

ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL

DARTMOOR TRAINING AREA

DEFENCE TRAINING ESTATE (SOUTH WEST)

July 2007
Version 2.2



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ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL

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1. INTRODUCTION

Dartmoor Training Area (DTA) consists of 13,000 hectares of mostly open moorland used by the Armed Forces for light force live and dry tactical training and a further 40,000 hectares of walk over rights. The training areas of Okehampton, Willsworthy and Merrivale are used for live and dry training, while Ringmoor and Cramber are only used for dry training. There are 3 fixed ranges at Willsworthy and a fixed Anti Tank range at Okehampton. Two camps, the larger at Okehampton and the other at Willsworthy, support training.

Most of the land is used under licence with only Willsworthy being MOD freehold. Farmers exercise rights of common over the unenclosed licensed moorland.

DTA lies within the Dartmoor National Park, designated for its natural beauty with the purposes of conservation and encouraging public access. Most of DTA is also designated as a Special Area of Conservation (SAC) and a Site of Special Scientific Interest (SSSI). Many archaeological and cultural heritage artefacts witness man's use of Dartmoor, a large number of which are Scheduled Monuments. The common land is grazed under DEFRA's Environmentally Sensitive Area scheme (ESA).

DTA, a part of the Defence Training Estate (an operational division of Defence Estates (DE)), is managed by a partnership consisting of Defence Training Estate South West (DTE SW), DE Operations South West and a commercial partner, Landmarc Support Services (Landmarc). The Commandant, as the occupier ultimately responsible through the Chain of Command to the Secretary of State for Defence, who is the landowner/lessor/licensee, is responsible for setting local SHEP policy, while production and implementation mostly falls to Landmarc, all with the advice of DE.

2. AIM

This Manual describes the Environmental Management System (EMS) in place at DTA. The System conforms to the requirements of JSP 418: MOD Environmental Management System (EMS) Manual, DTE EMS Procedures (EMP) and the overall structure of ISO 14001:2004.

3. SCOPE

The EMS covers the environmental and social impacts of all military activities within the Dartmoor National Park except those impacts associated with:

- (a) Procurement of goods and services that are managed outside of DTE SW's responsibilities.
- (b) Aircraft unless operating with ground troops.

The scope of the EMS is wider than is conventionally considered within the context of environmental management in order to cover MOD's responsibilities to the Dartmoor National Park, the Defence Estate Strategy's objectives and the Government's sustainability priorities.

The EMS is the umbrella document covering all environmental and social issues relating to DTA activities. Supporting documents such as the Integrated Land Management Plan, Okehampton Camp Establishment Development Plan, farm plans, pollution prevention plans, waste management plans and energy efficiency plans are referenced as appropriate.

4. OBJECTIVES

DTA's environmental and social objectives are designed to: Reduce, as low as reasonably possible adverse impacts of military activities; maximise positive impacts; to make efficient use of natural resources in order to reduce cost; respect the needs of future generations, and protect people from harm that might be caused by military activities. In particular they are to:

- (a) Maintain the balance between military impacts and National Park purposes.
- (b) Protect, and where possible, enhance the historic and natural environment.
- (c) Protect natural resources; maintain air and water quality, reduce water use, improve energy efficiency and reduce carbon emissions.
- (d) Reduce the visual impact of military infrastructure on Dartmoor's landscape character.
- (e) Reduce waste sent to landfill and increase recycling,
- (f) Improve quality and extent of public access and recreation across Dartmoor Training Area where this is compatible with military requirements.
- (g) Reduce risk from residual UXO, noise and other military impacts.
- (h) Maintain major incident preparedness and resilience.
- (i) Further develop stakeholder communications.
- (j) Maintain an effective measurement and monitoring system in support of continuous improvement.

5. PLANNING

5.1. Safety, Health & Environmental Protection (SHEP) Statement

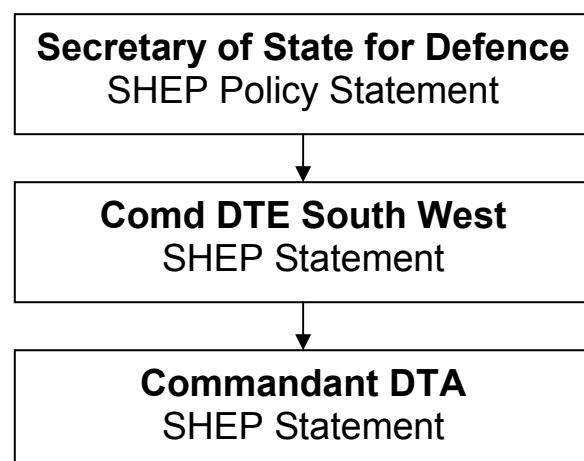
The Commandant's SHEP Statement sets the policy for the protection and enhancement of the environment, and the health, safety and welfare of MOD and partner employees, allocated users and any person affected by their activities. The organisation and arrangements central to its implementation are also detailed.

The Statement reflects the commitments made by the Secretary of State for Defence on the Management of Safety and Environmental Protection in the MOD, and Commander DTE SW in their respective statements (see figure 1). Advice is also taken from the staff of HQ 5 Div and HQ 43 (Wx) Bde, which provide Administrative Control (ADMINCON) for DTE SW.

The Secretary of State for Defence and Commandant DTA's SHEP Statements are communicated to allocated users and controlled personnel through display on noticeboards and via Standing Orders. Commandant DTA's statement is also copied to Comd DTE SW. It is reviewed annually as part of the overall EMS Management Review.

Copies of the above SHEP Statements are at Annex A.

Figure 1: Policy Statements



5.2. Identification and Assessment of Environmental Aspects – EMP01

The significant environmental aspects associated with DTA activities have been identified and evaluated using methodology based upon the guidance in JSP 418.

The site was divided into the functional areas below and the environmental aspects for each assessed for significance and documented at Annex B.

1. Provision and use of accommodation/offices/dining rooms less cookhouse/stores.
2. Receipt, storage preparation of food, kitchens, field cooking kitchens, operational ration packs but not dining rooms.
3. Receipt, storage, dispensing and use of fuel by DTA staff and contractors, and authorised users.
4. Receipt, storage and issue of ammunition.
5. Receipt, storage and issue of stores by DTA staff and contractors, and authorised users.
6. Dry and adventurous training.
7. Live firing.
8. Ten Tors.

The proforma provides a means for assessing environmental aspects through the following process:

- a. Identify relevant Environmental Legislation and Other Requirements.
- b. Identify each environmental aspect arising from an activity.
- c. Describe the environmental impact resulting from each aspect.
- d. Identify the existing control measures in place to minimise and mitigate the environmental impact.
- e. Determine significance of remaining impacts by rating each subjectively in terms of likelihood (scaled with 1 representing once in a lifetime) and consequence (scaled with 4 representing of regional significance). Low is 3 or 4, medium 6 or 8 and high 9, 12 or 16.
- d. Additional controls or works are proposed to address the environmental impacts and, if agreed and resourced by line management, actions set.

5.3 Legal & Other Requirements - EMP02

The EMS has been developed in accordance with international, European and national environmental legislation, and other requirements, such as any relevant Government & MOD strategy and policy commitments; Local Authorities, Environment Agency and Water Authority guidelines; National Park agreements; and other non-statutory guidance etc. Details are listed in Annex C.

5.4 Environmental Programme Management Plan (EPMP) - EMP03

The EPMP is a tool designed to drive forward continual improvement in environmental performance. DTA's EPMP, at Annex D, provides details of the environmental objectives and targets set to address the significant environmental aspects identified and the programme by which this is to be achieved.

6. IMPLEMENTATION & OPERATION

6.1. SHEP Organisational Structure and Responsibility - EMP04

The DTA SHEP Committee, which is 'owned' by Commandant DTA in liability, policy, resource, and audit terms, meets six monthly and consists of:

Commandant	29 Cdo RA Det (Lodger Unit)
DE Land Agent/Estate Surveyor DTE SW	Accom Supvr Landmarc
SHEP FP DTE SW	Comms Manager Landmarc
SHEQ Advisor Landmarc DTE SW	Catering Manager ESS
Estate Manager Landmarc	NAAFI Manager (Lodger Unit)
Training Area Manager Landmarc	Landmarc Sub Contractors
Works Manager Landmarc	Smith, Gore, Dreweat & Neate Landmarc sub contractor
DE BEM	MOD Contractors
CTCRM Det (Lodger Unit)	

The SHEP Committee's Terms of Reference (Annex E) are to ensure that adequate effort and resources are allocated to enable the objectives and targets set within the EPMP to be achieved. Details of the responsibilities and expectations for each appointment identified in the organisational structure are provided, communicated and reviewed through job descriptions, and the Performance and Development Report (PDR) process.

6.2. Training, Awareness and Competence - EMP05

The focus of environmental training is:

- Increased awareness of the environmental issues associated with DTA
- Understanding roles and responsibilities in implementing the EMS
- Provision of sufficient knowledge to ensure conformance with the SHEP Statement, the EMS, the action plans and procedures

6.3 Communication - EMP06

EMS related issues, including significant environmental aspects, are communicated internally and externally to interested parties. Records of communications are maintained for at least 2 years.

6.4 Control of Documents, Data and Records - EMP07

The documentation, records and correspondence associated with the EMS is subject to document control. Documents are given a file reference, version number and date to ensure they can be easily located and traced. All communications are processed, filed, retained and archived by Landmarc and held at HQ DTA. Obsolete versions are removed from circulation.

6.5 Operational Control - EMP08

Operational control is achieved through adherence to DTE EMS procedures, and to Regional and local procedures, instructions and information sources.

Specific local controls pertaining to the significant environmental aspects for DTA are detailed in each pro-forma for assessing and documenting environmental aspects, located in Annex B to this document.

6.6 Emergency Preparedness and Response - EMP09

Emergency response plans, which take into account potential environmental impacts for the following, are published in Standing Orders:

- | | |
|-----------------------------------|------------------------------------|
| - Fire | - Injury |
| - Explosion | - Lost persons |
| - Accidental release and spillage | - Terrorist Attack |
| - UXO | - Incursion into Range Danger Area |

Response actions to environmental emergencies are communicated to site staff, contractors and visitors through standing orders, training and briefing.

Annual (or more frequent if required) rehearsals and testing of emergency response plans are undertaken.

Records of incidents, near misses, complaints, rehearsals and tests, together with action taken and lessons learned, are kept. Responsibility for compiling these records lies with Landmarc.

7. CHECKING

7.1 Monitoring and Measurement - EMP10

Performance monitoring. The SHEP Committee monitors progress against the EPMP and supporting action plans. This is addressed during the six-monthly SHEP Committee meetings through discussing progress against each objective and target. Action plans may be amended following these meetings.

Environmental measurement. Measurement of certain parameters relevant to the significant environmental aspects associated with activities is undertaken on a periodic basis. The methodology and plan are at Annex F.

7.2 Audit Process - EMP11

The EMS is externally audited periodically by 4 Div and the Range Training Area Audit Board. Internal self audits, by Landmarc and Core Staff, assess performance, identify weaknesses and ensure that the EMS is maintained.

7.3 Non-conformance and Corrective & Preventive Action - EMP12

Non-conformances may be identified by any staff, such as during an inspection or following a complaint or incident, or by a second party during an audit of the EMS.

8. REVIEW

8.1 Management Review - EMP13

Management Review is undertaken locally by the DTA SHEP Committee. Information from this Committee is communicated upwards to DTE SW, and via the Regional Committee to the HQ DTE EMS Working Group if deemed significant. The review links to DE's performance targets and is reported publicly in MOD's Annual Stewardship Report.

J CORNISH
SHE Coordinator Landmarc

A H CLARK
Commandant

ANNEX B

PRO-FORMA FOR ASSESSING AND DOCUMENTING ENVIRONMENTAL ASPECTS

1. TLBH/HLBH: Organisation: Okehampton and Willsworthy Training Camps Department:		2. Reference: DTA 420/6 - 1 Date: 31 Jan 07 Assessor: Mr L A Vickery Appointment: Estate Manager (Des) Signed:			3. Activity: Provision and use of accommodation/offices/dining rooms less cookhouses/stores					
4. Relevant Environmental Legislation and Other Requirements (Policy, Licences, Consents, Agreements etc) Standing Orders JSP 307: Joint Service Catalogue of Accommodation Stores (Price List, Illustrations and general detail). Parts 4 & 5										
5. Environmental Aspect		6. Description of Environmental Impacts		7. Condition (Normal/ Abnormal/ Emergency)	8. Existing Control Measures (Note: Significance is calculated with existing control measures in place)		9. Significance Rating = (Likelihood x Consequence) Note: A + denotes a positive impact	10. Additional Proposed Controls		
A	Emissions to Air	Paints; emissions from volatile organic compounds. Heating boilers; global warming gasses			Limited use of paints for general maintenance. Each building has own LPG powered thermostatically controlled boiler – allows greater control. Serviced regularly. Energy saving initiatives in place include: Agreement on temperatures to be maintained. Heating reduced when buildings not in use. Double glazing in some buildings. Thermostats on some radiators. Timed taps and fixed thermostats on some showers.		L 1	X C 1	= S 1	
		Electricity use; global warming gasses			No record of a formal external energy survey but various energy saving initiatives including: Automatic lamps in some locations. Reduction of use and wattage of security lamps. Energy wardens appointed Energy awareness raising through education. Double glazing fitted to some windows.		3	2	6	Install a Building Management System (BMS) at Okehampton Camp and revitalise that at WWY to reduce energy use by allowing more precise control of heating to suit occupancy levels. Install percussion taps and fixed thermostats on all showers to reduce energy use. Install double glazing on all heated buildings to reduce energy use. Undertake energy audit to identify any further potential savings. Use long life lamps where cost effective. Use automatic switching wherever effective.

B	Discharges to Water	Sewage and surface; contamination of water resources		Surface water collected and treated by SWW through Project Aquatrine. Fuel points banded and drained to collection / separation chambers Use of salt on roads minimised. Sewage collected and treated by SWW through Project Aquatrine. Discharge consented by SWW.	1	3	3	
C	Solid/Liquid Waste	Disposal of general waste; use of landfill space Waste streams include: cardboard packaging, office waste, canteen waste i.e. cans, bottles etc.		All disposed to landfill by licensed contractor IAW regulations with small amount of recycling e.g. bread trays, ink cartridges, laser drums. Ammunition containers and cartridge cases put into military salvage system.	2	3	6	Press for segregation of waste streams and increase volume recycled.
D	Hazardous Waste	Disposal of hazardous waste. Asbestos Field Trg; Human effluent collected from training area. Clinical waste. Fluorescent tubes & Ni cad batteries.		Asbestos Register maintained by LSS IAW Landmarc Asbestos Management Plan. Disposed of by authorised contractors on ESS approved vendor list Removed by allocated users and returned to units for disposal Disposed of by authorised contractors on ESS approved vendor list	1 1 1 1	3 3 3 2	3 3 3 2	Complete surveys.
E	Land Contamination/ Site's previous uses/ Legacy issues							
F	Energy & Fuel Use	Excessive fuel used by heating/lighting power. Extra electricity used for security lighting		Double glazing installed on many buildings. Energy Warden appointed Some energy efficient lamps and PIRs fitted. Unoccupied buildings required to have curtains drawn to (where fitted), heating turned down to frost protection and windows closed.	3	2	6	Install additional energy efficient lamps and PIRs Install Buildings Management System.
G	Water Use	Use of natural resource for washing, showers, cleaning		Showers 70% button operated. Taps 0% percussion operated. Water conservation devices fitted to urinals. Water sourced off moor, treated at Okehampton and Willsworthy Camps.	2	2	4	Install timed percussion taps for all sinks and showers. None required; controls adequate

		Pollution of surface water.		At both Okehampton and Willsworth Camps on site sewage works treat effluent and at Okehampton discharge to river with consent from South West Water. Plant is maintained by South West Water under Project Aquatrine to industry standards and inspected regularly. Potential impact from spillage in Okehampton Camp was major now a number of controls in place: Spillage plan promulgated and practised.	1	3	3	
H	Use of other resources							
I	Nuisance: off and on base (Noise/Odour/Dust/Vibration/Light)	Visual intrusions of buildings in moorland landscape.		Security and HSW lamps pollute night sky and cause visual intrusion	2	3	6	Reduce brightness and duration of any necessary illumination.
J	Conservation/Biodiversity			Sewage plant and irrigation field				
K	Community/public Interest	Conservation of military artefacts Defence of the nation state allows areas such as Dartmoor to be National Parks Economic benefits through jobs and purchasing.		See Archaeology and Historic Environment DTE function is to support this national objective.	+2	+3	+6	
				Total of 80 staff employed on DTA. Preference given to local purchasing where cost effective.	+2	+2	+4	
L	Planned Changes			Okehampton Camp Landscape Management Plan (07) submitted to DNPA – already started to implement ideas e.g. reducing signs, changing colours of buildings. Some areas of planting remain under discussion to minimise impacts on areas of archaeological interest.	+2	+2	+4	Continue implementation of Okehampton Camp Landscape Management Plan
M	Landscape	Visual intrusions of buildings in moorland landscape. Security and HSW lamps pollute night sky and cause visual intrusion		Trees and shrubs managed to merge Camp into landscape.	2	3	6	Implement remaining Landscape Plan actions. When security threat permits, minimise security lighting. Use IR lamps where possible. Install PIRs to reduce times when HSW lamps are in use. HSW lighting should be reduced to 5 lux.
				Security lamps minimised.	2	3	6	

N	Historic Environment	Conservation of Military artefacts		Information centre at Okehampton Camp. Camp viewed by some stakeholders as 'blot on landscape' but history means that buildings potentially justify listing. Camp has been assessed and buildings of historic significance identified. Buildings of historic significance maintained appropriately, as if listed. EH's work to identify the national significance of military structures on hold. Some sites of historic interest (identified by EH's survey of the Okehampton Deer Park) within Okehampton Camp limiting planting of trees and shrubs to merge Camp into Dartmoor's landscape.	+2	+3	+6	Potential for NPA and DTA to work in partnership to enhance information provision at Okehampton camp to expand on existing historical display
O								
P	Health and Safety	Death or injury to DTA staff and contractors, authorised users and the public.		S of S Def SHEP statement cascaded down to Comdt DTA's personal SHEP statement. DTA staff trained and competent. Authorised users required to comply with military procedures, standing orders and briefing. Landmarc revise annually, or more frequently if necessary, a site wide risk assessment. Defence Fire and Rescue Service conduct risk assessment to prevent fire and safe egress. Building secured when not in use	2	2	4	
Q	Other							
11. Required Review Date: (Note: To be reviewed annually at a minimum) 31 Jan 08			12. Commander's Endorsement Name: Lt Col J Porter RRF Appointment: Commander Defence Training Estate South West Signed: Date:					

1. TLBH/HLBH: Organisation: Okehampton and Willsworthy Training Camps Department:		2. Reference: DTA 420/6 - 2 Date: 31 Jan 07 Assessor: Mr L A Vickery Appointment: Estate Manager (Des) Signed:			3. Activity: Receipt, storage, preparation of food, kitchens, field cooking kitchens, operational ration packs but not dining rooms.					
4. Relevant Environmental Legislation and Other Requirements (Policy, Licences, Consents, Agreements etc) DTA Camp Standing Orders WDBC have registered kitchen to ESS JSP 375: MOD Health & Safety Handbook JSP 418: Sustainable Development and Environment Manual ESS standing processes										
5. Environmental Aspect		6. Description of Environmental Impacts		7. Condition (Normal/ Abnormal/ Emergency)	8. Existing Control Measures (Note: Significance is calculated with existing control measures in place)		9. Significance Rating = (Likelihood x Consequence) Note: A + denotes a positive impact	10. Additional Proposed Controls		
A	Emissions to Air	Fridges and freezers and fire extinguishers; ozone depleting substances. Cooking appliances; global warming gasses.			Maintained and disposed of by specialist contractors on ESS approved vendor lists. Redundant refrigeration units disposed of under licence. Refrigeration units regularly serviced. Fire extinguishers do not use ozone depleting substances. LPG, an energy efficient fuel, used. High use gas cookers switched off when not in use.		L 1 3	X C 2 2	= S 2 6	Press for replacement with more energy efficient appliances
B	Discharges to Water	Waste from food and cleaning			Grease traps in place and maintained. Foul water drains to sewage plant maintained by Aquatrine.					Cooking oils stored in a bunded area. Cooking oils at Willsworthy Camp require bunded area.
C	Solid/Liquid Waste	Use of landfill space			Food, packaging waste disposed to landfill by licensed contractor IAW regulations. Used cooking oil recycled by specialist contractor; A&B Oils. Used cooking equipment to metal salvage by approved contractors on ESS approved vendor list.		3 1	3 1	9 1	Press for segregation of waste streams and increase volume recycled.
D	Hazardous Waste									
E	Land Contamination/ Site's previous uses/ Legacy									

	issues							
F	Energy & Fuel Use	Use of natural resources: LPG and electricity used for cooking, heating and lighting		High energy use cooking appliances switched off when not in use. Regularly serviced by contractor on ESS approved vendor list IAW manufacturers instructions.	3	2	6	Press for replacement with more energy efficient appliances..
G	Water Use	Use of natural resources: preparation of food and cleaning		Water sourced off moor, treated at each of Okehampton and Willsworthy Camps. Timed percussion taps used for some sinks and showers.	1 2	3 3	3 6	Install timed percussion taps for all sinks.
		Pollution of surface water.		At both Okehampton and Willsworthy Camps on site sewage works treat effluent and at Okehampton discharge to river with consent from South West Water. Plant is maintained by South West Water under Project Aquatrine to industry standards and inspected regularly. Potential impact from spillage in Okehampton Camp was major hazard, now a number of controls in place: Spillage plan promulgated and practised. Interceptor tank and gullies installed around Okehampton Camp main vehicle refuelling points. Spill response kit at the POL point or carried by user/operator. Oil traps and grease traps in place and maintained. Personnel trained and competent. POL Point inspected and licensed by Defence Fuel Group. POL Point operated in accordance with Standing Orders including lid and fuel nozzles locked when not in use, fuel tanks dipped twice a week.	1	3	3	None required; controls adequate.
H	Use of other resources							
I	Nuisance: off and on base (Noise/Odour/ Dust/Vibration/ Light)	Deliveries of food						
J	Conservation/ Biodiversity	Waste disposal when field cooking adds nutrients to habitats.		All waste returned to camp's for disposal to landfill by contractor on ESS approved vendor list	1	1	1	
K	Community/ Public Interest	Delivery of rations; adds to road use.		Transportation costs keeps vehicle movement to a minimum.	1	1	1	
L	Landscape							
M	Historic Environment							
N	Planned							

	Changes							
O	Other							
P	Health and Safety	Death or injury to DTA staff and contractors, authorised users and the public.		DTA staff trained and competent to handle and produce food. Authorised user staff trained to required military standards. Okehampton main kitchen deep cleaned twice a year. Other kitchens deep cleaned as judged by risk assessment and at least annually. Kitchens inspected by West Devon Borough Council Environmental Health Officer, 43 (Wx) Bde Environmental Health Team and ESS.	1	4	4	
11. Required Review Date: (Note: To be reviewed annually at a minimum) 31 Jan 08			12. Commander's Endorsement Name: Lt Col J Porter RRF Appointment: Commander Defence Training Estate South West Signed: Date:					

1. TLBH/HLBH:	2. Reference: DTA 420/6 - 3	3. Activity:
Organisation: Okehampton and Willsworthy Training Camps	Date: 31 Jan 07 Assessor: Mr L A Vickery	Receipt, storage, dispensing and use of fuel by DTA staff and contractors, and authorised users.
Department:	Appointment: Estate Manager (Des) Signed:	Note: Electricity and LPG use are considered at point of use.

4. Relevant Environmental Legislation and Other Requirements (Policy, Licences, Consents, Agreements etc)

Discharge consent

MoD Petrol, Oil and Lubricants (POL) licence

Defence Training Estate South West Standing Orders (DTE SW SOs)

JSP 317 - Joint Service Safety Regulations for the Storage and Handling of Fuels and Lubricants. 4th edition.

JSP 319: Joint Service Safety Regulation for the Storage and Handling of Liquefied Petroleum Gas (LPG) and Industrial Gases (IG). 2nd edition.

JSP 375 MOD Health & Safety Handbook

5. Environmental Aspect		6. Description of Environmental Impacts	7. Condition (Normal/ Abnormal/ Emergency)	8. Existing Control Measures (Note: Significance is calculated with existing control measures in place)	9. Significance Rating = (Likelihood x Consequence) Note: A + denotes a positive impact			10. Proposed Controls
A	Emissions to Air	Exhaust emissions; global warming gasses. LPG escape		DTA vehicle mileage and use recorded and examined. Measures in place to minimise use. LPG tanks provided and maintained by MoD contractor.	L 1	X C 2	= S 2	
B	Discharges to Water	Small spillage on issue Large spillage in controlled area.		Spillage Plan in place Spillage kits provided at POL point and at pack fuel location. Bunded area and interceptor installed at west end of Okehampton Camp square to provide a controlled area for vehicle and helicopter refuelling. Large spillage from uncontrolled area Bulk refuelling in uncontrolled areas rarely permitted. Spillage kit available	2	1	2	
C	Solid/Liquid Waste			Spillage from vehicle accident Oils and greases Little vehicle and generator maintenance on DTA. Used and surplus oils and greases disposed of by licensed contractors on ESS approved vendor list.	1 1	2 2	2 2	
D	Hazardous Waste	Spillsorp Contaminated fuel.		Spillage plan in place Oil spill kit provided Diesel fuel tanks checked and pressure tested IAW regulations. LPG tanks provided and maintained by MoD contractor. Contaminated fuel removed, cleaned and residue disposed of by licensed contractor on ESS approved vendor list.	1	2	2	

E	Land Contamination/ Site's previous uses/ Legacy issues	Large spillage of fuel i.e. controlled area Receipt		Spillage plan in place Interceptor installed on west end of Okehampton Camp square – the main vehicle and helicopter refuelling area	1	2	2	
F	Energy & Fuel Use	Use of natural resources; 7 ton coke pa 120,000 l diesel pa 654,000 LPG pa 450,000 units electricity pa						
G	Water Use							
H	Use of other resources							
I	Nuisance: off and on base (Noise/Odour/ Dust/Vibration/ Light)	Fuel vehicles to and from Camp & trg area		Transportation costs keep deliveries to a minimum.	1	3	3	
J	Conservation/ Biodiversity	Land and water contamination		DTA Spillage Plan	1	3	3	
K	Community/ Public Interest	Media interest on large spillage						
L	Planned Changes							
M	Landscape							
N	Historic Environment							
O	Spare							
P	Health and Safety	Death or injury to DTA staff and contractors, authorised users and the public		DTA staff POL point operatives trained and competent to receive, store and issue fuel. Authorised User operative must prove that they are trained and competent before they are allowed to take over the POL point. DTE SW SO. Authorised Users required to be trained and competent to refuel vehicles and generators. DTE SW SO. Fire prevention measures in place and fire extinguisher provided at POL point and in helicopter refuelling area. DTA Camps SO.	1	3	3	

11. Required Review Date:
(Note: To be reviewed annually at a minimum)

31 Jan 08

12. Commander's Endorsement
Name: Lt Col J Porter RRF

Appointment: Commander Defence Training Estate South West

Signed:

Date: Feb 07

1. TLBH/HLBH: Organisation: Okehampton and Willsworthy Training Camps Department:		2. Reference: DTA 420/6 - 4 Date: 31 Jan 07 Assessor: Mr L A Vickery Appointment: Estate Manager (Des) Signed:			3. Activity: Receipt, storage and issue of ammunition				
4. Relevant Environmental Legislation and Other Requirements (Policy, Licences, Consents, Agreements etc) Defence Training Estate South West Standing Orders (DTE SW SOs) JSP 336: Defence Supply Chain Manual LUMAT Vol 1 & 2 JSP 445: Dangerous goods by road, rail and sea. Ammunition and Explosive Regulations (A & ERs) MOD explosives storage licence JSP 440: Defence Manual of Security JSP 482: Ministry of Defence Explosives Regulations									
5. Environmental Aspect		6. Description of Environmental Impacts		7. Condition (Normal/ Abnormal/ Emergency)	8. Existing Control Measures (Note: Significance is calculated with existing control measures in place)		9. Significance Rating = (Likelihood x Consequence) Note: A + denotes a positive impact		10. Proposed Controls
A	Emissions to Air						L	X C	= S
B	Discharges to Water	If fire, extinguishing water/ foam run off into main soiled water system.			Sewage system acts as interceptor.		1	3	3
C	Solid/Liquid Waste								
D	Hazardous Waste	Manufacture and use of ammunition			Specification and safety controlled at MOD level by DOSG		1	3	3
E	Land Contamination/ Site's previous uses/ Legacy issues	Residual UXO Residual waste phosphorous			All military litter and debris removed Control of charge bag or augmenting cartridge disposal				
F	Energy & Fuel Use	Manufacture of ammunition use.			Specification and safety controlled at MOD level by DOSG		1	3	3

G	Water Use	If fire, water runs into main system			1	2	2	
H	Use of other resources							
I	Nuisance: off and on base (Noise/Odour/Dust/Vibration/Light)	Accidental explosion Noise or use		Authorised user controlled by conducting officer Storage controlled by qualified and competent storeman.	1	4	4	
J	Conservation/Biodiversity							
K	Community/Public Interest			See Health and Safety				
L	Planned Changes							
M	Landscape							
N	Historic Environment							
O	Spare							
P	Health and Safety	Death or injury to DTA staff and contractors, authorised users and the public.		Magazines maintained to MoD standards. Inspected by Ammunition Technical Officer and licensed. Magazines only allocated to qualified and competent users with appropriate security clearance. All ammunition publications are required to be adhered to. DTA staff trained to identify safe / unsafe munitions and action to be taken. Default is not to touch, note locations, mark area and inform HQ DTA, which will call out specialist disposal team. Conducting Officers briefed on UXO hazards and passes warning to subordinates. Civilians warned of UXO hazard and action to be taken through High Moorland Visitors Centre display, Dartmoor Visitor, Walks and Rides on Dartmoor brochure, warning signs and information boards. Ten year olds in West Devon attend Junior Life Skills where education on UXO is given.	1	4	4	
11. Required Review Date: (Note: To be reviewed annually at a minimum) 31 Jan 08				12. Commander's Endorsement Name: Lt Col J Porter RRF Appointment: Commander Defence Training Estate South West				

	Signed: Date:
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1. TLBH/HLBH: Organisation: Okehampton and Willsworthy Training Camps Department:		2. Reference: DTA 420/6 - 4 Date: 31 Jan 07 Assessor: Mr L A Vickery Appointment: Estate Manager (Des) Signed:		3. Activity: Receipt, storage and issue of ammunition					
4. Relevant Environmental Legislation and Other Requirements (Policy, Licences, Consents, Agreements etc) Defence Training Estate South West Standing Orders (DTE SW SOs) JSP 336: Defence Supply Chain Manual LUMAT Vol 1 & 2 JSP 445: Dangerous goods by road, rail and sea. Ammunition and Explosive Regulations (A & ERs) MOD explosives storage licence JSP 440: Defence Manual of Security JSP 482: Ministry of Defence Explosives Regulations									
5. Environmental Aspect		6. Description of Environmental Impacts		7. Condition (Normal/ Abnormal/ Emergency)	8. Existing Control Measures (Note: Significance is calculated with existing control measures in place)		9. Significance Rating = (Likelihood x Consequence) Note: A + denotes a positive impact		10. Proposed Controls
A	Emissions to Air						L	X C	= S
B	Discharges to Water	If fire, extinguishing water/ foam run off into main soiled water system.			Sewage system acts as interceptor.		1	3	3
C	Solid/Liquid Waste								
D	Hazardous Waste	Manufacture and use of ammunition			Specification and safety controlled at MOD level by DOSG		1	3	3
E	Land Contamination/ Site's previous uses/ Legacy issues	Residual UXO Residual waste phosphorous			All military litter and debris removed Control of charge bag or augmenting cartridge disposal				
F	Energy & Fuel Use	Manufacture of ammunition use.			Specification and safety controlled at MOD level by DOSG		1	3	3

G	Water Use	If fire, water runs into main system			1	2	2	
H	Use of other resources							
I	Nuisance: off and on base (Noise/Odour/Dust/Vibration/Light)	Accidental explosion Noise or use		Authorised user controlled by conducting officer Storage controlled by qualified and competent storeman.	1	4	4	
J	Conservation/Biodiversity							
K	Community/Public Interest			See Health and Safety				
L	Planned Changes							
M	Landscape							
N	Historic Environment							
O	Spare							
P	Health and Safety	Death or injury to DTA staff and contractors, authorised users and the public.		Magazines maintained to MoD standards. Inspected by Ammunition Technical Officer and licensed. Magazines only allocated to qualified and competent users with appropriate security clearance. All ammunition publications are required to be adhered to. DTA staff trained to identify safe / unsafe munitions and action to be taken. Default is not to touch, note locations, mark area and inform HQ DTA, which will call out specialist disposal team. Conducting Officers briefed on UXO hazards and passes warning to subordinates. Civilians warned of UXO hazard and action to be taken through High Moorland Visitors Centre display, Dartmoor Visitor, Walks and Rides on Dartmoor brochure, warning signs and information boards. Ten year olds in West Devon attend Junior Life Skills where education on UXO is given.	1	4	4	
11. Required Review Date: (Note: To be reviewed annually at a minimum) 31 Jan 08				12. Commander's Endorsement Name: Lt Col J Porter RRF Appointment: Commander Defence Training Estate South West				

	Signed: Date:
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1. TLBH/HLBH: Organisation: Okehampton and Willsworthy Training Camps Department:		2. Reference: DTA 420/6 - 5 Date: 31 Jan 07 Assessor: Mr L A Vickery Appointment: Estate Manager (Des) Signed:		3. Activity: Receipt, storage and issue of stores by DTA staff and contractors, and authorised users				
4. Relevant Environmental Legislation and Other Requirements (Policy, Licences, Consents, Agreements etc) Dartmoor Training Area Camp Standing Orders (DTA Camp SOs) JSP 336 - Defence Supply Chain Manual JSP 375 - MOD Health & Safety Handbook JSP 437 - Personal Protective Equipment Catalogue JSP 515 - Hazardous Stores Information System DTA Spillage Plan								
5. Environmental Aspect		6. Description of Environmental Impacts	7. Condition (Normal/ Abnormal/ Emergency)	8. Existing Control Measures (Note: Significance is calculated with existing control measures in place)	9. Significance Rating = (Likelihood x Consequence) Note: A + denotes a positive impact			10. Proposed Controls
A	Emissions to Air	Burning rubbish; global warming gasses If fire; combustion products include global warming gasses.		Bonfires no longer used to destroy debris. Fire prevention measures in place: DTA Camp SOs	L 1 2	X C 2 2	= S 2 4	
B	Discharges to Water	If fire; extinguishing water/foam run off		Through sewerage farm and interceptors	1	2	2	
C	Solid/Liquid Waste	Rubbish not re-cycled; use of natural resources and landfill sites filled		Rubbish collected centrally and disposed of by licensed waste contractors on ESS approved vendor lists IAW JSP 336 Pallets, packaging returned to MoD Depots	2	3	6	Improve waste management system
D	Hazardous Waste	Engine Oil Clinical waste NICAD batteries Paint;		No vehicle maintenance on site. Small volumes disposed of by authorised contractors IAW regulations. Clinical waste removed by Allocated Users IAW SOs Removed by specialist contractors on ESS approved vendor list and recycled where possible. Small quantities used. Waste disposed of by licensed waste contractors on ESS approved vendor list.	1 1 1	2 2 2	2 2 2	Introduce waste management system

		Fluorescent tubes;		Small quantities used. Waste disposed of by licensed waste contractors on ESS approved vendor list.	1	2	2	
E	Land Contamination/ Site's previous uses/ Legacy issues	Suppliers use approved containers. Hazard only if container damaged		Damaged containers returned to sender. Spillage Plan. No known legacy issues from use since 1893.	1	2	2	
F	Energy & Fuel Use	Forklift and vehicle fuel use. Stores lighting and heating.		Vehicle use controlled. Heating thermostatically controlled.	1 1	2 2	2 2	
G	Water Use							
H	Use of other resources							
I	Nuisance: off and on base (Noise/Odour/ Dust/Vibration/ Light)	Delivery of stores and equipment adds to road use.		Transportation costs keep vehicle use to a minimum.	1	1	1	
J	Conservation/ Biodiversity							
K	Community/ Public Interest							
L	Planned Changes							
M	Landscape							
N	Historic Environment							
O	Spare							
P	Health and Safety	Injury to DTA staff and contractors, and authorised users.		Manual handling training and compliance with legislation	2	2	4	
11. Required Review Date: (Note: To be reviewed annually at a minimum) 31 Jan 08				12. Commander's Endorsement Name: Lt Col J Porter RRF Appointment: Commander Defence Training Estate South West Signed:				

	Date:
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1. TLBH/HLBH: Organisation: Dartmoor Training Area Department:		2. Reference: DTA 420/6 - 6 Date: 10 jul 07 Assessor: Lt Col (Retd) A H Clark Appointment: Comdt Signed:			3. Activity: Dry and Adventurous Training		
4. Relevant Environmental Legislation and Other Requirements (Policy, Licences, Consents, Agreements etc) Licences from Duchy of Cornwall, SWW, Maristow Estate and others. Defence Training Estate South West Standing Orders (DTE SW SOs) NE PDO agreement for North Dartmoor SSSI Planning Consent for Cramber							
5. Environmental Aspect	6. Description of Environmental Impacts	7. Condition (Normal/ Abnormal/ Emergency)	8. Existing Control Measures (Note: Significance is calculated with existing control measures in place)	9. Significance Rating = Likelihood x Consequence (+ denotes a positive impact)			10. Additional controls proposed
				L	X C	= S	Produce new video

A	Emissions to Air	Controlled fires	Two yearly approx swaling of tracer impact areas at Willsworthy fixed ranges.	2	1	2	Implement emergency response plans Fully train operatives Develop further with stakeholders, fire prevention and fighting procedures. Fire breaks to protect blanket bog would assist containment but conflict with landscape objectives.
		Wildfire; damage to peat, habitats and wildlife, erosion, carbon release to atmosphere. Potential uncontrolled fires burning vegetation and peat.	Fire risk assessed & precautions taken DTE SW SOs 414 & 435 HQ DTA's Red/Amber/Green warning system used to highlight risk periods and to warn Allocated Users of additional controls that need to be put in place. Limitations (but not necessarily a total ban) on use of pyrotechnics during red periods. Restrictions on use of pyrotechnics during amber periods. Precautions include trialling use and careful siting. Fire beaters issued during periods of higher risk. Firebreaks cut at Willsworthy. First aid fire fighting equipment made available eg fire beaters and foggers. Emergency response plans being developed with Commoners, NPA, RDS, Duchy of Cornwall and Fire Authority.	2	3	6	
		Internal combustion engine; fuel use and exhaust	Generators at Holming Beam and Bagga Tor only used when buildings occupied. Serviced IAW manufacturers instructions. Allocated users generators regularly serviced and used infrequently as part of operational training. DTA vehicles mileage recorded and analysed. Systems in place to minimise use. Serviced IAW manufacturer's instruction Allocated users vehicles serviced IAW MoD instructions. Use controlled by ECO and overseen by HQ DTA. Quantity of aircraft training with ground troops is small. Aircraft serviced and maintained efficiently.	1	2	2	
		Fridges, freezers and fire extinguishers; ozone depleting substances.	Redundant refrigeration units disposed of under licence. Refrigeration units regularly serviced. Fire extinguishers do not use ODS.	1	2	2	

B	Discharges to Water	Portaloos spillage		ECO briefed on environmental consequences and precautions Portaloos returned to Okehampton Camp for contents to be disposed of by licensed contractors on ESS approved vendors list.	1	2	2	
		Ground disturbance from digging		Sites carefully selected and refilled DTE SW SO 444	1	2	2	
C	Solid/Liquid Waste	Military debris		Military debris removed DTE SW SO waste plan. Authorised users required to identify military debris in areas being trained over and to either remove it, where safe to do so, or report it for experts to remove. Locations of UXO found recorded. Log and experience indicates considerable reduction over last 10 years	2	4	8	Further clearance of high risk areas if identified.
D	Hazardous Waste	Used fuel spillage absorbent		Disposed of as hazardous waste through licensed waste contractor on ESS approved vendor list	1	2	2	Press for segregation of waste streams and increase in volume recycled.
		Disposal of general waste; use of landfill space Waste streams include: cardboard packaging, office waste, canteen waste i.e. cans, bottles etc.		All disposed to landfill by licensed contractor in accordance with regulations with small amount of recycling e.g. bread trays, ink cartridges, laser drums. Ammunition containers and cartridge cases returned to military salvage system.	2	3	6	
E	Land Contamination	Litter Civilian litter Debris, cartridge cases & pyro containers UXO		All litter removed DTE SW SO 448 Removed if area used by mil All debris removed DTE SW SOs 430 & 448 Blinds destroyed DTE SW SOs 437 et seq	2 +2 2 1	1 +2 1 2	2 +4 2 2	
		Residual UXO		Frequent surface inspections of areas used by military, location of surface UXO and their detonation or removal. Clearance of UXO from high risk areas & trial firebreak. Close control of any blinds including searches, identification and effective disposal procedures. Ordnance Board approval given.	2	2	4	
		Pyro emissions			1	2	2	
		Fuel spillage during refilling; pollution of surface water		Refuelling on training area, relatively infrequent activity. Limited permissions, careful control & spillage plan Location of refuelling other than jerry can refuelling of individual vehicles controlled by HQ DTA. Spill response kits carried by user / operator. No recorded incidents.	1	2	2	

F	Energy & Fuel Use	Natural resources depletion; Vehicle fuel use Generator fuel use Heating of lookouts using coke fires and range buildings		Serviced IAW mfr's instrs Low numbers, Serviced IAW mfr's instrs Only heated when in use	1 1 1	3 1 1	3 1 1	
G	Water Use			Normally an insignificant amount used. Water extraction and purification exercises held every couple of years.	1	1	1	
H	Use of other resources			Use of materials for training is outside of DTA's jurisdiction	0	0	0	
I	Nuisance: Noise, vibration	Changes character of the moor, detractor from the experience of 'wildness' and affect on 'tranquillity'. Firing noise, Helicopter and fixed wing aircraft noise,		Range danger areas closed during live firing and little impact of firing noise outside RDA boundary. Allocated users required to be considerate of other users when conducting adventurous and dry tactical training. Standing Orders prohibit blank firing and use of pyrotechnics within 100m of civilians and within 200m of habitation. Para 21, DTE SW SOs Times and location of intense firing activity likely to cause inconvenience carefully considered by HQ DTA when dry tactical training exercises are being planned. Dawn and dusk are the opportune times for attacks and ambushes more successful by night. Observations communicated to HQ DTA are recorded. Warning of military training given in DTA Walks and Riders brochure, information boards, High Moorland Visitors Centre display, DTA website. Public notified of major exercises Military aircraft activity, cooperating with ground troops, regulated by HQ DTA including dates of training, quantity of aircraft, flying heights, areas used for tactical flying and transit routes. Helicopters required to avoid riders and stock where safe to do so. DTE SW SOs. Low flying to achieve operations capability has to be authorised by senior officer. If not authorised, aircraft transit above 250 feet MSD. Most aircraft excluded from Air Danger Area which extends to 10,000ft. Pilots briefed to avoid horse riders	1 2 +2	2 3 +2	2 6 +4	Undertake noise survey, building on knowledge of that conducted at Cramber. Undertake landscape character and visual impact analyses to include an assessment of 'tranquillity' and 'wildness'.

		Vehicles using highways	Drivers trained, highway code enforced ECO warned of narrow lanes DTE SW SO 0452	1	2	2	
J	Conservation/ Biodiversity	Trampling of habitats Disturbance of nesting birds during breeding season Physical impact of movement of tracked vehicles on blanket bog/heathland. Disturbance of wildlife Disturbance of wildlife in breeding season Physical damage to vegetation (also issue of SSSI consent) Erosion of footpaths	Off track vehicle movement limited and controlled During breeding season military do not linger in, camp or carry out tactical activities in golden plover, dunlin and ring ouzel nesting areas agreed with DNPA and published on addendum to MOD Dartmoor map. Raven nesting sites notified to HQ DTA avoided by military MOD supportive of Operation Wader (led by NPA) includes monitoring & improvement of habitat management through agreement DTA military conservation group monitors flora and fauna, working closely with EN and DNPA. Standing Orders limit vehicle transit to roads and tracks. Movement on other tracks and cross country is only authorised by HQ DTA when there is an operational training need. Supervised by DTA staff Lessons learned from BV206 movement in 2003 implemented In 1980s programme of restoring tracks, monitored using aerial photos	2 2 +2 +2 2 2 2 1 1	1 1 +2 +2 1 2 1 2 2	2 2 +4 +4 2 4 2 2 2	Publish on DTA map. Improve briefing and/or control of operatives. Update Potentially Damaging Operation consent and agree with NE. Screen Viking activities to see if an Appropriate Assessment is required prior to use on DTA.

	Physical effects	Use of artillery high explosive rounds on DTA ceased in Sep 98, hence less incidence of direct damage 81mm Mortar ground burst, that does not make a hole, normally used. Delayed fuse only used for safety when raining. Allocated user units required to clear up any debris and to backfill any major holes. DTA staff supervises allocated users. DSG monitors MOD's performance. Significant changes require consultation with stakeholders, EIA and/or Appropriate Assessments. Major changes would require planning consultation. EN issues Potentially Damaging Operation consents. HQ DTA controls locations in which trench digging may take place, avoiding heather areas	2	2	4	Institute more rigorous programme of monitoring re-instatement of damaged areas Improve training of DTA staff who are responsible for supervision Completed corrective action reports to be held in EMS Habitat sensitivity map should be provided to HQ DTA. Management plan for all military activities on Dartmoor should be produced in consultation with landowners and Statutory Bodies.
	Wild fire	Fire risk assessed and precaution taken. See Emissions to Air above	2	3	6	
	Movement of livestock	Farmers informed of major activity likely to cause stock movement	1	2	2	
	UXO	See Land Contamination above				
	Provision of financial and physical resources	Monitoring surveys and management programmes. Implementation of MOD's Rural Element of the Estate Strategy for example rebuilding of Reddaford Farm dry stone walls, Willsworthy's heather restoration project, East Okement Farm tree planting, bracken control etc. Funds for Dartmoor Military Conservation Group and Operation Wader. Support for Forest Fire Project.	+4	+2	+8	
	Reduced human disturbance	Difficult to quantify as no baseline for comparison i.e. even if improved access, level of tourism and consequent human disturbance unlikely to increase significantly due to inhospitable nature of moor – needs to be quantified.	?	?	+?	Evaluate the benefits of the reduction of human disturbance after the 2006 Breeding Bird Survey

		The achievement of 'favourable condition' on MOD's freehold Willsworthy Training Area, part of North Dartmoor SSSI		Working with NE to implement management plan. Maintain and enhance heather & bilberry with granite outcrops through no grazing or burning on parts. Species rich hay meadows restoration at Reddaford Farm.	+2	+1	+1	
K	Community/ Public Interest	Disturbance to peace and quiet Startling of walkers Startling of riders Military presence (including dry training) perceived by some to be intrusive to the enjoyment of Dartmoor. Potentially off putting to some tourists. Conflict with access objectives of statutory bodies: Optimising use of open access land is a principal objective of both NE and DNPA. Noise from firing, helicopters etc – impact on 'tranquillity' of area and consequent recreation enjoyment Loop Road & Access Tracks. Improved access to moor: Local residents, tourist and commoners use loop road for vehicle access to moor Reported benefits for access by less able		See Nuisance Auth users required to be considerate of other users DTE SW SO In addition, pilots briefed to avoid horse riders. Exercises involving 4 or more aircraft notified to public. MOD uses leaflets and information boards to promote access unless live firing programmed (see below). Allocated users required to be considerate to other users. See Nuisance. See Landscape	2 2 2	2 2 3	4 4 6	Consider additional methods of notifying the public of military dry tactical training activities Awaiting findings of Tourism Associates' study which should: Assess level of use and public perceptions re. military presence. Provide cost-benefit analysis to identify benefits/losses for tourism. NE would also like to improve linkages with other long distance routes and investigate potential for improvement of car parking facilities.
L	Planned Changes	Replace Holming Beam Trg Area Control to reduce visual intrusion		Planning process being followed	1	1	1	

M	Landscape	Military Debris; (includes flare cases, survival equipment, kit, tin boxes)	Allocated users required to clear up after activities. DTA staff check that clear up is completed. Periodic area clean up by DTA staff and clearers including civilian litter if in areas used by military. Two additional staff (Training Area Marshals) employed from Spring 2007.					
		Loop Road & Access Tracks; visual intrusion/loss of character & indirect impacts	Duchy/MOD licence requires MOD to manage decline of Loop Road, but also permits MOD to maintain it to a standard suitable for its purposes. MOD/Duchy and DNPA work together under auspices of DSG, to agree management plan and works.	2	3	6	Duchy, MOD and DNPA need to agree schedule of work that will allow road to degrade to a track suitable for military and farmer's purposes without causing environmental damage or increasing visual intrusion.	
		<i>NB</i> Local community and tourists value Loop Road for access especially the less able and are opposed to its deterioration.	MOD/DNPA have constructed parking constraints to prevent vehicles being driven onto open moor. MOD has bouldered off tracks to prevent use by military and civilian vehicles allowing terrain to recover.	+2	+2	+4		
		Military vehicles; visual intrusion and erosion (tracks established and encourages unauthorised use).	Military vehicles camouflaged and dispersed. Tourist honey pots avoided. Off track vehicle movement restricted and controlled by HQ DTA.	2	2	4		
		Field sanitation; visual intrusion	Field portaloos with small visual signature that can be positioned by the allocated user close to their location and removed after use is being trialled during 2007.	2	2	4		
		Trench digging; visual intrusion and change in landscape character.	Trenching carefully controlled and refilled after use.	1	3	3		
		Paths caused by trampling; visual intrusion from creation of paths through trampling etc.	Routes varied, tors avoided, variety of navigational techniques (direct line, contouring and use of tracks) Monitored with DNPA Rangers. Nothing of significance noted.	2	2	4		Undertake landscape character and visual impact assessment.
		Noise from firing, helicopters & other aircraft (changes character of the moor, detracts from the experience of 'wildness' & affects 'tranquillity')	See Nuisance					Undertake landscape character and visual impact assessment including assessment of 'tranquillity' and 'wildness'.
		Clearance of civilian litter; landscape character improvement	Military authorised users required to clean up civilian litter in areas used by them. Periodic area clean up by wardens and clearers includes all litter including non-military – assists in keeping the Moor clean.	+2	+2	+4		
Military resourced; management / maintenance.	Military assistance to civil community and civil authority with works e.g. bridge building, track repairs, ditch maintenance, dumped car removal.	+1	+2	+2				

		Willsworthy ILMP; positive landscape management	Landscape with heather and bilberry with granite outcrops maintained through no grazing or burning on parts. Species encouragement. Reddaford Farm – stone walled and enclosed. Species rich hay meadows restored.	+1	+2	+2	
N	Historic Environment	Use of archaeological artefacts to make shelters. Damage or modification of scheduled monuments, artefacts and vernacular features. Generally one report a year; not always proven to be attributable to military Proactive partnering; provision of financial and physical resources.	No disturbance or damage permitted DTE SW SO 447. Education: Posters displayed where service personnel gather and pause. Leaflet, produced jointly with DNPA, to educate Service personnel on importance of historic environment. Maps from English Heritage of sensitive areas. Information Centre set up at Okehampton Camp. DTA staff enforce Standing Orders by supervising training. DTA staff monitor historic environment at least every 6 months. Results are shared with DNPA/EH. English Heritage inspects Scheduled Monuments every 7 years. Corrective actions identified within complaints file. DTE contribute resources to undertake repairs – all noted on reports. Reports made by members of the public. Portaloos provided when troops are gathered together for a number of days. Standing Orders prohibit the use of historic sites and tors as targets. UXO clearance conducted with due regard for historic environment and in accordance with protocol/Standing Order agreed with DNPA. Vehicle movement limited to permitted roads and tracks unless HQ DTA authorises in order to achieve operational training objective. EH historic environment condition survey initiated and partly funded by DTE. Reviewed every 5 years. Problems noted by DTA staff's frequent (at least 6 monthly) monitoring of all upstanding historic environment passed to NPA. Military artefacts that EH, NPA and MOD have agreed as significant, maintained by DTA.	2	2	4	Improve training of DTA staff to ensure that are able to enforce controls English Heritage's historic environment surveys of DTA should be completed. An effective GIS with historic environment overlays should be provided to HQ DTA to assist in exercise planning and briefing. The national significance of DTA's military historic artefacts should be assessed by English Heritage in order that funds can be attributed to maintaining the most significant.
				+2	+2	+4	

		Dartmoor Military Conservation Group & DTA ILMP; positive management		Support to commoners to manage grazing.	+1	+2	+2	
		Conservation of historic buildings.		Historic environment and condition assessment of Doe Tor Farm completed 2007.	1	2	2	Undertake historic environment assessment of Bearwalls, East Okement and Standon and Yellowmead Farms.
O	Geology and Soils	Digging trenches on DTA; Damage to mineral soil strata		Other sites allocated in preference to DTA for basic military skill of digging when possible. Geology considered when digging sites selected and approved by HQ DTA. Allocated users required to backfill trenches and re-turf. DTA staff supervise reinstatement	2	2	4	Monitoring of reinstatement should be demonstrated to concerned stakeholders.
		Military vehicles and other activities that cause tracks and paths; erosion		Standing Orders and maps set out restrictions on military vehicle transit routes. HQ DTA controls vehicle movement off permitted tracks and limits to those having an operational training need. Any rutting caused is repaired. Tracks and roads inspected and repaired. Allocated users conduct reconnaissance and consult with HQ DTA before finalizing the training required to achieve their training objectives. Allocated users submit traces of their intended routes and activity areas. HQ DTA consults with DNPA about routes for large groups (>30) outside of designated training areas. Erosion of footpaths monitored by DTA staff in collaboration with DNPA Rangers. Allocated users encouraged to locate check points off the tops of tors so that movement is off paths and sheep tracks – as well as increasing the difficulty of navigation. Periodic monitoring using aerial photography. Last series was in 1980s. Monitored by DTA staff & Statutory Bodies.	2	2	4	Aerial or other appropriate techniques should be periodically undertaken and comparisons made over time to assess level of recovery from erosion. Improve briefing and/or control of operatives.

P	Health and Safety	Health & safety of military & civilians		Secretary of State for Defence cascades personal direction on safety, health and environment down to HQ DTA and units. Comdt DTA issues annual personal statement on Safety, Health Environment and Fire. Military set out to achieve health and safety standards that exceed best practice and the law. Inspections and monitoring are conducted on behalf of CinC Land by specialists. For military users: MOD publications and DTE SW Standing Orders. Safe System of Training in place including training and risk assessments. Military required to be considerate of other users.	1	4	4	
		Health & safety; residual UXO risk to military, walkers and riders.		Authorised users sweep areas used, clear safe military debris and civilian litter, and report UXO to HQ DTA for disposal by specialists. DTA staff and clearers carry out periodic sweeps to collect safe military debris and civilian litter and report UXO to HQ DTA for disposal by specialists. Because of the clearance, HQ DTA assess that there is little chance of finding dangerous UXO on the moor's surface within DTA but because it does rise to the surface, there is always the possibility of finding an item. Primary school children within West Devon briefed on UXO as part of Junior Life Skills. Warnings about the danger to life from UXO given in DTA publications, web site, firing notices, on warning signs around the range danger areas, in talks to the public etc. Incident reports held from 20 April 03.	1	4	4	Continue to clear surface UXO. Clear buried UXO from areas of high risk and fire breaks.
11. Required Review Date: (Note: To be reviewed annually at a minimum) 31 Jan 08				12. Commander's Endorsement Name: Lt Col J Porter Appointment: Comd DTE SW Signed: Date:				

1. TLBH/HLBH: Organisation: Dartmoor Training Area Department:		2. Reference: DTA 420/6-7 Date: 10 Jul 07 Assessor: Lt Col (Retd) A H Clark Appointment: Comdt DTA Signed:			3. Activity: Live Firing					
4. Relevant Environmental Legislation and Other Requirements (Policy, Licences, Consents, Agreements etc) Live firing area and ranges authorised by Comd 43 (Wx) Bde Ammunition authorised by Ordnance Board JSP 403: Handbook of Defence Land Ranges Safety										
5. Environmental Aspect		6. Description of Environmental Impacts		7. Condition (Normal/ Abnormal/ Emergency)	8. Existing Control Measures (Note: Significance is calculated with existing control measures in place)			9. Significance Rating = (Likelihood x Consequence) Note: A + denotes a positive impact		10. Proposed Controls
A	Emissions to Air					L	X C	= S		
B	Discharges to Water									
C	Solid/Liquid Waste									
D	Hazardous Waste									
E	Land Contamination/ Site's previous uses/ Legacy issues	Ammunition remains; UXO			Ordnance Board control safety of munitions. UXO recovered wherever possible. Legacy UXO and other debris recovered or detonated	1 2	2 3	2 6		
F	Energy & Fuel Use	Power for targets Power for re-charging batteries Power for radios				1	2	2		
G	Water Use									
H	Use of other resources									
I	Nuisance: off and on base									

	(Noise/Odour/Dust/Vibration/Light)						
J	Conservation/ Biodiversity	<p>Reduced grazing pressure resulting in increased molinia. (Particularly need cattle in centre of moor). Also results in increased intensity of grazing on edge of moor.</p> <p>Disturbance of wildlife</p> <p>Closing areas to the public; limits disturbance and protects wildlife.</p>		<p>DTE liaises with commoners to clear stock when live firing is programmed, where possible, into areas where grazing supports their ESA management plans. Close liaison is also maintained with NE to ensure that agreements match their environmental objectives. Local farmers, employed as clearers, move stock minimum distance out of the live firing exercise weapon danger area to agreed locations. Where possible, live firing exercise are planned to enable stock to be moved to areas requiring grazing. Where commoners have requested, the clearers encourage stock to start moving back at the end of live firing.</p> <p>Dry training; Allocated users advised to be careful of stock when dry tactical training. Stock will move short distances when people walk by and slightly further if blank ammunition is fired, but soon returns.</p> <p>No evidence of wildlife being disturbed by bullets and shells because of short duration of impact. Sensitive bird breeding area avoided by troops. Arty HE not used since Sep 98</p>	1	2	2
				2	2	4	<p>Improve management of clearing to encourage stock to preferred areas. Reduce clearing to only the weapons impact area.</p>

K	Community/ Public Interest	Limits access to and use of moor. I		There is guaranteed public access to Okehampton 245 days each year, Willsworthy on 130 days a year and Merrivale 186 days a year. This information is made available on the web, in military and civilian publications, on information boards around the moor, at DNPA Information and Tourist Information Centres. Training programme tailored for units to use on permitted days under licence. Six weeks notice given of live fire programmed. Main variable is weather conditions – cannot fire if cannot observe range danger area (RDA) boundary, so have to allow for days where may not be able to see. Cancellations due to: Bad visibility preventing observation of RDA boundary to ensure public safety. Good weather, days that were programmed in case of bad visibility but become available at short notice, normally at the end of a week of good weather. User cancellation e.g. operational reasons prevent use at short notice. Cancellations notified on web, helpline telephone, NPA Information Centres and Radio Devon. Few complaints from general public regarding military activities. MoD pays commoners for rights to train and pays compensation for stock injured or killed. Incident reports and claims kept by MoD. Only 2 without prejudice payments made in past 10 years.	2	3	6	Awaiting findings of Tourism Associates' study.
		Economy and Employment; Live firing – clearance of stock Economic – impact on stock during calving and lambing.		MoD pays commoners for rights to train and pays compensation for stock injured or killed. Incident reports and claims kept by MoD. Only 2 without prejudice payments made in past 10 years.	+2	+2	+4	
		Payments to farmers for clearing; economic support for local farmers		Payments to 21 clearers, mostly local farmers	+2	+2	+4	
L	Planned Changes							
M	Landscape	Military infrastructure (including lookout shelters, stables, warning signal poles, warning signs, datum points, radio masts and information boards); visual intrusion.		Structures painted in subdued moorland green. Warning signs of reduced size by special dispensation from JSP 403. Stables sited out of sight. Information boards designed and sited with advice from DNPA.	2	2	4	Complete Intervisibility study to determine the least visually intrusive but most effective locations

		<p>Military Debris; (includes flare cases, survival equipment, kit, tin boxes)</p> <p>Fixed range infrastructure (including stop butts, firing points, troop shelters, wardens huts, target stores); landscape character.</p> <p>Stock clearance; inappropriate grazing patterns</p>		<p>Allocated users required to clear up after activities. DTA staff check that clear up is completed. Periodic area clean up by DTA staff and clearers including civilian litter if in areas used by military. Two additional staff (Training Area Marshals) employed from Spring 2007. Willsworthy (MoD freehold) had 3 fixed ranges; Gallery, ETR and MMTT. Okehampton has an Anti Tank Range, the target for which was incorporated into the target railway bank to reduce visual intrusion and the firing points fenced to ensure vegetation grew to blend them into the surrounding moorland. DTA works closely with graziers to achieve ESA Management Plans</p>	1	2	2	Undertake landscape character and visual impact assessment.
N	Historic Environment	Damage to SMs and other cultural heritage.			1	2	2	
O	Lasers	Damage to eyesight		Lasers treated as live weapons and appropriate safety measures enforced.	1	2	2	
P	Health and Safety			<p>Live firing conducted IAW appropriate military regulations and Standing Orders by competent persons using the sage system of training. Observation maintained by lookouts (clearers) over approx 70% of Range Danger Area boundary including main access routes. Live firing overseen by Comdt, D Comdt, Training Area Marshals, Supervisors and staff.</p>				
<p>11. Required Review Date: (Note: To be reviewed annually at a minimum)</p> <p>31 Jan 08</p>				<p>12. Commander's Endorsement Name: Lt Col J Porter RRF</p> <p>Appointment: Commander Defence Training Estate South West</p> <p>Signed:</p> <p>Date:</p>				

TLBH / HLBH	DE/DTE	Issue Date	Mar 07
Unit/Organisation	Dartmoor Training Area	Version No.	VERSION 2.1

Serial (a)	Unique Ref (from Box 1 & Col 8) (b)	Environmental Objective (c)	Performance Measure (c)	Action (f)	Responsibility for Implementation (g)	Cost/Savings (k)	Target Date for completion (m)	Comment (o)
1		Maintain the balance between military impacts and National Park purposes		<p>Conduct Environmental Appraisal (EA) as part of Sustainable Military Training on Dartmoor Project (SMTOD).</p> <p>Implement EA recommendations.</p> <p>Complete Dartmoor Training Area Integrated Land Management Plan (ILMP).</p> <p>Improve fire prevention and first aid fire fighting in order to safeguard moorland habitats and enable training facilities to be made available to troops during periods of fire risk.</p> <p>Press for identification of UXO high risk areas.</p> <p>Request Explosive Ordnance Clearance of any areas identified balancing historic and natural environment conservation purposes with the potential risk reduction.</p>	<p>SMTOD Project Board</p> <p>Comdt</p> <p>Comdt</p> <p>Landmarc</p> <p>Comdt</p> <p>Comdt</p> <p>Comdt</p>		<p>Jan 08</p> <p>Jan 09</p> <p>Jan 07</p> <p>Apr 07</p>	
	6A 6J							
	6C							
	6I							

Serial (a)	Unique Ref (from Box 1 & Col 8) (b)	Environmental Objective (c)	Performance Measure (c)	Action (f)	Responsibility for Implementation (g)	Cost/Savings (k)	Target Date for completion (m)	Comment (o)
	6K 6M			<p>Monitor aircraft activity and reduce noise nuisance where possible.</p> <p>Seek mitigation and improvements to reduce the perceived and actual intrusion of military activities.</p> <p>Duchy, MOD & DNPA need to agree schedule of work that will allow Loop Road to degrade to a track suitable for military and farmers' purposes without causing environmental damage or causing visual intrusion.</p>	<p>Comdt</p> <p>Comdt SLA</p>		Oct 07	SMTOD EA provides open consultative process.
2.		Protect, and where possible, enhance the historic and natural environment.		<p>Implement DTA ILMP Action Plan</p> <p>Produce map of sensitive historic environment sites.</p> <p>Produce map of sensitive habitats from National Vegetation Classification (NVC) Survey.</p>	<p>Comdt with SLA</p> <p>Martin</p> <p>Dominic Ash</p>		<p>Jul 07</p> <p>Jul 07</p>	

Serial (a)	Unique Ref (from Box 1 & Col 8) (b)	Environmental Objective (c)	Performance Measure (c)	Action (f)	Responsibility for Implementation (g)	Cost/Savings (k)	Target Date for completion (m)	Comment (o)
1A 1F 1I 2A 2F 2G		Protect natural resources; maintain air and water quality; reduce water use; improve energy efficiency and reduce carbon emissions		<p>Press for an energy audit at Okehampton Camp to identify further savings.</p> <p>Press for installation of a Building Management System (BMS) at Okehampton Camp and re-vitalisation of that at Willsworthy Camp.</p> <p>Install percussion taps for all sinks and showers and fixed thermostats for all showers.</p> <p>Reduce quantity of lights, wattage and duration used commensurate with safety and security.</p> <p>Use automatic switching wherever cost effective.</p>	Comdt Comdt Landmarc Landmarc Landmarc			<p>Spend to save with short timescales for paybacks should have priority.</p> <p>Decisions will be required on whether the energy saving measures are to be part of Vanguard contract eg output or should be paid for by DTE eg input</p>

Serial (a)	Unique Ref (from Box 1 & Col 8) (b)	Environmental Objective (c)	Performance Measure (c)	Action (f)	Responsibility for Implementation (g)	Cost/Savings (k)	Target Date for completion (m)	Comment (o)
				<p>Use long life bulbs where cost effective.</p> <p>Press for replacement of energy inefficient kitchen appliances.</p> <p>Complete installation of double glazing on all occupied buildings.</p> <p>Install insulation in roof spaces where cost effective.</p> <p>Conduct carbon audit.</p>	<p>Landmarc ESS</p> <p>Landmarc</p> <p>Landmarc MOD</p>			MOD wide audit
3	1M	Reduce the visual impact of the military infrastructure on Dartmoor's landscape quality.		a. Implement Okehampton Camp Landscape Plan.	SLA			
4	1C 2C 5C 6C	Reduce waste sent to landfill; increase recycling and limit carbon emissions.		<p>Press HQ DTE for waste management strategy and funding.</p> <p>Encourage and enable staff to implement self help waste recycling schemes.</p>	<p>Comdt</p> <p>Comdt</p>		<p>Ongoing</p> <p>Jul 07</p>	
5	7K	Improve quality and extent of public access and recreation across Dartmoor Training Area where this is compatible with military requirements.		<p>Manage programming of military activities to maximise public access opportunities.</p> <p>Examine further opportunities to increase public access opportunities.</p> <p>Produce walkers' guide to Willsworthy</p>	<p>Comdt</p> <p>DE EST</p>		<p>Ongoing</p> <p>Oct 07</p> <p>Oct 07</p>	Part of SMTOD EA

Serial (a)	Unique Ref (from Box 1 & Col 8) (b)	Environmental Objective (c)	Performance Measure (c)	Action (f)	Responsibility for Implementation (g)	Cost/Savings (k)	Target Date for completion (m)	Comment (o)
6	7E	Reduce risk from residual UXO, noise and other military impacts.		Maintain pressure for assessment of contamination by residual ordnance when technically possible and, if necessary, return of EOD clearance team.	Comdt through HQ DTE			
7		Maintain preparedness for and resilience to major incidents.	Cooperation and exercises indicate preparedness and resilience	Review emergency action plans. Conduct exercise with fire service, police, ambulance service and Dartmoor Rescue Group.	Comdt Comdt		Jul 07 Sep 07	
8		Further develop stakeholder communication.	Improved understanding of military need and measures taken to mitigate effects of operational training	Implement Positive Image Plan. Maintain active communications with SBs, NGOs, local communities and influential persons. Use media, magazine articles, talks, briefings etc. Improve Dartmoor-ranges.co.uk website by addition of CCTV and meteorological reports. Update DTA briefing video. Consider with DNPA means of enhancing information provision at Okehampton Camp to expand an existing historical display.	Comdt Comdt Comdt Comdt		Ongoing Mar 08 Mar 08	

Serial (a)	Unique Ref (from Box 1 & Col 8) (b)	Environmental Objective (c)	Performance Measure (c)	Action (f)	Responsibility for Implementation (g)	Cost/Savings (k)	Target Date for completion (m)	Comment (o)
9		Maintain an effective measurement and monitoring system in support of continuous improvement.	Knowledge of environment and socio-economic situation in order to mitigate effects of military activities.	As Annex F	Comdt with SLA			SMTOD Project Board are leading on several surveys.

SHEF COMMITTEE TERMS OF REFERENCE

1. The SHEF Committee is to meet three monthly or as required to:
 - a. Review and propose amendments to the Commandant on SHEF policy, organisation and arrangements.
 - b. Identify, evaluate and review all significant environmental aspects associated with the site's activities.
 - c. Maintain the EMS Manual.
 - d. Maintain a high level of Environmental protection (EP) awareness amongst staff and ensure that all staff with specific legislative/compliance responsibilities, or whose job is related to significant aspect have received appropriate training and achieved levels of competence.
 - e. Determine EP objectives for the site's Environmental Programme Management Plan, meeting the requirements of high level EMS management plans, and in a manner consistent with commitments made in the Environmental Policy.
 - f. Set EP targets to ensure that compliance is achieved and demonstrate continual improvement in environmental performance. Maintain management programme action plans to progress and report performance.
 - g. Undertake periodic self-assessments.
 - h. Prepare for, and assist in, SHEF Audits and visits by regulatory bodies.
 - i. Determine funding requirements and prepare budgetary bids to meet action plan targets and ensure legislative compliance.
 - j. Review and maintain emergency action plans.
 - k. Monitor authorised users, contractors, lodgers and tenants to ensure that the organisation is not placed at risk by their acts or omissions when operating within the site.
 - l. Investigate and report on any significant incidents or accidents that pose a significant threat to the environment and recommend remedial and preventative action.

**MINUTES OF DTA'S SHEF MANAGEMENT REVIEW
MEETING HELD AT [] ON []**

Present:		
Apologies:		

Item (a)	Discussion and Decisions (b)	Action (c)
1. Minutes		
2. Introduction and Objectives		
3. Changes	¹	
4. Environmental Audits and Self Assessment	²	
5. Incidents, Near Misses and Complaints	³	
6. EPMP Progress	⁴	
7. Environmental Policy	⁵	
8. Training and Communication	⁶	
9. Stakeholders' Views	⁷	
10. Actions and Recommendations	⁸	
11. Any Other Business		
12. Date of Next Meeting		

¹ List and consider changes to activities, environmental aspects and impacts, and relevant environmental legislation and MOD Policy.

² Give results of environmental audit and self assessment.

³ Review reports on environmental incidents, near misses and complaints (since date of last Review) and ensure that appropriate corrective and preventative action has been identified and implemented.

⁴ Review progress against EPMP and supporting action plans. Review effectiveness of ILMP/EMS integration and EMS at managing rural issues.

⁵ Review Commandant's SHEF Policy.

⁶ Review Training Needs Analysis and Training Plan to identify priorities and agree resource requirements. Review effectiveness of communication measures.

⁷ Consider feedback from and general views of key stakeholders including MOD/Defence Estates, local environmental groups, Government/local authority policy, staff, lodgers, authorised users, tenants, contractors, visitors and neighbours.

⁸ Tabulate item, proposal, by whom, when and resources required.

ENVIRONMENTAL MEASUREMENT

1. Introduction. Environmental measurement is an essential part of the Environmental Management System's checking element. The outputs of many processes are already measured and recorded, for example water quality. For some other processes the data exists but is not interpreted, while for others, there is no data collection. This Annex identifies the purposes of environmental measurement and gives it a structure from which a plan (Appendix 1) is developed.

2. Purposes. Environmental measurement is required to:

- a. Ensure that the existing control measures remain in place and are being enforced.
- b. Determine the effectiveness of the existing control measures.
- c. Validate the environmental impacts and the ratings given.
- d. Assess any environmental impacts not identified in this EMS.

3. The Environmental Measurement Cycle. Environmental measurement can be broken down into separate stages as shown in Figure H – 1 below.

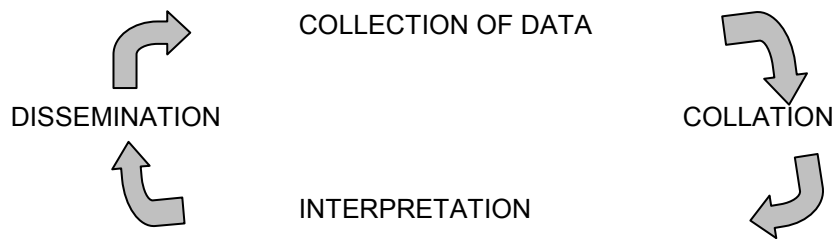


Figure H - 1: Environmental Measurement Cycle

a. Types of Data. Both factual and perceptual data will need to be collected. Factual data on the impact of military training will include energy inputted (radiation, pressure waves, thermal and chemical) as well as the effects on the environment. Perceptions, such as landscape and effect on tourism, will be harder to collect as statistically valid data but will be equally necessary.

b. Collection of Data. Data will be collected from a broad span of sources using varying methods, each appropriate to the subject. The principle should be 'Collect once, use many times'. For consistency of description, 4 types of data collection are identified

- (1) Surveys; a detailed examination and record of features.
- (2) Observations; periodic inspection and record of observations.
- (3) Checks; investigation or verification of a particular issue eg supervision to ensure that identified existing controls are in place.
- (4) Statistics; collection of verifiable numeric data.

c. Collation. In order to answer a particular question, the required data will be brought together and collated. This process may identify a gap in the data requiring additional data collection.

d. Interpretation. In this process of the Environmental Measurement Cycle, the collated data will be analysed and interpreted to answer a particular question, often a performance indicator. Where the interpretation is comparative over a period of time, it is commonly called monitoring.

- e. Dissemination. The report of the data interpretation, often consisting of a summary suitable for the lay reader backed by the detail, will be published and archived. The report will also often include recommendations on the need for additional data or refinement of the interpretation process. These recommendations will be fed back into the Environmental Measurement Cycle.
- 4. Performance Indicator. Rather than attempting to measure every aspect, an indicative sub-set is usually identified thus reducing cost and effort. The performance indicators must be carefully selected to ensure that they are representative of the aspect being measured and acceptable to stakeholders.
- 5. Need for Controls. Because the military have trained on Dartmoor for over 150 years, It is necessary to compare data with parts of Dartmoor on which the military have not trained in order to separate out any impacts attributable to military activities from those caused by other factors. This will require the collection of usage data and measurements on moorland not used for military training to act as controls.
- 6. Other Users and External Influences. The military share Dartmoor with other users. The moor is also subject to external influences. In order to exclude the impacts of these 2 factors from those attributable to military training, it is necessary to collect data on them.
- 7. Consistency. Data collection and interpretation should be consistent, not only over a number of years but also with other organizations. Where possible data should be obtained from measurements already being taken by other organizations, ideally by joint action as other Government Bodies will have similar needs. If this is not possible, MOD will consider sponsoring the appropriate body to carry out the required work. MOD should also use internationally or nationally agreed measurement and interpretation protocols.
- 8. Environmental Measurement Plan.
 - a. The Environmental Measurement Plan, at Appendix 1 to this Annex, details the objectives, performance indicators, methodology to be used, and states by whom, the frequency and when the action is to be completed by.
 - b. Achievement of the Plan is dependant on funding and cooperation with other stakeholders.

ENVIRONMENTAL MEASUREMENT PLAN

Srl	Question	Performance Indicator	Method	By	When	Remarks
1.	Does Military activity accord with planning conditions?	Number of breaches	Observation	Training Area Manager	Reports to Comdt Biannual reports to DWP	
2.	How much military use takes place each calendar year?	Man Training Days by area, by type of training, by unit	DTA Statistics	DTA	Annually. Statistics agreed with DNPA and presented to DWP at Spring meeting	Improved presentation being investigated
3.	How much other use takes place each calendar year and what is the impact? a. Agricultural use. b. Public access use. c. Grazing. d. Water extraction. e. Traffic.	By area, by number By area, by number	DEFRA Statistics DNPA Statistics ESA	DEFRA DNPA NE EA/SWW DCC Highways	? ?	Answers to these questions are needed in order to isolate military effects
4.	What is the impact of external influences? a. Global warming.					Use open sources already researched
5.	How is the Historic Environment impacted by military training? a. Visual checks for damage. b. Visual Condition survey.	No damage caused by military	Visual Visual For Cramber: Representative	DTA DE EST	Quarterly Annually	Reports compiled for observed damage or potential for damage. Use DE/EH Condition assessment form

Srl	Question	Performance Indicator	Method	By	When	Remarks
	c. Condition survey.	7. SMs in good condition	sites as assessed for ES. EH methodology	EH or specialist surveyors	Quinquennially	Support EH to fulfil their statutory requirement.
6.	How is Dartmoor's landscape impacted by military training?	Acceptability to Local Planning Authority in the context of the Dartmoor Management Plan	Landscape and tranquillity assessment Any proposed changes assessed against the Dartmoor landscape assessment., if necessary through planning applications and consultation Quantify the military structures on the open moor Intervisibility Study of warning signals and lookouts Aerial photo survey to identify change in tracks and paths.	ENTEC DTE SW DNPA Comdt DE GIS ?	Mid 2007 As required Early 07 Early 07 Mid 07	Surveys need to deal with objective evidence and public perceptions Includes both permanent and temporary structures Building Index provides data, supported by Survey of historic structures. Photographic evidence might be useful Nearly completed Air photos located
7.	7.1.1.What is the impact of military training on the ecology of Dartmoor?					

Srl	Question	Performance Indicator	Method	By	When	Remarks
	a. Impact of military training on habitats.	Habitats improving	NVC and condition survey of north Dartmoor.	MOD	Quinquennially 2010	NVC in 05 & 06 ESA Condition Surveys
		Habitat in improving status	SSSI Condition Survey	NE	?	
			DEFRA clustered quadrats	NE	?	Areas of troop concentration added.
			Crater survey	MOD		In next 10 years. Doubtful validity .
	b. Effect of stock clearance.		Grazing Index Performance	NE		
	c. Impact of military training on wildlife.					
	(1) Birds	Quantity of breeding pairs consistent or improving	Breeding Bird Survey using similar methodology to 06	MOD with RSPB	Quinquennially 2011	Breeding Bird Survey 06
			Specific rare bird species surveys	DNPA	?	
			MOD Annual Bird Survey Willsworthy	DTA Cons Gp	Annually	Using BTO methodology since 06
			Effect of noise on birds.	DE	Early 2007	Use research already conducted elsewhere.
	(2) Marsh Fritillary			TBC	Annually	Support Dartmoor BAP
	(3) Damsel Fly		Transect walks	TBC	Annually	Support Dartmoor BAP
	d. Effect of global warming on habitats and species.		?			Use research already planned elsewhere on the

Srl	Question	Performance Indicator	Method	By	When	Remarks
						Defence Estate.
8.	What is the effect of military training on public access to Dartmoor?		Survey of public attitudes Complaints and comments made to the Dartmoor Working Party	DE EST	Quinquennially Biannually	See also Landscape North Dartmoor 04/05 Cramber 06/07 Tourism Associates 06.
9.	What is the effect of military activities on other land users?					Tourism Associates Report on socio-economics and tourism due Apr 07.
10.	What is the effect of military training on water quality?		EA methodology.	EA	Early 2007	EA data published on internet shows no effects.
11.	What is the effect of military activity on the use of natural resources?		Maintain energy and water use records		Ongoing	
12.	What is the effect of military training on Local Communities? (1) What is the effect of military activities on tourism? (2) What is the effect of military activities on the economy of local communities? (3) How much noise does military training generate and what is the impact of it on the local communities and wild		Survey of noise on North Dartmoor.		Early 2007	Tourism Associates Report on socio-economics and tourism due Apr 07 Tourism Associates Report on socio-economics and tourism due Apr 07

Srl	Question	Performance Indicator	Method	By	When	Remarks
	life?		Identify receptors, and volume and frequency of noise received.			