

## **DEFENCE POLICY: FUTURE TRENDS TO 2050**

### **HIGH LEVEL ASSUMPTIONS REPORT**

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9 June 2004

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# 1 Introduction and Background

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## Introduction

- 1.1 The purpose of this paper is to set out the background logic for the continued need for training land in the UK generally and specifically the continued need to train on Dartmoor. The requirement is to make High Level Assumptions on possible Training Demand out to 2050.
- 1.2 The paper uses 'open source' information and has the following structure:
- 1.2.1 Section 1 - Background sets the current size and shape of the Armed Forces in an historical context and in the light of existing foreign policy.
- 1.2.2 Section 2 - Current Trends in Defence Policy identifies the trends in Defence Policy drawn particularly from the specific Planning Assumptions set out in the Defence White Paper (Dec 2003).
- 1.2.3 Section 3 - The Armed Forces Training Demand sets out, in general terms, the current regular formations and structure required to meet the Planning Assumptions detailed above and those units requiring regular access to the Army Training Estate. The paper does not consider air or helicopter activity except where it is in direct support of ground units. The continued need for training culminating in Collective Training relating to these formations is also described.
- 1.2.4 Section 4 – The Training Estate describes the major training areas together with their prime users. Other factors affecting the training demand including the opportunity for overseas exercises are also considered.
- 1.2.5 Section 5 – Simulation considers the use of Simulation and whether in the future this would change the requirement for Training Land in the UK.
- 1.2.6 Section 6 – The Royal Marines describes the size and structure of 3 Cdo Bde.
- 1.2.7 Section 7 – Summary of Assumptions collates the assumptions are made at the end of each Section.
- 1.3 There are certain key studies currently being undertaken by MoD that have the potential to affect the Assumptions made in this paper. A review of these Assumptions, therefore, may have to be conducted as these studies come to fruition. Relevant studies include:
- The Core Sites Review
  - The Defence Training Estate Review

- Future Army Structure
- Review of Training Over Private Land

1.4 This paper does not draw conclusions.

## **Background**

- 1.5 “British Defence and Foreign Policy has for almost all the time since 1945, and probably earlier, been afflicted by a shortage of resources”.<sup>1</sup> The Healy Review of the mid 1960s was conducted in the wake of the end of National Service, the retreat from Empire (in particular from East of Suez) and an economic crisis brought on by the delayed effects of the Second World War. Likewise the Nott Review of 1981 was an attempt to bring the defence programme into line with resources and the 1990 Options for Change was a first cautious attempt to realise some savings from the end of the Cold War. The subsequent Defence Costs Study was a cost reduction exercise. The SDR of 1997-8 was in principle different in as much as it was publicly stated to be policy led, not resource led. However it was the MoD’s contribution to a Whitehall-wide series of expenditure reviews in which it was made clear that programmes could not outstrip resources and to this extent it fell into the same general pattern.
- 1.6 This hard nosed approach to defence spending has persisted for over 50 years and is unlikely to change. The commitment by successive governments in recent history to a relatively proactive Foreign and Defence Policy is thus dependant on national resources. As long as the United Kingdom remains the World’s fourth economic power, a member of the EU, a signatory to the NATO Alliance and a permanent member of the UN Security Council, then it is likely that it will remain both useful and necessary for British governments to continue to use its Armed Forces as an instrument of Foreign Policy and for Britain to continue “to punch above its weight” in world affairs. In so far as it is possible to forecast, Britain’s geopolitical status is unlikely to change substantially in the next 20-30 years, but as China starts to emerge as a world economic power and as demographic trends start to exert a malign influence on the economic clout of European nations including Britain, the UK’s relative position as a world power may start to decline beyond 2030. Be that as it may, Britain’s foreign policy objectives show no likelihood of changing in the foreseeable future. Thus for as long as British Governments continue to use the Armed Forces in support of Foreign Policy objectives then the Armed Forces have to be of a certain size and composition with a defined capability for expeditionary use that is broadly similar to its current size and shape. If Defence cuts are required they are more likely to involve “big ticket” equipments such as

aircraft or ships. Thus it is very difficult to envisage circumstances in which manpower in the Army (and the requirement to train it collectively) will be reduced below 100,000 up to 2030 and most probably up to 2050.

- **Defence is an essential part of achieving the Government's wider Foreign and Security Policy objectives both through military operations and Defence Diplomacy;**
- **Our forces need to be prepared to conduct the full range of operations from warfighting through to peace support operations;**



**Defence White Paper Dec 2003**

## **Assumptions**

- **The Armed Forces will have a broadly similar size and shape and therefore a similar need to train collectively out to 2050.**

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<sup>1</sup> The Making of British Defence Policy, William Hopkinson, The Stationary Office, 2000

## 2 Current Trends in Defence Policy

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2.1 Current defence planning and procurement trends are setting a clear pattern for the next 30 years at least. The Secretary of State for Defence in his Foreword to the 2003 Defence White Paper states, ***“Our focus is now on delivering flexible forces able to configure to generate the right capability in a less predictable and more complex operational environment. This will require us to move away from simplistic platform-centric planning to a fully networked enabled capability able to exploit effects-based planning and operations, using forces which are truly adaptable, capable of even greater levels of precision and rapidly deployable”***.<sup>2</sup>

2.2 The Defence White Paper goes on to make further fundamental points relevant to the size and shape of our Armed Forces:

- A need for Armed Forces equipped for deployment on expeditionary operations, usually as part of a coalition;
- That the largest operation envisaged is a regional conflict, although the ability to reconstitute larger capabilities in the event of a re-emerging strategic threat to NATO must be maintained;
- British Forces need to be able to conduct the full range of operations from war-fighting through to peace support operations;

**Medium weight forces will not, however, remove the requirement for heavier armoured forces, the attributes and advantages of which were demonstrated in the conflict in Iraq.**

**Defence White Paper Dec 2003**

- As well as remaining actively engaged in and around Europe, the near East, North Africa and the Gulf, Britain must extend its ability to project force further afield than the SDR envisaged, in particular across sub-Saharan Africa and South Asia;
- The wider threat from international terrorism will require British forces to engage in conflict prevention, peace support and counter terrorist operations.
- Multiple concurrent small to medium scale operations will remain the most significant factor in our force planning;

- The UK must maintain a broad spectrum of maritime, land, air, logistics, C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance & Reconnaissance) and Special Forces capability elements to conduct limited national operations, or to be the lead or framework nation for coalition operations, at small to medium scale;

2.3 Specific planning assumptions are defined in the 2003 Defence White Paper Planning Framework Document as follows:

- As a norm, the MoD should be able to mount:
  - An 'enduring' Medium Scale peace support Operation simultaneously with an 'enduring' Small Scale peace support Operation, and
  - A one-off Small Scale intervention Operation.
- The MoD should be able to reconfigure the Forces rapidly, in order to carry out:
  - An 'enduring' Medium Scale peace support Operation, and
  - A Small Scale peace support Operation simultaneously with
  - A limited duration Medium Scale intervention Operation.
- Given time to prepare, the MoD should be capable of undertaking:
  - A 'demanding' one-off Large Scale Operation, while maintaining a commitment to
  - A 'simple' Small Scale peace support Operation.
- Additionally the MoD has to take account of standing commitments such as Quick Reaction Alert Aircraft guarding UK airspace.
- Definitions
  - Large Scale can be defined as a Divisional task, i.e. Iraq in 2003.
  - Medium Scale can be defined as a Brigade task, i.e. Afghanistan in 2001.
  - Small Scale can be defined as a Battle Group task, i.e. Macedonia in 2001.

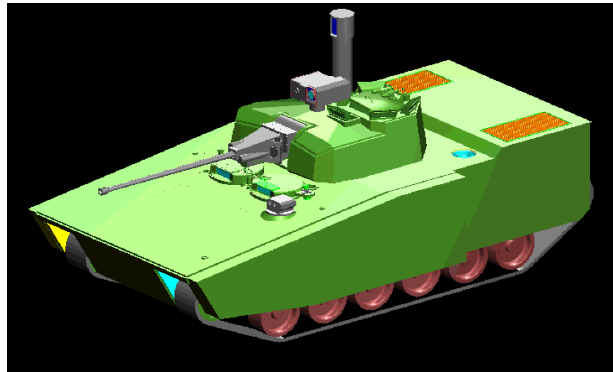
2.4 The Conservative Party has indicated that it might reduce the Defence Budget. If it did so, certain "big ticket" items such as Eurofighter might well be vulnerable, but the mindset of the

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<sup>2</sup> Delivering Security in a Changing World, Defence White Paper 2003

Conservative Party throughout its history has never wavered from a robust Foreign and Defence Policy which has emphasised Britain's status as a world power.

- 2.5 Future Rapid Effects System (FRES) is due to enter service in 2010. FRES is a family of new vehicles not a capability. They will largely replace the SAXON wheeled personnel carrier and the ageing 432 series. The majority will go to medium forces. It will weigh 10-22 tonnes and be air portable.



**FUTURE RAPID EFFECTS SYSTEM**

- 2.6 Future Army Structure (FAS):- the intention of FAS is to provide a war fighting Army:

- Geared for expeditionary operations
- Structured for most likely tasks at brigade level
- Able to generate forces for less frequent but larger deployments
- Balanced in combat capability
- Able to deploy, support and maintain forces on operations
- Rebalanced within current strength
- With integrated reserves
- Resilient and robust with more predictable tour intervals

2.7 FAS will be implemented in Phases out to 2009. The end state for FAS is:

***“An agile, balanced intervention capability consisting of medium and light forces underpinned by effective, capable heavy forces able to conduct the full spectrum of operations”<sup>3</sup>***

2.8 It is, therefore, safe to conclude that the size and configuration of Britain’s Armed Forces are likely to remain essentially the same for the foreseeable future. In the unlikely event of significant equipment defence cuts, these would not affect Britain’s capability to mount expeditionary operations in conjunction with allies, and therefore not affect the training requirement either.

<p>Defending the UK, protecting our interests overseas, dealing with the proliferation of WMD and addressing the threat from international terrorism require a clear focus on projecting force, further afield and even more quickly than has previously been the case. This places a premium on the deployability and sustainability of our forces, sometimes in circumstances where access, basing and overflight cannot be guaranteed.</p> <p>The added demands placed on our Armed Forces by the expanding range of tasks and greater geographical scope of deployment will require our forces and their supporting structures to be more flexible and adaptable. Multiple concurrent Small to Medium Scale operations will be the most significant factor in our force planning.</p> <p><b>Defence White Paper Dec 2003</b></p>	<p>To meet the challenges of the future, in particular the threats posed by international terrorism and the proliferation of WMD, and maintain a qualitative edge over potential adversaries, we will need to continue to modernise our forces to concentrate on the characteristics of speed, precision, agility, deployability, reach and sustainability.</p> <p><b>Defence White Paper 2003</b></p>
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<sup>3</sup> ACGS Future Land Operations 24 Mar 04

## **Assumptions**

- **The Armed Forces will need to be able to conduct the full range of operations from war fighting to peace support operations.**
- **The Armed Forces will continue to need to train for the most testing and demanding end of the spectrum of conflict; that is to say, war fighting.**
- **The Armed Forces will have to be prepared at all times to mount peace support operation as well as intervention at short notice and forces will have to be trained and ready for this contingency**
- **Given time, the Armed Forces should be capable of Large Scale Operations – these would be likely to require a capacity for ‘surge training’.**
- **The size and configuration of Britain’s Armed Forces are likely to remain essentially the same for the foreseeable future though the trend will be towards light formations for expeditionary operations.**
- **There will be a continued requirement for armoured formations.**

## 3 The Armed Forces Training Demand

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### The Overall Training Demand

- 3.1 Britain's Regular Armed Forces in early 2004 number some 212,600.<sup>4</sup> This includes trained and untrained personnel, Full Time Reserve Service (FTRS) personnel and Ghurkhas. It excludes the Home Service battalion of The Royal Irish Regiment, mobilised Reservists and Naval activated Reservists.
- 3.2 The Regular Army numbers 116,670. For the purposes of this paper is useful to summarise combat units, since it is through these that the collective training requirement is best determined. Combat units currently consist of: 6 x armoured regiments, 4 x armoured recce regiments, 9 x armoured infantry battalions (Warrior), 6 x mechanised infantry battalions (Saxon), 25 x light infantry battalions (including 3 x airborne battalions - only one in para role - and 2 Ghurkha), 1 x Special Forces (SAS) regiment, 11 x artillery regiments, 4 x Air Defence regiments, 12 x engineer regiments, 5 x Army Aviation Regiments and 4 x independent flights.
- 3.3 This is, therefore, a total of 83 x combat arm units which does not include logistic and support units, which also have a requirement for training facilities. About 32 of these major combat units are located in Northern Ireland, Germany, Iraq, Cyprus, Brunei or the Balkans, leaving about 50 in Great Britain at any one time.
- 3.4 The Regular, deployable Brigades in the UK are:
- 3 Cdo Bde (Plymouth)
  - 1 Mech Brigade (Bulford)
  - 12 Mech Brigade (Tidworth)
  - 19 Mech Bde (Catterick) – to be re-roled as a light brigade
  - 16 Air Assault Brigade (Colchester)
  - 2 Inf Bde (Dover)
  - 52 Inf Bde (Scotland)

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<sup>4</sup> The Military Balance, IISS 2003-2004

- 3.5 The Royal Marine Commandos (3 Cdo Bde) consists of 5 x major units and other supporting minor units. These are located in the South West other than a single Commando in Arbroath in Scotland.
- 3.6 There is a new requirement to train the 14 x Civil Contingencies Reaction Force (CCRF), each 500 strong, which are being formed from the Territorial Army (TA) nationwide from within existing manpower. The threat from terrorism will require an increase in the number of exercises undertaken in conjunction with the emergency services.

**The New Chapter committed us to improvements in liaising with the civil authorities and emergency services and gave a new role to the Volunteer Reserves – the Civil Contingencies Reaction Force (CCRF). The 14 CCRFs are a way of organising the Volunteer Reserves to exploit their individual and collective strengths based on existing Territorial Army infantry battalions. We have established new posts to administer the CCRF role and their training programmes – an additional two training days for all Volunteer Reserves for tasks assisting the civil authority and an additional five for all CCRF volunteers.**

**Defence White Paper Dec 2003**

- 3.7 No diminution in Cadet Units (ACFs/CCFs) and University Officer Training Corps (UOTCs) throughout the UK is planned.

## **Assumptions**

- **There will be no reduction in the size and shape of deployable forces based in the UK**
- **Any marginal reduction in Army units based in the UK will be compensated by reductions in units located in Germany and Ireland**
- **The Armed Forces training demand in the UK will remain generally the same.**

## The Need For Training

- 3.8 The 2003 Defence White Paper states: ***“robust and effective collective military training is critical to the generation of capable forces and the need for more rapid response times will require both joint and combined (i.e. with allies) training to be undertaken on a regular basis before specific operations have been identified. It will continue to be underpinned by a number of fundamentals, including single-service ethos and fighting spirit, and effective lower-tier training activity in the maritime, land and air environments. However the focus will be on joint, combined and fully integrated training for operations that cross all components of capability. To meet these demands we must continue to exercise at the operational level.... Additionally our more routine tactical exercises will build in a greater degree of joint training to ensure that we can meet the full range of short notice Small and Medium Scale commitments. In the future this will include novel ways of using a network of live and virtual training environments”.*** (our emphasis).
- 3.9 Indeed arguably, what differentiates the British Army from other armies (with the exception of the US Army) is its insistence on Field Training Exercises (FTXs) at formation level (brigade and above). These take place at BATUS in Canada, Germany (which is becoming an increasingly expensive option), Poland and periodical FTXs such as Exercise SAIF SAREEA in Oman in 2001. To be capable of undertaking Formation level FTXs it is first necessary to undertake individual, section, platoon, company and battalion level training. Inevitably most of this, for UK based units, takes place in UK on the Army Training Estate.
- 3.10 There is an increasing demand for multinational training both at the individual and collective level both in UK and overseas.
- 3.11 The relative shortage of training land, particularly for armoured manoeuvre training and live firing as well as the costs associated with training and the need to minimise disruption to servicemen already suffering from the effects of overstretch is resulting in more centralised control of training activities.

The new capability we plan to introduce will only be effective when employed by highly trained, professional forces. Alongside the investment in equipment and systems, we will also invest in training the people that operate them to develop the skills they will need to realise the potential benefits of the new technology.

**Defence White Paper Dec 2003**

## **Assumptions**

- Training and in particular field training, will remain essential to the delivery of military capability.
- Field training in the UK will have to accommodate both Regular and Reserve forces.
- Training will continue to be progressive.
- There will be a trend towards more 'Directed' training in the future.

## 4 The Training Estate

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### The Size and Utility of the Training Estate

- 4.1 The primary and overriding purpose of MOD's relatively undeveloped rural estate is to enable the Armed Forces to train and weapons to be trialled and tested. It has to be sufficiently diverse and challenging to permit the training of personnel and testing of weapons in the wide spectrum of environments and scenarios that UK forces may be expected to face. It also has to be capable of being used safely and sustainably. Programming activity on the rural estate is complex and, as is presently the case, can be compounded by high levels of unprogrammed operational commitments. It is important that the rural estate can accommodate changes in tactics, methods of training, force levels and advances in equipment<sup>5</sup>.

**Our rural training estate, as well as being responsive to changes in tactics, organisation and global security, has to be capable of adapting to developments in weapon systems. Modern, long range, high energy and mobile weapons require more space and larger areas than their predecessors.**

**The Strategy For The Defence Estate**

- 4.2 The MoD (Defence Estates) is committed to achieving the Government's target of introducing Environmental Management Systems across the Rural Estate. This commitment to sustainable management will be delivered through appropriate Integrated Rural Management Plans<sup>6</sup>. However the continued pressure to manage the Rural Estate in a sustainable way, as with the increased emphasis on public access, has the potential to erode the utility and lower the capacity of key Training Areas.
- 4.3 The **Rural Elements of the Estate Strategy Report** acknowledges that the means to measure the long term need for training land is a demanding task, however it will be necessary to develop such a methodology in order to provide a greater transparency over the need for the rural estate possibly using the same methodology as was applied to ATE SP.
- 4.4 The rural land owned or occupied by the MOD must:
- Provide the Armed Forces with cost-effective, safe training facilities in a variety of environments and scenarios in order to achieve and maintain required operational

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<sup>5</sup> In Trust and On Trust, The Strategy For The Defence Estate

<sup>6</sup> Defence Estates – The Rural Elements of the Estate Strategy Project

capabilities. UK-located facilities must be augmented by facilities overseas in order to cover the full range of operational environments that UK forces may encounter.

- Provide the Armed Forces and our defence equipment agencies and contractors with the field facilities for personnel and equipment research, trials and development, for the proofing of munitions and the testing of equipment.
- Provide cost effective, safe ranges and training areas to enable the Armed Forces to develop proficiency and confidence in their weapon systems.
- Provide cost effective, safe training facilities for the Armed Forces' cadet organisations to achieve their objectives.
- Provide safe training facilities for other agencies or Governments that have a need for such facilities, where it is in the UK's wider security interests.

4.5 The main training areas available in Great Britain are:

- Salisbury Plain (up to Battlegroup level FTX, Tactical Engagement Simulation (TES) exercises and Armoured Manoeuvre Training.)
- Stanford (OPTAG Rural Training)
- Hythe/Lydd (OPTAG Urban Training)
- Catterick (Phase 2 Infantry Training and back door training for 19 Mech Bde)
- Warcop (Phase 2 Infantry Training)
- Otterburn (Artillery and Infantry Training)
- Sennybridge (Phase 3 Infantry Training)
- Dartmoor (Light Forces i.e. light infantry battalions and Royal Marine Commandos up to Unit level).
- Bovington/Lulworth ((Individual and Crew training for Armoured/Mechanised units.)
- Castlemartin (Gunnery Standard Test Exercises up to subunit level for Warrior and Challenger)
- Cape Wrath (Naval Gunfire Support)
- Spadeadam (Electronic Warfare)

4.6 Training Over Private Land (TOPL) is used, particularly in Scotland and Wales, to augment and enhance the MOD Training Estate. TOPL, while extremely valuable to the MOD, does not provide the utility and facilities, particularly live firing, provided by the MOD Training Estate. A review of TOPL is currently being conducted.

**We do not envisage any future acquisitions of training land.**

**Smaller training areas, often associated with particular barracks or garrisons, are necessary for individual and team training. These need to be readily accessible to make the most efficient use of limited time and minimise unnecessary travelling.**

**The Strategy for the Defence Estate**

4.7 The UK Training Estate is an historic legacy; it is constrained in its utility by, among other things its size, location and terrain. There are, of course, further training facilities available overseas such as in Canada, Kenya, Cyprus, Belize and Brunei and indeed these are a very necessary extra facility to provide realistic training in different topography (i.e. jungle or desert) and in different climates. However these are an expensive option, facilities are often limited and availability is not always guaranteed.

4.8 It is key to any analysis of future training demand to understand that there has been an exponential increase in the area of influence that a Battlegroup can command owing to its increased mobility, the range of the weapon systems as well as their surveillance and target acquisition capabilities. This increase in range and capability has not been matched by any significant increase in the size of training areas or the overall size of the training estate. Until the 1970s ATE Salisbury Plain (ATE SP) could easily sustain a brigade level exercise. With the advent of armoured/ mechanised brigades in the UK and the introduction of faster and more capable weapon platforms such as Warrior and Challenger, as well as the demands of TES training, the maximum mechanised or armoured exercise that ATE SP can now accommodate is a Battlegroup. The result is that, in terms of their utility and capacity, training areas have effectively shrunk.

**The MOD complies with the Government's strategy for sustainable development detailed in the Framework for Sustainable Development on the Government Estate and undertakes environmental policy appraisals of all new or revised policies and equipment acquisitions. A pan-MOD group drives the development of performance indicators and action plans to meet the Framework's targets. The MOD is also committed to the UK Biodiversity Action Plan and the Government's Better Quality of Life key objective to reverse the decline in UK wildlife and its habitats.**

**Defence White Paper Dec 2003**

## Assumptions

- The size of the Training Estate is unlikely to increase despite the more demanding training requirement.
- The process to measure the long term need for rural training land and to address the issues of matching environmental constraints to MOD's longer-term operational requirements will assist in informing future work.
- The pressure to manage the estate in an environmentally sympathetic manner will increase with consequential reduction in utility and capacity.
- Overseas Exercises will continue to be an important part of the overall training programme but are no substitute for UK based facilities given their cost of use and limited availability.
- The rural training estate will continue to require a mix of terrain and topography in order to provide variety and challenge in training.
- The increased 'reach' of light roled forces will mean that use of several training areas and Training Over Private Land will be required to exercise Battlegroups and Brigades

## Future Demands on the Training Estate



**Salisbury Plain Training Area**

- 4.9 ATE SP is now prioritised for Tactical Engagement Simulation (TES) exercises and armoured manoeuvre training. With the likely increase in the proportion of light battalions in the Army order of battle, ATE SP throughput is likely to be at least 10 x battalions per year. The effect of this new development is that training will necessarily be displaced from ATE SP to elsewhere potentially increasing the demand. Constraints have already been imposed for activity levels on ATE SP in order to reduce the amount of bare ground on the designated chalk downland. This situation may be exacerbated with the introduction of FRES.

Without prejudice to any urgent or special training requirements, where a report identifies- significant environmental damage or environmental damage which is likely to become significant in the near future, training shall be rescheduled, reduced or redirected with a view to protecting or rehabilitating the relevant area of the Plain.

**Unilateral Planning Declaration for Salisbury Plain by the Secretary of State for Defence**

- 4.10 As troop levels in Northern Ireland decrease from the current 11,000, there are likely to be more troops located in Great Britain on standby for “surges” to reinforce Northern Ireland if necessary. Arguably therefore this will increase the training requirement in England, if not in Northern Ireland.
- 4.11 One of the findings of “Operations in Iraq” (produced by DGCC, July 03)<sup>7</sup> was that logistic units need to improve their basic infantry skills. This again has the potential to increase the demand on training areas with a priority for light roled or dismounted training.
- 4.12 Whilst there are signs that Army recruiting has improved somewhat in 2003/04, retention has not. Thus it is necessary to motivate 25,000 new recruits each and every year. This can only be achieved by the provision of proper training facilities. Moreover the Armed Forces are required to change roles on a regular basis and therefore need to retrain for different roles with different equipment. Career Course Training is required in order to qualify Servicemen for promotion and the complex systems that the modern soldier is required to operate can easily result in skill-fade even when on operations. Thus more than their civilian counterparts, the modern soldier is in constant need of retraining. With a larger army there would arguably be less need for retraining, but one of the penalties of a small, highly mobile Army is that it is required to carry out a wide spectrum of roles with a small number of troops. This is a demanding training requirement and therefore there will be a continuing need for easy and regular access to suitable training areas by Army Training Regiments and Arms Schools.

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<sup>7</sup> Operations in Iraq, DGCC, July 03

**To achieve our mission within this challenging strategic environment will require flexibility across Defence, from our people, structures and equipment. We must adapt to stay ahead of potential adversaries and be prepared to make tough decisions to ensure that our forces and equipment deliver the required capabilities. Force structures will need constantly to evolve as we seek to exploit new technologies, techniques and equipment to improve capability and respond to the changing strategic environment. Through this process of continuous improvement and adaptation, we will ensure our Armed Forces are ready and equipped to face successfully the challenges of the future and contribute to wider international security. Defence White Paper Dec 2003**

- 4.13 As mentioned above, the increasing capability of weapons and surveillance systems will inevitably lead to a less dense battlefield. Realistic field training for the 'less dense' battlefield will be more demanding in terms of the size of the estate.
- 4.14 New weapons systems i.e. FRES (a new family of wheeled and tracked vehicles) will be widely deployable by aircraft, and will be lighter and can therefore be more easily used in UK Training Areas.
- 4.15 The level of operational activity of the British Armed Forces in any given period of time can dramatically affect the implementation of the Exercise Programme. For instance, approximately 350 exercises were listed annually in 2002 and 2003. 69 of these exercises were cancelled in 2002 and 151 in 2003. Additional operational commitments in 2002 included deployments in Afghanistan as well as in the UK in Aid of the Civil Power resulting from the Foot & Mouth outbreak. In 2003 the two major additional operational commitments were to Iraq and as a result of the Fireman's Strike. Of those exercises cancelled in 2003 "some ten per cent"<sup>8</sup> were deleted by countries other than the UK. To balance these cancellations there were short notice additional requirements for exercises before deployment on operations. Examples are exercises carried out on STANTA prior to Iraq deployments in 2003 and on DTA prior to deployment in Sierra Leone in 2000. The conclusion to be drawn from these statistics is that the exercise programme is subject to change and cancellation, to quieter periods and to surges. Therefore there must be a degree of redundancy built into the system. DTA for example was used extensively to train individual reservists prior to deployment to Iraq.
- 4.16 The demand for space and time on the ATE is based upon a training model – currently the Formation Readiness Cycle. This model assumes that all forces are in the UK and training in

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<sup>8</sup> Hansard, 4 Feb 04

accordance with the model requirements and does not therefore take into account of operational commitments with the consequential short notice training.

We are also looking carefully, in light of lessons identified from operations in Iraq, at how we can improve the ability of our forces to prepare in advance of a commitment to specific operational deployments.

**Defence White Paper Dec 2003**

- 4.17 As set out above, training in recent years has not matched the model precisely because of the demands of operational commitments and it is a fairly safe assumption that such commitments will continue to be factor in the future. Attempting to predict these commitments which the Forces may face in the future or to use actual training levels in the past (i.e. levels which have been disrupted by operational commitments) would not be a valid approach to assessing demands which could be placed upon the training estate. Using a worst case in terms of demand based upon the training model is the only method by which the MoD can usefully assess the requirement for training land.

As well as helping to sustain relative peace in Northern Ireland ahead of a final settlement, Defence has also played an important role in supporting the civil authorities in responding to a range of civil contingencies. The availability of a pool of highly trained service personnel, combined with expertise in crisis management, planning and command and control, has seen the Armed Forces deployed to support civil authorities during the fuel dispute, foot and mouth outbreaks, flooding and most recently on Operation FRESCO during the fire services' pay dispute. The Armed Forces' performance was widely praised, but there was inevitably an impact on personnel and the training and preparedness of units for their operational roles, particularly as Operation FRESCO coincided with the start of the campaign in Iraq.



## Assumptions

- There needs to be the flexibility and availability on the Army Training Estate in order to cope with changes in weapon systems, training policy and operational demands.
- Future training requirements will be more demanding on the estate than in the past.

- **Given the high level of operational deployments over the last 10 years, historical usage data for the Training Estate will not reflect an accurate picture of future demand. The demand for training space and time must be based upon the training requirement.**

## 5 Simulation

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Simulator based training can make a significant contribution to the achievement of training objectives. But it falls well short of the realism provided by field training, particularly for large formations. It complements other training but is not an alternative. Troops must have confidence in themselves, their equipment and their commanders.

### The Strategy for the Defence Estate

- 5.1 With the pressures exerted by lack of time and space to train combined with the range of operational commitments now facing the Armed Forces as well as the requirement to evolve into a more easily deployable force, the training challenge for the Armed Services has never been greater. All Services have invested in simulation over the last decade but it is the Army (including the Royal Marines) where there is a direct link between simulation and the demand for training land.
- 5.2 Simulation can be considered in terms of: Constructive, Virtual and the Live Environment. **Constructive Simulators** focus on process and procedures. Examples in use are the Combined Arms Staff Trainer and the Battlegroup Command and Control Trainer. These are utilised to train and practice Commanders and Staff at Battlegroup level and above in the procedures used in the conduct of operations. **Virtual simulators** use simulated vehicles with virtual reality technology to practice processes and skills from crews to Headquarters Staff. Examples of virtual simulators are the Combined Arms Tactical Trainer and the Apache flight simulator. The limitations of Constructive and Virtual simulators are that they do not replicate the harsh reality of the real environment. Crews do not have to operate complex equipment when wet, cold and tired over long periods, or operate in the real ground and weather environment that makes judgment of time and space or operating at night and across country so much more demanding than in a virtual world. Nor do they replicate the true topography of the Battlefield as the granularity of the simulation is too coarse to accurately represent the difficulties of manoeuvring around the Battlefield. What Constructive and Virtual Simulators do achieve, is to enable crews, staff and commanders to arrive at the next stage of training at a higher, better prepared standard, than previously, and consequently units complete their training to a higher level of operational readiness.

- 5.3 Simulation in the context of the **Live Environment** (i.e. field training) provides the units with a more realistic and more demanding training that reproduces as near as possible the demands, challenges and friction of real operations. Tactical Engagement Simulation exercises provide these opportunities. Simulation is, therefore, an enhancement to field training rather than a substitute.
- 5.4 As far as the Army is concerned, resources are tight and effects based training in the live domain is particularly expensive. The challenge for simulation in the future is to meet the requirement for training commanders and staff at Brigade level and above. This is likely to be met by **'Wrap Around'** simulation: one battle group would conduct live training while the flanking battle groups and enemy off the training area would be largely constructive with some virtual elements such as Unmanned Aerial Vehicles (UAVs).
- 5.5 The further advance in simulation known as **Live-Virtual-Constructive** (L-V-C) is much more problematic with the direct technical linking of the three simulation domains to exercise multiple units. Adding live to constructive and virtual simulation creates technical difficulties for example: real ground is different from terrain databases creating line of sight anomalies.
- 5.6 Although there may be some improvement to the fidelity of Constructive and Virtual Simulation, advances in simulation are likely to be focused on Wrap Around and L-V-C technology in order to provide a training medium for Brigade and Divisional Staffs. In any event, there is no likelihood of simulation replacing the need for live training for up to and including Battlegroup level. Indeed, the increasing capability of weapons and surveillance systems will continue the trend towards the less dense battlefield with a consequent increased demand for real estate. As simulation techniques develop, they will no doubt increase in their training value, but they can only ever be an enhancement to rather than a substitute for live training.

## **Assumptions**

- **While advances in simulation will improve the quality of training, the requirement for demanding and realistic field training will remain.**
- **Simulation is an enhancement of field training and not a substitute.**
- **Advances in simulation will not reduce the demand for training land.**

## 6 The Royal Marines

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- 6.1 3 Commando Brigade HQ is located in Plymouth. 42 Commando is also based in Plymouth, as is 29 Commando Regiment Royal Artillery. 40 Commando is located in Taunton and 45 Commando in Arbroath. The Commando Logistic Regiment is based at Chivenor along with 59 Independent Commando Squadron Royal Engineers. The Commando Helicopter Force is located at RNAS Yeovilton and the amphibious shipping, in support of 3 Commando Brigade, is based at Devonport. Thus, with the exception of 45 Commando in Arbroath, the entire UK amphibious force is based in the South West. The feasibility of relocating 45 Commando in the South West is currently being investigated.
- 6.2 Given no operational deployment, each Commando company will require a minimum of two weeks live and dry training on a UK training area each year. With a total of 21 company equivalents (not including reservists) there is therefore a requirement for 42 training weeks per year by the Royal Marines alone.

### The 30 Mile March

**This test consists of a 30-mile march or 'yomp' across Dartmoor carrying full fighting order, safety equipment and weapon. Starting early in the morning both Officers and recruits are split into teams or syndicates to complete the test in the time permitted.**

**Time: 8 hours**



6.3 The Royal Marines have a clear need for a rugged training environment close to their peacetime locations. They require facilities for live/dry training up to Battalion level. Superimposed on this requirement are the training needs of the Commando Training Centre (CTC RM) at Lympstone, for which there is no realistic alternative to DTA. DTA is essential for their advanced dry training and the majority of all live firing. It is also used for the Commando Test of a 30-mile march every two weeks. The logic for the use of DTA by the Royal Marines is inescapable.



## Commando Training Wing

Commando Training Wing (CTW) is responsible for the training of Recruits who wish to become Royal Marines, as well as Army and Naval personnel who volunteer to serve with 3 Commando Brigade. In addition the Wing also undertakes the training of Royal Marines Reservists and Territorial Army volunteers who serve with the Royal Marines.

CTW has a remit to train every Recruit to reach a set standard which must be achieved before a Recruit can pass out of training. While the Wing has a 'pass ethos', there is a degree of self-selection in Recruit training, such that only those with determination, commitment, application and an above average level of physical ability succeed. New entries will find themselves in a troop that is approximately 50 strong. They will be taken through training by a team of instructors that normally consist of: an Officer, a Sergeant and four Corporals from the Platoon Weapons Branch (or from other branches - such as Chef, Landing Craftsman, Signals or Heavy Weapons specialists), a Corporal from the Physical Training Branch and a Corporal from the Drill Leaders Branch. The training team possess a wide range of individual skills, experience, and specialisations, which enhances the Recruits' training.

Training is based on a logical progression, so that the Recruits gain confidence in their own abilities, and are not overwhelmed by it. The successful completion of Recruit Training is within the capabilities of all those who have been selected from the Potential Royal Marines Course and allocated a place at CTCRM.

The training is demanding, challenging and arduous and the workload is considerable. In addition to normal 'working hours' training takes place in the evening, and on some weekends. It should be noted that training takes place regardless of season, weather, light or darkness.

## **Assumptions**

- **3 Cdo Bde will remain at generally the same size and shape and will be based in the South West together with its helicopter support and amphibious shipping.**
- **The throughput of CTCRM will remain broadly the same.**
- **Both 3 Cdo Bde and CTCRM will continue to require access to local training areas for arduous training, dry training and live firing.**

## 7 Summary of Assumptions

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### Introduction and Background

- 7.1 The Armed Forces will have a broadly similar size and shape and therefore a similar need to train out to 2050.

### Current Trends in Defence Policy

- 7.2 The Armed Forces will need to be able to conduct the full range of operations from war fighting to peace support operations and train for the most testing and demanding end of the spectrum of conflict.
- 7.3 The size and configuration of Britain's Armed Forces are likely to remain essentially the same for the foreseeable future though the trend will be towards light/medium formations for expeditionary operations but there will be a continued requirement for armoured formations.
- 7.4 The Armed Forces will have to be prepared at all times to mount peace support operations as well as intervention at short notice and forces will have to be trained for this contingency; given time they should be Capable of Large Scale Operations that would be likely to require a capacity for surge training.

### The Armed Forces Training Demand

- 7.5 There will be no reduction in the size and shape of deployable forces based in the UK, any marginal reduction will be compensated for by relocation of units from Northern Ireland and Germany.
- 7.6 The Armed Forces training demand in the UK will remain generally the same.
- 7.7 Training and in particular field training for both Regular and Reserve Forces will remain essential to the delivery of military capability.
- 7.8 Training will be conducted annually and continue to be progressive.

### The Training Estate

- 7.9 The size of the Training Estate is unlikely to increase despite the more demanding training requirement and it will continue to require a mix of terrain and topography in order to provide variety and challenge in training.

7.10 The pressure to manage the estate in an environmentally sympathetic manner will increase with consequential reduction in utility and capacity. The process to measure the long term need for rural training land and to address the issues of matching environmental constraints to MOD's longer-term operational requirements will assist in informing future work.

- 7.10 Overseas Exercises will continue to be an important part of the overall training programme but, given their cost, uncertainty and limited availability, are no substitute for UK based facilities.
- 7.11 The increased 'reach' of light roled forces will mean that several training areas and the use of Training Over Private Land will be required to exercise Battlegroups and Brigades and thus future training requirements will be more demanding on the estate than in the past.
- 7.12 There needs to be the flexibility and capacity on the Army Training Estate in order to cope with changes in weapon systems, training policy and operational demands.
- 7.13 Given the high level of operational deployments over the last 10 years, historical usage data for the Training Estate will not reflect an accurate picture of future demand. The demand for training space and time must be based on the training requirement.

## **Simulation**

- 7.14 While advances in simulation will improve the quality of training, the requirement for demanding and realistic field training will remain.
- 7.15 Simulation is an enhancement of field training and not a substitute thus advances in simulation will not reduce the demand for training land.

## **The Royal Marines**

- 7.16 3 Cdo Bde will remain at generally the same size and shape and will be based in the South West together with its helicopter support and amphibious shipping.
- 7.17 The throughput and training demand of CTCRM will remain broadly the same.
- 7.18 Both 3 Cdo Bde and CTCRM will require regular access to local training areas for arduous training, dry training and live firing.