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The Defence White Paper: Future Capabilities

The Defence White Paper of December 2003 sets out the MOD's analysis of the future security environment and how the UK's strategic interests should be prioritised in light of this assessment. It is regarded as a baseline from which decisions on the future size and composition of the Armed Forces will be made. Library Research Paper RP04/71 *The Defence White Paper* examines its main themes and should be read as background to this paper.

In July 2004 an additional chapter to the White Paper entitled *Future Capabilities* was published. It sets out in detail the intended changes to the structure and role of the Armed Forces and identifies specifically where cuts will be made. This paper examines the key motivations that are driving this change, the adjustments to force composition and the potential impact these may have on sustainability and affordability.

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Summary of main points

Three key assumptions from the Defence White Paper are driving change within the Armed Forces and provide the basis for the recommendations set down in the additional chapter to the White Paper entitled *Future Capabilities*. It is expected that multiple, concurrent, small to medium-scale operations over a wider geographical area than those envisaged under the 1998 *Strategic Defence Review* (SDR), will become the overriding norm. Planning assumptions have thus been revised to ensure the sustainability of three simultaneous and enduring operations of small to medium-scale. Given time to prepare, the UK should be capable of undertaking a demanding large-scale intervention operation while still maintaining a commitment to a small-scale peace support operation. Participation will generally be in coalition with other countries and large-scale intervention operations are unlikely to be conducted without the US.

“Effects Based” Operations and the ability to achieve one, or a combination, of eight desired effects across the range of military tasks are to be the main factor in establishing the balance of capabilities required. Developing a fully integrated Network Enabled Capability (NEC) is considered to be at the centre of this approach. As a consequence fewer platforms will be required to achieve the desired military effect. The emphasis is no longer on quantity as a measure of capability.

Therefore, the Army will be restructured to provide a more balanced and flexible force. The emphasis will be on developing a medium-weight capability, with the introduction of the Future Rapid Effects System and the ‘re-rolling’ of 4 Armoured Brigade into a mechanised brigade. A new light brigade will also be formed. The Infantry will be restructured with the Infantry Arms Plot being phased out so that battalions will be largely fixed in geographical location and role. The number of Regular battalions will be reduced from 40 to 36 and Divisions will be restructured into large single-cap badge regiments of two or more battalions. Decisions on which battalions are to be disbanded and amalgamated have yet to be announced. The manpower requirement of the Army will reduce by 1,500 to 102,000.

The Royal Navy fleet will lose three Type 42 destroyers and three Type 23 frigates by March 2006 and six mine countermeasure vessels by 2007. It will also lose three nuclear-powered attack submarines (SSNs). The acquisition requirement of the Type 45 air defence destroyer has also been reduced from 12 to 8. The manpower requirement of the Navy will reduce by 1,500 to 36,000 by April 2008.

An air expeditionary task group capable of deploying up to 64 offensive fast jets will enable the full range of small, medium and large-scale contingent operations to be conducted. Therefore, RAF aircrews will be reduced from 210 to 170; three Jaguar squadrons will be disbanded two years earlier than planned and RAF Coltishall will close. One Tornado F3 squadron will be disbanded in October 2005. The Nimrod MR2 fleet will be reduced from 21 to 16 aircraft and the requirement for the Nimrod MR4A has been downsized from 18 to 12. The manpower requirement of the RAF will reduce by 7,500 to 41,000 by April 2008. A review of the RAF’s future airfield requirements will also be conducted.

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I Key Motivations / Assumptions

The Defence White Paper of December 2003 is intended to provide a policy baseline against which decisions on the future size and structure of the Armed Forces will be taken. However, it is more than just a reassessment of the threats and challenges of the future security environment and a re-prioritisation of the UK's strategic interests. It provides an opportunity to develop, and integrate into that assessment, concepts introduced in the 2002 *New Chapter to the Strategic Defence Review* on the UK's approach to warfare (Effects Based Operations) and how technology can be exploited to achieve military dominance (Network Enabled Capability).

The White Paper makes some key assumptions which have become the driving force for change with respect to the composition of the Armed Forces and form the basis for the recommendations set out in the additional *Future Capabilities* chapter.

A. Planning Assumptions

Given the advances in technology that have been achieved since the *Strategic Defence Review* (SDR) in 1998, the change to the security environment driven by international terrorism, and the nature of operations that have been undertaken in the last six years, the White Paper concludes that the Armed Forces face a broader range of tasks across a wider geographical area than originally envisaged under the SDR. Proactive engagement in conflict prevention and multiple, concurrent small to medium-scale operations¹ involving peace support and peace enforcement, including counter-terrorist and counter-proliferation operations, are expected to become the overriding norm. However, the ability to undertake, at longer notice, large-scale intervention operations in Europe, the Mediterranean and the Gulf region will remain important.

Therefore the MOD's planning assumptions have been revised. As a norm, and without causing overstretch, the Armed Forces must be capable, in addition to their standing tasks, of conducting three simultaneous and enduring operations of small to medium-scale. Given time to prepare, the UK should be capable of undertaking a demanding large-scale intervention operation while still maintaining a commitment to a small-scale peace support operation.

Within this context the following assumptions are made:

- The UK will not be able to contribute militarily in every international crisis. Therefore, participation will generally be in coalition with other countries.

¹ The UK deployment to Macedonia in 2001 (initially involving approximately 2,000 troops) is described as a small scale operation, while the deployment to Afghanistan in 2001 (involving 4,200 personnel) is described as medium scale.

- The most demanding expeditionary operations, involving intervention against state adversaries, are unlikely to be conducted without the US, either at the head of a coalition or within NATO.
- In the event that the US is not involved in an operation, the UK must maintain the capability to lead or act as the framework nation for a European or similar coalition operation of medium-size.
- Based on current experience in Afghanistan and Iraq there is also an assumption that in enduring operations, once stability has been established, lower force levels and generally lighter forces will be required.

Consequently, the White Paper advocates maintaining a broad spectrum of capabilities in order to meet these planning assumptions. Generating large-scale capabilities across the same spectrum when operating alongside the US or other allies will be unnecessary, although developing interoperability with US command and control structures and delivering capabilities that achieve greatest impact when operating alongside US forces are regarded as priorities.

In addition to maintaining an expeditionary capability, the White Paper emphasises the importance of being more prepared for asymmetric attacks by both state and non-state actors, including the use of WMD through a variety of means, and fulfilling the requirements of homeland defence.

B. Effects Based Operations (EBO)

The conceptual framework for Effects Based Operations was established in the SDR New Chapter with the introduction of three aims for addressing the challenge of international terrorism and asymmetric warfare more generally.²

That approach is developed further in the White Paper which identifies eight strategic effects that the UK's Armed Forces should be able to deliver across the spectrum of military tasks:

Prevent – to stop or limit the emergence and development of crises and conflict through fostering regional and national security.

Stabilise – to set the secure and stable conditions required for political and economic action so as to bring a situation under control. Military involvement

² These three objectives were defined as prevention/stabilisation through defence diplomacy, deterrence/coercion through both military and non-military means, and military force as a means to rapidly 'detect and destroy' any potential terrorist threat.

could include the deployment of forces to assist with the return of political control and to assist in reconstruction efforts.

Contain – to actively limit or restrain the spread, duration or influence of an adversary or crisis.

Deter – to dissuade an adversary from a course of action by diminishing the expected gains and/or raise the expected costs.

Coerce – similar in nature to deterrence although coercion aims to use force, or the threat of force, to persuade an adversary to adopt a particular course of action.

Disrupt – to disable an adversary’s capability with the use of military action.

Defeat – to reduce the effectiveness of an adversary so that they are no longer able to conduct combat operations. Action should consequently bring about the cessation of hostilities.

Destroy – to damage an enemy state or non-state adversary so that they are no longer militarily viable.³

Achieving one, or a combination, of these desired strategic effects has become the underlying principle for determining future force structure and capability requirements. This new approach advocates flexible long-term force planning, rather than a fixed force approach, in recognition of the fact that the force structure and requisite military capabilities required to deliver a certain strategic effect may change over time as threats, technology and coalitions evolve. Consequently, using the quantity of platforms and personnel as a measure of capability is no longer considered viable.

According to the White Paper there are three premises which underpin the ability to achieve any, or all, of these desired effects: the rapid deployment and configuration of forces; the capacity for rapid decision making; and the precise delivery of force. However, the Paper acknowledges that achieving a balance of capabilities to meet all eight strategic effects across the operational spectrum will be difficult, particularly with regard to C4ISR⁴, strategic air and sea lift and logistics. The assumption is that conducting several concurrent small to medium-scale operations would be potentially more demanding for these key assets than one or two substantial operations. Maintaining platforms and capabilities that do not have the flexibility to meet the demands of future operations is regarded as untenable. The improvements in precision strike and communications technology have led to the conclusion that fewer platforms and capabilities will be required to achieve the intended effect.

³ Ministry of Defence, *Delivering Security in a Changing World: Supporting Essays*, Cm 6041-II, December 2003, p.6

⁴ C4ISR refers to command, control, communications, computers, intelligence, surveillance and reconnaissance.

C. Network-Enabled Capability (NEC)

Network enabled capability (NEC) is defined by the MOD as “the enhancement of capability through the effective linkage of platforms and people through a network”.⁵ The intention with NEC is to exploit information superiority in order to achieve military dominance and decisive effect. As such, NEC is identified in the White Paper as central to developing a force composition for achieving effects based operations.

However, limitations on defence resources have led to a focus not on the wholesale transformation of forces that the US is seeking to achieve, but on the development of capabilities that are “key enablers” of operational effectiveness, so as to link effectively all the various components in ‘real time’. The main examples of this are C4ISR assets, such as the Watchkeeper unmanned aerial vehicle and the ASTOR airborne stand-off surveillance aircraft, and enhanced communications capabilities such as Skynet 5, Bowman and the Defence Information Infrastructure (DII).⁶

The complexity of NEC as a concept, including its predisposition to constant evolution, and the financial implications it entails, requires that a clear set of priorities be set down by the MOD. There will be three interconnected phases intended to achieve the following:

- An “initial” NEC state in 2007 which will involve improving the connectivity of existing platforms and currently planned equipment.
- A “transitional” NEC state in 2015 which will focus on the further integration of organisations and systems.
- A “mature” NEC state in 2020-2030 when all aspects of military capability will be synchronised.⁷

However, the MOD acknowledges that because of the evolutionary nature of NEC and its associated technologies, a completely “mature” state in NEC delivery is unlikely to be achieved. The more likely scenario is expected to be one involving continual movement from one transitional state to the next.

One of the main implications of a network-centric, rather than a platform-centric, focus for force composition is that the ability to respond more quickly and precisely will act as

⁵ Ministry of Defence, *Delivering Security in a Changing World: Defence White Paper*, Cm 6041-I, December 2003, p.3

⁶ More information on each of these projects is available online at: <http://www.mod.uk/dpa/ipt/index.html>

⁷ Ministry of Defence, *Future Capabilities: Factsheet 4 Network Enabled Capability*, July 2004. A copy of this is available online at: http://www.mod.uk/linked_files/issues/security/cm6269/factsheet4.pdf

a force multiplier, thereby allowing the Armed Forces to achieve its intended effect through a smaller number of more capable linked assets.

II Force Restructuring

On the basis of these key assumptions the main conclusions drawn in the *Future Capabilities* chapter are intended to create a flexible, expeditionary force that maximises the advantages offered by technology.

In his foreword to the December 2003 White Paper the Secretary of State for Defence, Geoff Hoon, stated:

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 “network 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.⁸

For each of the three planning assumptions outlined above, and with a view to maintaining force elements committed to the UK’s standing tasks⁹, a force summation assessment was undertaken, matching operational requirements determined by the 18 Military Tasks set out in the White Paper with the envisaged tempo and scale of operations. Within each assessment, force generation and force rotation factors¹⁰ were also taken into account.

The overall force structures required to meet each planning assumption are set out in Appendix One of this paper. An assessment of the overall force levels required is set out in Appendix Two.

The specific consequences for the Army, Royal Navy and RAF are outlined below.

A. Army

Land forces are currently configured with emphasis on heavy and light capabilities. While heavy forces provide firepower, tactical mobility and protection to carry out ground warfare, considerable effort is required to deploy and support them on operations. In contrast, light forces are able to deploy rapidly but lack much of the firepower and protection necessary to engage in operations against an adversary equipped with armour and mechanised forces.

⁸ Ministry of Defence, *Delivering security in a changing world*, Cm 6041-I, December 2003

⁹ These are outlined in Library Research Paper RP 04/71 *The Defence White Paper*, 17 September 2004

¹⁰ Force generation factors determine the numbers of units or force elements required to be held in the force structure to generate the numbers to be deployed. These include training and maintenance requirements, readiness preparation times, the availability of combat ready crews and having a pool of forces to rotate through the deployed force. The optimum force ratio for prolonged commitments in this respect is 3 or 4 ships and 5 Army and RAF units or crew for each one deployed.

In order to achieve a flexible, expeditionary land force able to meet the demands of multiple, concurrent operations across the full range of military tasks, the White Paper and the *Future Capabilities* chapter conclude that a re-balancing of forces across the whole capability spectrum will be required. Consequently, restructuring will take place at the brigade level, involving the creation of a new light brigade and a reduction in the number of armoured brigades from three to two. The Infantry will also be restructured. The reallocation of key support elements such as logistics, medical and engineer support personnel towards each brigade from the divisional level will be undertaken to reflect the demand of multiple, concurrent operations. The integration of the Apache attack helicopter into an Army force structure optimised for medium and small scale operations will also be reviewed.

The generic Future Army Structure (FAS) which will be developed over the next four years is expected to consist of the following:

In addition to the existing Air Assault and Royal Marine Commando brigades:

Heavy Forces – There will be two heavy armoured brigades (7 Armoured Brigade and 20 Armoured Brigade).

Medium Forces – There will be three medium-weight brigades based around the Future Rapid Effects System (FRES) (1 Mechanised Brigade, 12 Mechanised Brigade and a mechanised brigade formed from the ‘re-rolling’ of 4 Armoured Brigade).

Light Forces – 19 Mechanised Brigade will be ‘re-roled’ to form one light brigade.

As a result of this re-balancing the Royal Armoured Corps will be reduced by seven Challenger II squadrons from 25 to 18 by March 2007 allowing an armoured regiment to be ‘re-roled’ into armoured reconnaissance, and providing each armoured and mechanised brigade with its own reconnaissance regiment. Consequently 40 Challenger II tanks will be taken out of service. It is anticipated that a number of these surplus tanks will be placed in storage.¹¹

One of the present six AS90 close-support artillery regiments will be ‘re-roled’ into a light gun regiment to support the newly formed light brigade. Within the remaining AS90 regiments there will be a reduction of six AS90 batteries by March 2007. In the medium term three artillery regiments will be equipped with the new Light Mobile Artillery Weapon System (LIMAWS) which has an in-service date of 2009. The introduction of the Apache attack helicopter in autumn 2004 and the introduction into service of the Javelin infantry anti-tank guided weapon system in 2005 is expected to offset these

¹¹ Defence Select Committee, *Future Capabilities: uncorrected evidence*, to be published as HC 1031-I, 15 September 2004

reductions and significantly improve the Army's capability to engage land targets at range.

There will also be a 50% reduction in ground-based air defence across the Services. As a result, there will be a reduction in the Army's High Velocity Missile (HVM) fire units from 156 to 84. The Low Level Air Defence Capability provided by the Rapier Field Standard C system will be consolidated as an Army-only asset within 16th Regiment Royal Artillery (see section II C below).

An additional Explosive Ordnance Disposal (EOD) Squadron will be formed to provide an EOD capability for all armoured and mechanised brigades.

The development of digitised strategic communications within the Army will continue with the introduction into service of the Bowman system¹² at the tactical level and the Cormorant and Falcon systems¹³ at the operational and strategic levels. In addition, 22nd Signal Regiment will be formed to field the Falcon system.

The recognition of logistics as a key enabling capability is translated in the FAS by a shift in combat service support provision from the divisional level down to the brigade level. Units of the Royal Logistics Corps (RLC) and the Royal Electrical and Mechanical Engineers (REME) will be restructured accordingly. The RLC will be reorganised to provide Brigade Logistic Support Regiments for the five armoured and mechanised brigades. REME will be reorganised along similar lines and will combine with the RLC to provide a Combat Service Support Regiment for the new light brigade. In addition, enhancements are being made to logistics visibility and asset tracking.

Infantry Restructuring

One of the most significant conclusions to come out of the FAS assessment is the decision to undertake a wholesale restructuring of the infantry as a result of phasing out the Infantry Arms Plot (IAP) system, which involves moving battalions between locations and roles every few years, and of reducing the Army's commitments in Northern Ireland.

One of the consequences of the IAP system is that battalions are taken out of the Order of Battle while they are moving and training for new roles. The number of battalions available to deploy at any one time is therefore reduced. The FAS assessment concludes that the disadvantages this system brings outweighs the advantages that are gained. The benefits of phasing out this practice were outlined in a Statement by the Chief of the General Staff, General Sir Mike Jackson:

¹² More information on Bowman is available online at: <http://www.mod.uk/dpa/ipt/bld.htm>

¹³ More information on Cormorant and Falcon is available online at: <http://www.mod.uk/dpa/projects/cormorant.htm> and <http://www.mod.uk/dpa/projects/falcon.htm>

Operational Availability. An order of battle comprising 36 battalions which are always available will be more capable than one of 40 drawn down by a significant number of battalions moving, re-rolling and re-training.

Experience Base. Individual experience will be better achieved through individual postings within a large regiment structure [...]

Continuity of Role. The new structure will provide continuity of expertise in role and greater brigade coherence [...]

Career Development. In the future, career development for officers and SNCOs in particular can be much more carefully planned [...]

Family Stability. The new structure will offer much improved family stability compared to that provided by the Arms Plot.¹⁴

Therefore, as part of the FAS, individual battalions in the future will be broadly fixed by role and geographical location.

As a result of the improving security situation in Northern Ireland the Army's commitments in the Province will be reduced. In June 2004 the MOD announced its decision to reduce the number of battalions committed to service in Northern Ireland by two. Following a further review of security requirements, the number of assigned battalions will be reduced by an additional two in autumn 2004.

As a result of both of these changes the regimental system that underpins the infantry will be restructured. The number of Regular battalions in the Army will be reduced from 40 to 36 by April 2008 with the disbanding of one battalion from the existing six battalions of the Scottish Division and three battalions from the existing thirteen battalions of the Prince of Wales and King's Divisions.¹⁵ The main criteria in determining the reduction of battalions will be the sustainability of future recruitment, including current manning performance and recruitment levels on a regiment-by-regiment basis, retention and regional demographic data.¹⁶

During an evidence session of the Defence Committee on 15 September 2004 Mr Hoon stated:

Clearly one factor in that will be the level of recruitment of the particular single battalion regiment, inevitably those that are less good at recruiting are more vulnerable, it necessarily follows. Equally, part of the structure is to try and

¹⁴ Statement by The Chief of the General Staff, General Sir Mike Jackson, 21 July 2004. This is available online at: <http://www.mod.uk/issues/security/cm6269/cgs.htm>

¹⁵ The individual battalions of the Scottish, King's and Prince of Wales's Divisions are listed at the following website: <http://www.army.mod.uk/careers/combat/regiments.html>

¹⁶ Statement by The Chief of the General Staff, General Sir Mike Jackson, 21 July 2004.

establish a clear and consistent footprint for the Army across the country – organised already in divisions so it is not particularly novel – but obviously there will be some changes based on that distribution. Rightly, in my view, recruitment is going to be a significant factor [...]

Can I make it clear that it will be based on objective consideration. Can I make it clear, equally, that decision will be taken by me once the Army Board have made their recommendation.¹⁷

The remaining battalions within the Regular Army will be amalgamated into an infantry structure organised on a divisional basis but comprised of large single-cap badge regiments of two or more battalions. Although decisions on the final structure of the infantry have yet to be taken, the assessment by the Executive Committee of the Army Board (ECAB) concluded that Divisions would be restructured in one of two ways: either with two or three regiments, each with two or three battalions, or one regiment of four or more battalions. The Reserve Forces are expected to be incorporated into this new structure.

Decisions on the future structure of the infantry are not expected until the end of 2004 following a period of consultation which ends in October. The structure of the Brigade of Gurkhas will not be affected by these changes. To maintain a regional balance the 1st Battalion Royal Irish Regiment has also been exempted.

The manpower released by the reduction of four battalions equates to approximately 2,500 personnel. They will be re-distributed across the remaining battalions both to strengthen existing units and shore up the most heavily committed specialisations including logisticians, engineers, signallers and intelligence.

However, as a consequence of all of these decisions the overall manpower requirement of the Army will reduce by 1,500 to 102,000.¹⁸

B. Royal Navy

The expectation of the Defence White Paper is that the future role of the Royal Navy will be focused on the provision of a flexible expeditionary maritime capability. In particular the ability to deliver a land attack capability, an amphibious landing capability and secure access to the military theatre are identified as the key priorities for future maritime operations.

¹⁷ Defence Select Committee, *Future Capabilities: uncorrected evidence*, to be published as HC 1031-I, 15 September 2004

¹⁸ The actual trained requirement of the Army at 1 July 2004 was 106,730. However, the actual trained strength was approximately 103,000 (DASA)

In the short term, naval capability will be built around the existing aircraft carriers and Joint Force Harrier, operating the upgraded Harrier GR9. In order to deliver a flexible expeditionary capability in the future, the future carrier (CVF) and the Joint Combat Aircraft (Joint Strike Fighter) are expected to be key elements in increasing the ability to project air power from the sea. CVF will have a greater reach and be sustainable in theatre for a longer period of time than the Navy's current carriers, while the multi-role JCA will improve strike and reconnaissance capability. Future amphibious capability will be provided by the amphibious assault ships HMS *Albion* and *Bulwark*, which entered service in 2003, and supported by four Bay-class landing ships which are expected to enter service from late 2005 onwards. The existing 3 Commando Brigade will add to the robustness of this amphibious capability.

The range of capability provided by the Navy's fleet of destroyers and frigates will continue, and in particular with respect to their involvement in smaller scale operations. However, the reduction in conventional threats, the MOD's subsequent revision of its planning assumptions, the enhancements that are expected to derive from improved networked capability and the introduction of the Type 45 from 2007 onwards, have led to the conclusion in the White Paper that fewer naval platforms are required to deliver intended military effect.

In a statement on 21 July 2004 the Chief of the Naval Staff, Admiral Sir Alan West, outlined:

We have looked at what sort of operations we are likely to undertake. The SDR assumptions hold good, but the emphasis has shifted from running two Telic-sized operations together, to more numerous small scale ops such as Sierra Leone. We will retain the ability to conduct high intensity ops. We have also looked at reducing the number of units deploying specifically for individual tasks by making better use of the JRRF pool. Whilst clearly a ship can only be in one place at one time, the potential gains to be realised from investment in network enabled capability, combined with the revised planning assumptions, result in all 3 services requiring fewer units than before [...]

We have selected which ships will go to ensure that we can retain a balance of capabilities. By improving the quality of the networked capability of our major warships we will be able to deliver the desired military effects from a reduced number of platforms [...]

In explaining these reductions [...] it is important to focus on the following:

- The government has re-confirmed the central role in joint expeditionary warfare that the Navy will continue to play.
- The core capabilities of the Navy remain intact...¹⁹

¹⁹ Personal message from The Chief of the Naval Staff, Admiral Sir Alan West, 21 July 2004. A copy is available online at: <http://www.mod.uk/issues/security/cm6269/cns.htm>

The maritime force structure set down in the *Future Capabilities* chapter of the White Paper envisages the following changes:

- A reduction in the required number of Type 45 air defence destroyers from 12 to eight. There are currently six Type 45 destroyers on order.
- A requirement for 25 destroyers and frigates (there are currently 31: eleven Type 42 destroyers, 16 Type 23 frigates and four Type 22 frigates). This reduction will be achieved by paying-off three Type 42 destroyers (HMS *Cardiff*, *Newcastle* and *Glasgow*) and by paying-off the Type 23 frigates HMS *Norfolk*, *Marlborough* and *Grafton* by March 2006.²⁰
- A requirement for eight nuclear-powered attack submarines (SSNs). This will be achieved through the planned paying-off of HMS *Superb* and HMS *Trafalgar* as planned by December 2008. The introduction of the three Astute-class submarines, which is currently scheduled for 2008, is, however, expected to provide greater capability.
- A reduction in the number of Mine Countermeasures Vessels from a current fleet of 22 to 16. This will be achieved by paying-off the Sandown-class Single Role Minehunters HMS *Inverness*, *Bridport* and *Sandown* by April 2005 and the Hunt-class vessels HMS *Brecon*, *Dulverton* and *Cottesmore* by April 2007.

Cuts to the Nimrod MR2 fleet which provides an anti-submarine and maritime reconnaissance capability are outlined in Section C below.

As a result of these reductions the manpower requirement of the Royal Navy will be reduced from 37,500 to 36,000 personnel by April 2008. It is expected that these reductions will be met by normal staff turnover and no redundancies are planned.

C. Royal Air Force (RAF)

The projection of air power from both land and sea, offering capabilities across the range of air operations but with a clear emphasis on offensive effect, is identified in the White Paper as a priority.

At present the Tornado GR4 and Harrier GR9 aircraft provide the RAF's offensive strike and tactical reconnaissance capability. Recent upgrades to the Tornado GR4 and the ongoing development of the Harrier GR9, combined with significant advances in

²⁰ Original decommissioning dates are outlined in Library Standard Note SN/IA/1967, *The Royal Navy Fleet*, 21 October 2003

precision guided weaponry with the introduction into service of the Storm Shadow long range air-to-surface missile, the Brimstone and Maverick anti-armour weapons and the new Paveway IV precision guided bomb are judged to have significantly enhanced offensive capability in the short term. The Tornado F3 force, which provides air defence capability, has also seen significant improvement with the introduction of the Advanced Medium Range Air-to-Air Missile (AMRAAM), the Advanced Short Range Air-to-Air Missile (ASRAAM) and the Joint Tactical Distribution System.

Over the next 10 to 15 years the multi-role Eurofighter Typhoon and Joint Strike Fighter (JSF) are expected to offer even greater flexibility in combat air power and thus reduce the need for single-role fast jet aircraft. Multi-role aircraft will also allow deployed force packages, including associated personnel, to be smaller.

In order to prepare for this transition to a force structure based on multi-role aircraft and given the advances that have been made to the existing RAF fleet, a revision of air requirements has been made as part of the Future Capabilities assessment.

In a Statement on 21 July 2004 the Chief of the Air Staff, Air Chief Marshal Sir Jock Stirrup, stated:

The broad thrust of my intent [is] an agile, adaptable Air Force based on good people trained to the highest standards, and on modern multi-role aircraft and systems that can exploit Network Enabled Capability to achieve the desired effect swiftly. In all of this we must focus on overall capability, not just on numbers of systems or people. During Operation Telic a much smaller RAF employed only about 70% of the number of fast jets used in Operation Granby, but to much greater overall effect. We need to maintain this trend of increasing capability [...]

The size and shape of the RAF depends on the scale and nature of the forces we need to commit to operations. The increasing capabilities of our individual systems and our growing ability to switch them from one role to another as the situation demands means that we are able to reduce the size of the overall deployed force. This will provide us with the necessary resilience to meet the demands of the more likely multiple concurrent and enduring small and medium scale operations. But at the upper end of the scale, we will have the capacity to deploy a force larger than that which we contributed to Operation Telic, and which, platform for platform, will be increasingly more capable.²¹

Consequently, the following changes to the RAF's fast jet squadrons are envisaged:

- An air expeditionary task group capable of deploying up to 64 offensive fast jets will enable the full range of small, medium and large-scale contingent operations

²¹ Statement by Chief of the Air Staff, Air Chief Marshal Sir Jock Stirrup, 21 July 2004. A copy of this statement is available online at: <http://www.mod.uk/issues/security/cm6269/cas.htm>

to be conducted.²² Under this revised requirement the offensive force will require approximately 170 front line crews rather than the current 210. The Jaguar force will be drawn down two years earlier than planned with 54 Squadron disbanded in April 2005, 41 Squadron in April 2006 and 6 Squadron in 2007. RAF Coltishall will be closed by December 2006 as a result.

- Given the reduced air threat to deployed forces, the ability to deploy 16 air defence fighter aircraft within the expeditionary task group will be necessary. Taking into consideration Quick Reaction Alert (QRA) tasks, a front line force of 55 crews will be required compared to the current 80. As a result 11 Squadron (Tornado F3) from RAF Leeming will be disbanded in October 2005.
- The overall reduction in the number of fast jet aircrew will reduce the requirement for fast jet training and the number of training aircraft. The MOD remains committed to the procurement of the Hawk 128, although final numbers beyond the initial 20 are yet to be determined.

In addition to the reductions in the RAF's fast jet aircraft, improvements to the anti-submarine and reconnaissance capabilities of the RAF's maritime patrol aircraft have also led to the recommendation that the current Nimrod MR2 fleet be reduced from 21 to 16 aircraft, with a shift in its primary role towards surveillance in support of joint military operations. The MR2 fleet is due to be replaced by the more capable Nimrod MR4A from a current forecast in-service date of March 2009.²³ However, the requirement of 18 MR4A aircraft has been revised downwards to a fleet of 12,²⁴ while the MOD has also stipulated that the future of the programme is "subject to industry demonstrating satisfactory performance at an acceptable price".²⁵

To enhance expeditionary capability the RAF will purchase the four C-17 transport aircraft currently provided through a leasing arrangement, together with one further aircraft. The C-17 fleet will complement the capabilities currently provided by the C-130 aircraft and the A400M which is expected to enter service from 2011.

On the basis of the reduced threat to deployed forces and the RAF's current advanced air-to-air weapons capabilities, investment in ground-based air defence (GBAD) will also be reduced and the role relinquished by the RAF regiment. As a result four RAF Regiment GBAD Squadrons will be disbanded. Responsibility for ground-based air defence will

²² This number reflects aircraft required at readiness. The actual number of aircraft in the RAF fleet will also be determined by peacetime training and maintenance requirements.

²³ National Audit Office, *Major Projects Report 2003*, HC 195, Session 2003-04

²⁴ The original Nimrod MR4A requirement was 21 aircraft. This was revised in 2001 following a re-negotiation of the contract.

²⁵ Ministry of Defence, *Delivering security in a changing world: future capabilities*, Cm 6269, Session 2003-04, p.7

pass to the Army (16th Regiment Royal Artillery) and will be commanded by a new Joint HQ within RAF Strike Command.

An extensive review of the RAF's future airfield requirements is also expected to be conducted. This follows several recent reviews into RAF basing arrangements which resulted in the decision to close RAF Lyneham by 2012 and the possible closure of RAF Sealand and the drawdown of RAF Boulmer and RAF Neatishead, also by 2012.²⁶ Decisions on further rationalisation are expected in 2005.

As a result of these changes the future manpower requirement of the RAF will be reduced from 48,500 to around 41,000 by 1 April 2008. In anticipation of these changes, intake into the RAF has been reduced over the last six months. However, it is acknowledged that a targeted redundancy scheme will be necessary.

²⁶ Ministry of Defence Press Release 4 May 2004 and HC Deb 23 April 2004, 30-1WS

III Assessment of the Proposals

The White Paper was generally welcomed following its publication, despite some criticism that it was lacking in detail. The reaction to the additional chapter outlining future force structure requirements has been mixed.

Many commentators have welcomed the broad thrust of modernisation to address the challenges posed by international terrorism and meet the UK's strategic interests. However, there has been extensive criticism of the proposals to cut the numbers of personnel while the Armed Forces are more widely committed than at any time in the last ten years. There has also been criticism of the reliance on technologies that will not be available until the latter end of this decade and the need to meet an expanded list of military tasks within a defence budget that is perceived to be under pressure.

Michael Smith, Defence Correspondent of *The Daily Telegraph*, called the changes "savage", although he went on to comment that "Army restructuring, and the loss of famous name regiments that goes with it, is probably the more justifiable part of the whole sorry package".²⁷

An editorial in *The Financial Times* commented:

The moves are driven primarily by the government's desire to enable British forces to work with their ever more modern US counterparts and to free resources for health and education at home. As such, they will be hard for opposition parties to oppose convincingly. But the government is compounding the existing overstretch of British forces that have been sent into action in Kosovo, Sierra Leone, Afghanistan and Iraq in recent years in addition to peacekeeping duties elsewhere. If cuts have to be made, they should be in costly programmes such as the Eurofighter Typhoon rather than in personnel, especially among Britain's overworked foot soldiers.²⁸

A. Affordability

When it was published the White Paper made broad recommendations on the future structure of the Armed Forces but with no financial framework. In particular it did not address the monetary implications of delivering a Network Enabled Capability within the context of the overall equipment plan.

²⁷ "Cuts betray those who risked their lives", *The Daily Telegraph*, 22 July 2004

²⁸ "Defence cuts in the wrong place: the UK gets its priorities wrong", *The Financial Times*, 22 July 2004

An editorial in the *Financial Times* in December 2003 commented:

Rapid reaction of highly mobile forces, and investment in far more computer networks and intelligence systems, are the name of the game. But matching resources to the new threats is the biggest challenge.

That is the dilemma at the heart of the new defence white paper [...] Old reliance on heavy armour is on the way out. Tanks, old ships and aircraft will be scrapped. Less armour and more mobility is required. Intelligent networks to link fewer, more sophisticated military platforms are supposed to enable the new system to operate. But to think that can be done within a defence budget that is frozen in real terms is fanciful [...]

Even on present plans, the likelihood is that UK defence spending will face a new crunch around 2007, when substantial new supplies such as the Eurofighters and new missiles are to be delivered.²⁹

The *Future Capabilities* chapter to the White Paper was published shortly after the 2004 Comprehensive Spending Review (CSR), which outlined spending to 2007/08. The additional chapter provided a degree of financial context to the recommendations on restructuring and force composition as a result of the increase to the defence budget announced in the CSR.

Under the CSR the Chancellor of the Exchequer announced that, in real terms, defence spending would increase by an average of 1.4% each year up to 2007/08. That equates to an increase of £3.7bn in total planned defence spending, taking it to £33.4bn in 2007/08. This projected figure does not include the cost of operations and conflict prevention which are funded through contingency reserves as required.

As yet, there are no projected figures available for the defence procurement budget to 2007/08. However, the budget spent by the Defence Procurement Agency (DPA) on fighting equipment has remained relatively static at approximately £6bn per annum.³⁰

In his Statement to the House on 21 July 2004 Mr Hoon stated:

There will be those who will claim that the defence budget is under such pressure that it is impossible to sustain the Department's forward equipment programme. In fact, the spend with industry will continue at the level of recent years.³¹

²⁹ "Wanting it all – new military thinking means more cash or fewer options", *The Financial Times*, 12 December 2003

³⁰ HM Treasury, *2004 Spending Review*, Cm 6237, July 2004, p.129

³¹ HC Deb 21 July 2004, c349

An assessment of UK defence expenditure, and the impact of Resource Accounting and Budgeting (RAB) on the comparability of the defence budget to previous years, is available in Library Standard Note SN/SG/113 *Defence expenditure*, 19 July 2004.

With a defence procurement budget of approximately £6bn, questions have been raised about the affordability of the MOD's current proposals.

One of the biggest criticisms centres on the affordability of NEC-enabling technologies within the current forward equipment plan, which in itself is expected to create a 'bow wave' of programmes during 2008-2012 that already far exceed the defence procurement budget. The peak years of expenditure for the A400M (2008-2010), the Beyond Visual Range Air-to-Air Missile (2009-2013), JSF (2008), and Combat Support Vehicle (2008-2010) for example, will fall within this period. The Future Carrier (CVF), Future Integrated Soldier Technology (FIST) and Future Strategic Tanker Aircraft (FSTA) are also all due to enter service in this period.³²

In addition to this spending, the MOD's proposals under this White Paper envisage the delivery of an "initial" NEC state by 2007, with the major period of transition, and therefore potentially the peak years of expenditure, achieved by 2015. The main NEC enabling technologies identified by the White Paper are currently expected to enter service between 2004 and 2013, a period that is also expected to mirror years of peak expenditure. Cormorant will achieve full operational capability between 2004 and 2005, Skynet 5 is scheduled to enter service in 2005 and achieve full operational capability in 2007. However, the peak years of procurement expenditure are identified as 2011-2013. ASTOR has an in-service date (ISD) of 2005, Soothsayer and Falcon will enter service from 2006, Watchkeeper has an ISD of 2007, the Defence Information Infrastructure (DII) project of 2008 and FRES of 2009.³³

In an article in *RUSI Defence Systems* the defence spokesman for the Liberal Democrats, Paul Keetch, commented:

The balance of priorities in the White Paper seems to suggest that the MOD has put equipment and strategy ahead of the numbers and welfare of our troops. I would prefer to see the equation the other way round, with the numbers, training and equipping of troops coming first, before we consider the question of what technology we can afford.

Even without any substantial investment in new digitised battlespace technology, the MOD's procurement budget looks unsustainable. The Government will have a

³² National Audit Office, *Major Projects Report 2003*, HC 195, Session 2003-04

³³ *ibid* and Defence Procurement Agency website: <http://www.mod.uk/dpa/index.html>

hard time affording the technology they aspire to without significantly rearranging the posture and structure of the armed forces.³⁴

There is also a concern that the MOD is basing its equipment spending plans on the premise that all of these capabilities will be introduced to time and budget. The problems of defence acquisition have been well documented. In the National Audit Office's *Major Projects Report 2003* eighteen of the largest procurement programmes were collectively £3bn over approved costs. The majority of this cost overrun was concentrated on four legacy (pre-smart acquisition) programmes: Eurofighter, the Astute-class submarine, Nimrod MR4A and the Brimstone Advanced Air-Launched Anti-Armour Weapon. Cost overruns of this magnitude and delays in delivery are not considered feasible within the current defence budget and timescales that have been set down for restructuring the Armed Forces and introducing NEC.

Shadow Defence Minister, Gerald Howarth, commented:

Given the increasing frequency with which British troops are called upon to engage in military operations, we owe it to them to ensure that they are properly funded, trained and equipped. We must also ensure that our procurement processes are managed in a way that makes the most of our resources and delivers the best equipment on time and to cost. This will require a degree of honesty from the MOD from the outset about what a project entails and its true long-term costs. I have met nobody who believes that the future aircraft carriers can be delivered to the originally mooted £3bn.³⁵

Consequently, a trade-off between planned capabilities and NEC-enabling technologies is one possibility that analysts expect in the next few years. Although the Defence Secretary made a commitment to the second tranche of the Eurofighter Typhoon in his statement to the House on 21 July 2004, questions have been raised over the government's commitment to tranche 3, involving 88 aircraft. The future of the Nimrod MR4A programme also remains in doubt despite its mention in the White Paper.

The Chief of the Naval Staff, Admiral Sir Alan West, is reported to have acknowledged that the future warship building programme would be unsustainable in light of current budget constraints.³⁶

The Director of RUSI, Rear Admiral Richard Cobbold, commented:

The trouble is that fewer platforms can be achieved at the stroke of a pen, whereas achieving a joint net-worked capability is a big challenge that cannot be

³⁴ Paul Keetch MP, "The UK Defence White Paper: what it does not say", *RUSI Defence Systems*, Summer 2004, p.28

³⁵ Gerald Howarth MP, "Equipping the White Paper", *RUSI Defence Systems*, Summer 2004

³⁶ "Navy chief accepts cuts to fleet and new ships", *The Financial Times*, 16 January 2004

met quickly. On past experience, achieving such a capability to time, cost and specifications, may be an insurmountable hurdle.³⁷

In an article in *RUSI Journal* former Air Marshal (and now adviser to the Liberal Democrats) Sir Timothy Garden and General Sir David Ramsbotham commented:

If the funding for defence is set at a level which makes it impossible to cover all risks, then a difficult political judgement is required over how best to allocate limited funds. Merely slicing capabilities ever thinner is no longer an option. The UK is now at a stage where some major procurement projects need to be re-examined if today's essential capabilities are to be sustained. The defence budget is in crisis because of a string of flagship projects – including the Nimrod maritime reconnaissance aircraft, the Eurofighter, the Astute submarine and the Brimstone anti-armour missile – are overshooting their costs by around £3bn.³⁸

They went on to suggest relieving pressure on the defence budget by cutting the CVF programme and instead building another HMS *Ocean* that could rapidly deploy helicopter-borne troops to trouble spots around the world. The premise of their argument is that large-scale intervention operations involving the deployment of the future carrier are not expected to be carried out without the US, which has an abundance of this capability.

B. Sustainability

The sustainability of the decisions outlined as part of the *Future Capabilities* assessment has received much attention. In particular, the ability to sustain three concurrent expeditionary operations in addition to the UK's standing commitments with fewer platforms and personnel has been questioned. Concerns have also been raised over the ability to deliver an NEC capability within the timeframe of restructuring, particularly within the Army.

1. Commitments

The premise of the future capabilities assessment is that, in addition to meeting its standing commitments, the type of operations in the future will, as a rule, be multiple, concurrent and small to medium-scale. However, the ability to conduct a large-scale intervention operation will remain. The UK's deployment to Macedonia of approximately 2000 troops in 2001 is classed as small-scale while the commitment of 4,200 to Operation *Enduring Freedom* in Afghanistan in 2001 is described as a medium-scale operation.

³⁷ Rear Admiral Richard Cobbold, "Only connections", *RUSI Journal*, August 2004, p.5

³⁸ Air Marshal Sir Timothy Garden and General Sir David Ramsbotham, "About face – the British Armed Forces which way to turn?", *RUSI Journal*, May 2004

Operation *Telic* in Iraq, which initially involved 45,000 Armed Forces personnel, is defined as large-scale.

While many analysts have generally accepted this analysis, the sustainability of these planning assumptions appears to rest on two premises: first, there will be a commitment to only three concurrent operations at any one time; and secondly, that the UK's standing commitments, in particular military aid to the civil authorities, are predictable and therefore, the force structure plans set out in Appendix One are adequate.

The standing commitments of the UK's Armed Forces are diverse both geographically and in terms of task. They include protecting the territorial integrity of the UK including its territorial waters and airspace, providing defence and security of the UK's Overseas Territories, providing military aid to the civil authorities and supporting wider British interests such as counter-drugs operations in the Caribbean.

At present the Royal Navy has, among others, the Type 42 destroyers HMS *Edinburgh* committed to the Standing Naval Force in the Mediterranean and HMS *Cardiff* to Atlantic Patrol South, the Type 23 frigate HMS *Richmond* to Atlantic Patrol Task North and the Castle-class patrol vessel HMS *Leeds Castle* assigned as the Falkland Island Patrol Vessel. The remaining fleet of Patrol Vessels is assigned to fisheries protection in UK territorial waters and patrolling the UK's offshore gas and oilfield installations. The RAF currently has a number of Tornado F3 aircraft assigned as Quick Reaction Alert (QRA) aircraft to defend UK airspace, 230 Squadron and one RAF Regiment based in Northern Ireland, and a contingent of Tornado F3s, Chinook and Sea King helicopters, a VC10 tanker, a Hercules transport aircraft and an RAF Regiment air defence squadron in the Falkland Islands. The Army has standing forces committed in Northern Ireland, the Falkland Islands, Brunei, Cyprus and Gibraltar.³⁹

Theoretically, committing forces to more than three concurrent small to medium-scale operations at some point in the future is not an unfeasible scenario. The White Paper suggests that involvement by the UK in any crisis will be determined by proximity, national interest and responsibility. However, some analysts have suggested that if there was overriding political willingness to commit troops and assets into a fourth theatre of operation, the sustainability of the UK's standing commitments, particularly those undertaken by the Navy, could come under pressure.

In an interview with *Jane's Defence Weekly* the Chief of the Naval Staff, Admiral Sir Alan West, outlined his concern for the Royal Navy:

People should be under no illusions [...] with only 25 destroyers and frigates we will be very close to the cusp [...] The reduction in [destroyer and frigate] numbers will demand a commensurate reduction in commitments to direct tasks.

³⁹ Information correct as of 15 August: <http://www.mod.uk>

The first one to go is our commitment of one ship to NATO's Standing Naval Force Atlantic, which has happened already. But even having taken that commitment away, I can't see that we can manage the remaining tasks we have and I think there will have to be another reduction. And that becomes very difficult, because all these directed tasks are undertaken for very good reasons.⁴⁰

Ellie Goldsworthy, Head of the UK Armed Forces Programme at RUSI, argued:

Despite the reduction in infantry battalions, the Army is left pretty much intact and able to carry out all the tasks required of it according to MOD planning assumptions. The problem is that governments continue to get away with ignoring these assumptions and over-stretching the military [...]

For now, cutting military personnel is not a concern in itself as long as the resulting force structures are capable of carrying out the military tasks required. Furthermore the government of the day must not abuse its executive control of the military by asking more of it than it can deliver.⁴¹

However, General John McColl, the Senior British Military Representative in Iraq, was reported by *The Scotsman* to have commented that:

We are tight. Tour intervals are down and the army is very committed. Northern Ireland is still going along and there are tours in Bosnia, Afghanistan, the Falklands and Cyprus, among others [...] The army is very busy indeed and the reduction of the four battalions will not help in any way [...] in terms of things that are measured in years, our capacity to conduct a number of these commitments is reduced with a reduction in the number of infantry battalions.⁴²

Concerns have also been raised over the extent to which future force structures have taken military assistance to the civil authorities into consideration. By definition military assistance in this instance would involve "preventing or managing the aftermath of a crisis at home".⁴³ Such events cannot be predicted in the long term and therefore the scale of effort required to meet them cannot be planned for. In 2001 the foot and mouth crisis in the UK required the involvement of Armed Forces personnel. Toward the end of 2002 19,000 personnel were called upon to cover the strike by the Fire Brigades Union (FBU) (Operation *Fresco*).⁴⁴ Concern over the impact of the FBU strike on the operational readiness of the Armed Forces was widely reported at the time. An article in *The*

⁴⁰ Interview with Admiral Sir Alan West Chief of Naval Staff and First Sea Lord, UK Royal Navy, *Jane's Defence Weekly*, 11 August 2004

⁴¹ Ellie Goldsworthy, "Is the Ministry of Defence delivering the right message?", *RUSI Newsbrief*, August 2004

⁴² "Army chief in Iraq condemns plans to cut the number of regiments", *The Scotsman*, 13 September 2004

⁴³ Ministry of Defence, *Delivering security in a changing world*, Cm 6041-I, December 2003, p.8

⁴⁴ A breakdown of Armed Forces personnel that covered the fire strike is available online at: <http://www.operations.mod.uk/fresco/forces.htm>

Guardian quoted the then Chief of Defence Staff, Admiral Sir Michael Boyce, as stating that “the provision of cover for firefighters was having a serious effect on the armed forces, which were already stretched to the limit”.⁴⁵

The strike also had a significant impact on the deployment preparations for the operation in Iraq. Richard Scott writing in *Jane’s Navy International* highlighted:

Fleet programming during the second half of 2002 and early 2003 was severely affected by Operation Fresco, the requirement to provide emergency firefighting cover(over 6,000 sailors and marines) for the duration of a lengthy industrial action undertaken by members of the Fire Brigades Union. This provision of military aid to the civil power had a significant impact, with seven ships laid up alongside (resulting in the ‘gapping’ of some directed tasks) and personnel drawn from a further 13 units. This in turn impacted on training, causing a significant degradation in certain ships at specific levels of readiness.

Indeed the commitment to ‘Fresco’ was still continuing at the same time that the RN began to assemble forces for what was to become the largest UK naval deployment since the 1982 Falklands campaign.⁴⁶

The New Chapter to the SDR introduced measures for improving co-ordination and liaison between the military and civil authorities in the event of such emergencies. It also created fourteen Civil Contingency Reaction Forces (CCRFs) to meet demand for personnel on the ground. However, some commentators have considered that these measures are not enough and therefore pressure on the Regular Forces remains.

The Defence Select Committee in its report on the White Paper stated:

We conclude that the MOD has still not taken seriously enough the need for a “predictable” element to be available for civil emergencies at home. We remain to be convinced that the MOD has adequately thought through the use of reserve forces at home and away in an era of constant operational commitments and a significant threat to the UK.⁴⁷

2. Nature of Operations/ Balance of Capabilities

The operations in Iraq and Afghanistan in the last few years have demonstrated the continued need for war-fighting capabilities at the high intensity end of the military spectrum. At the same time both theatres of operation, and in particular Iraq, have revealed one important lesson for future capabilities planning. The ability to rapidly reconfigure forces in theatre as the conflict develops from heavy war-fighting to enduring

⁴⁵ “Tensions exposed on use of troops in fire strike”, *The Guardian*, 21 November 2002

⁴⁶ “Royal Navy poised to perform another rebalancing act”, *Jane’s Navy International*, 1 April 2004

⁴⁷ Defence Select Committee, *Defence White Paper 2003*, HC 465-I, Session 2003-04, p.63

peace support and post-conflict reconstruction will be essential. However, one thing the post-conflict support operation in Iraq has shown is that the reverse is also potentially true. Peace support operations since May 2003 have arguably presented more challenges to deployed forces than the phase of major combat operations. Indeed, more Coalition troops have lost their lives since 1 May 2003 than during the period of major combat.⁴⁸ In this situation the ability to introduce heavier capabilities back into theatre to balance the vulnerability of light forces will be required.

The *Future Capabilities* chapter concluded, therefore, that there is clear need for more medium-weight capabilities to provide a balance between the need for heavy forces and the need for a lighter touch.

Major General A Stone, writing in the August 2004 edition of *RUSI Newsbrief*, supported this view:

One of the most telling lessons, and one which the forces in Iraq are still grappling, is the need to be able to ‘change horses’ as the conflict develops from High Intensity Conflict through to post-conflict operations of an entirely different nature and which therefore require a significantly different military profile. High-profile tracked equipment can be counter-productive in such operations as it is seen to be both provocative and aggressive at a time when the requirement is to win over the ‘hearts and minds’ of a country following their military defeat. Furthermore, tanks and tracked APCs are particularly unsuitable platforms in urban surroundings as a means of observation, intelligence gathering and ‘peace-projection’. So, with light forces too vulnerable and heavy forces too aggressive in many of these emerging conflict scenarios the clear need for some form of medium force was confirmed.⁴⁹

However, on a practical level much of the Army’s proposed restructuring is centred upon the introduction of technology and capabilities that will not be available until the latter half of the decade. The Future Rapid Effects System (FRES), which is a family of medium-weight vehicles that will form the basis of the new medium-weight capability, and is expected to be at the centre of the Army’s network enabled capabilities, is still in its concept phase with an award for the assessment phase of the project not expected until nearly the end of 2004. An in-service date has been tentatively placed at 2009, assuming the programme runs to time. However, the White Paper’s proposals for both the Army and for the initial delivery of NEC are based on the premise that FRES will start making a difference by 2007-2008. 4 Armoured Brigade, for example, will be ‘re-rolled’ into a mechanised brigade by 2008.

⁴⁸ At 15 September 2004 there had been 33 UK casualties and 138 US casualties during the period of major combat operations. Since 1 May 2003 there have been 878 US casualties and 33 UK casualties. <http://www.operations.mod.uk/telic/casualties.htm> and <http://www.defenselink.mil/news/casualty.pdf>

⁴⁹ Major General A. Stone, “Smaller and still better?”, *RUSI Newsbrief*, August 2004

During the Defence Committee's evidence session on *Future Capabilities* on 15 September 2004 the Permanent Under Secretary of State, Sir Kevin Tebbit, argued:

The reason for not coming forward with a more specific FRES in service date at the moment is the balance you always have to make between buying today's equipment which is going to be second-rate quite quickly and waiting until you have got the right technology level mature to get something which is going to last you through from the end of this decade right through to the next 20 or 30 years, and, as of now, the technology is not quite where it needs to be for us to be absolutely certain we have got a low-risk theme but something which will last for a very long period of time, which is why we are now appointing a systems house; it helps to give us advice on who is going to have the best combination of these technologies, reliable and will work, so that we are going to bring it in at the right moment with the right level of capabilities. It is not about delaying or pie in the sky pushing things off, it is about making the right judgment when we can, as it were, take a serious, good decision. There are lots of people with the stuff around, but it will not be world beating in 2014, and that is what we have got to do.⁵⁰

However, in an article in *The House Magazine* the defence commentator Paul Beaver suggested:

Tanks and heavy artillery will be replaced by the FRES family and new light-weight artillery systems. The Future Rapid Effects System will have the firepower of the 70 tonnes heavyweight tanks but the transportability of 20 tonnes vehicles – but this is half a decade away yet. Another example of where the future is being mortgaged.⁵¹

In his article Major General Stone also warned against an over-reliance on future technologies during this period of restructuring. He commented:

Given the continuing demands on the armed forces, any reorganisation to prepare for the future must be balanced by the retention of a capability to cope with the unexpected. Although technology can solve some our problems in assisting us to deliver 'effect', the fundamental statement made by the Secretary of State that: 'measuring the capability of our Armed Forces by the number of units or platforms in their possession will no longer be significant' is clearly wrong. Quantity is still a measure of capability and must remain so, at least until the reorganisation is complete and we are sure that the re-equipment programme is on time, within budget and up to performance expectations. The army must therefore, probably for some ten years ahead, maintain its current size to deal

⁵⁰ Defence Select Committee, *Future Capabilities: uncorrected evidence*, to be published as HC 1031-I, 15 September 2004

⁵¹ Paul Beaver, "Selling off the family silver?", *The House Magazine*, 26 July 2004

with unforeseen crises. To cut anything, but particularly infantry battalions, at this time would unacceptably jeopardise the UK's readiness.⁵²

Major General John McColl outlined in his article in *RUSI Journal* in February 2004 that NEC represents “both a challenge and an opportunity” to future warfare. He suggested that, as a critical enabler in realising the concept of Effects Based Operations, NEC was a “new dawn to be welcomed”. However, he also warned against the false belief that technology will change everything. He commented:

It will be necessary to avoid being fixated simply by the better deliverance of kinetic effect and to seek to understand the application of NEC to post-conflict challenges. NEC is, after all, only an enabler, not a solution to all our challenges.⁵³

This is a view that it widely shared, with many observers warning of the detrimental affect of an over-reliance on technology as opposed to a military presence on the ground, particularly in a post-conflict situation.

In an article in *RUSI Defence Systems* the Liberal Democrat Defence Spokesman, Paul Keetch, suggested:

The emphasis of the changes is not one I agree with. NEC, the focus of much attention in the White Paper, and in the New Chapter of the SDR before it, is undeniably an important development, but the security situation in Iraq can only be addressed by forces on the ground [...]

The conflict in Iraq demonstrated the utility of NEC, but British forces perform a tremendous range of tasks and NEC cannot keep the peace.⁵⁴

Shadow Defence Secretary Nicholas Soames commented:

It is a very important thing to keep a balance between the manpower and the application of technology. What matters at the end of the day is boots on the ground.⁵⁵

⁵² Major General A. Stone, “Smaller and still better?”, *RUSI Newsbrief*, August 2004

⁵³ Major General John McColl, “Adapting command hierarchies: does NEC pose a threat or an opportunity”, *RUSI Journal*, February 2004

⁵⁴ Paul Keetch MP, “The UK Defence White Paper: what it does not say”, *RUSI Defence Systems*, Summer 2004, p.28

⁵⁵ “20,000 posts go in defence cuts”, *BBC News Online*, 21 July 2004

Ellie Goldsworthy argued that it is the MOD's presentation of its emphasis on NEC and the introduction of new technology that has led to a misrepresentation of the consequences for the rest of the Armed Forces:

One of the areas where the MOD seems to have been misunderstood by the media is the emphasis it places on new technology and Networked Enabled Capability (NEC) [...] Instead of talking about technology and NEC, if the MOD talked more of investment in meaningful capabilities and explained why new technology will help, the message might be better understood [...]

New technology in the armed forces is not something to be despised and it is not – as some clichéd headlines in the media have it – a matter of either/or technology or people.⁵⁶

The Defence Select Committee has also argued that the focus in the White Paper on NEC as the central component in delivering an effects-based approach to warfare is misguided. In its report on the *Defence White Paper* the committee concluded:

NEC may contribute to the delivery of military effect in support of EBO, but it is not a prerequisite for it, or indeed, necessarily the main contributor towards an effects-based operational outcome...⁵⁷

⁵⁶ Ellie Goldsworthy, "Is the Ministry of Defence delivering the right message?", *RUSI Newsbrief*, August 2004

⁵⁷ Defence Select Committee, *Defence White Paper 2003*, HC 465-I, Session 2003-04

Appendix One – Required Force Structures⁵⁸

FORCE STRUCTURE - MEDIUM/SMALL/SMALL CONCURRENCY

Force Element	Enduring Medium Scale Operation	Enduring Small Scale Operation	Small Scale Intervention	Standing Commitments	Factors ²	Total ³
Maritime						
Aircraft Carriers	0	0	0	0	0	0
Destroyers and Frigates	2	2	2	1	9	16
Amphibious Shipping	0	0	2	0	0	2
Minewarfare Vessels	0	0	0	2	1	3
Strategic Deterrent Submarines				4		4
Attack Submarines	0	1	1	1	3	6
Maritime Patrol Aircraft (Nimrod MR2)	2	2	4	6	2	16
Land						
Armoured Squadrons	3	0	0	0	9	12
Armoured Recce Squadrons	2	0.25	0.25	0	9	12
AS 90 Batteries	3	0	0	0	9	12
Lt Gun Batteries	0	1	1	0	1	3
AD Artillery Batteries	0	0	1	0.5	2	4
GS Artillery Batteries	2	0	2	0	4	8
Engineer Regiments	1.5	1	1	1	6.5	11
Infantry Battalions	3	1	1	7.33	23.33	36
RM Commandos	0	1	1	0	0	2
Equipment Support Battalions (REME)	1	0.25	0.25	0	4.5	6
Royal Logistic Corps Regiments	1	0.25	0.25	0	4.5	6
Support Helicopters ⁴	8	5	12	24	N/A	49
Attack Helicopters	8	0	8	0	18	34
Air⁵						
Air Defence Aircraft	0	0	6	8	N/A	14
Offensive Support Aircraft	10	10	10	0	N/A	30
C4ISR						
Signal Regiments	2	0.3	0.5	0	6	9
Airborne Early Warning Aircraft	0	2	2	0	2	6
Reconnaissance Aircraft	1	0	1	0	1	3
Logistics and Strategic Enablers						
Transport and Tanker Aircraft	23	7	26	2	25	83
Royal Fleet Auxiliary Vessels	1	2	3	0	2	8
NBC Regiment	0	0	0.5	0	0	1
RAF Regiment Field Squadrons	2	1	1	0	5	9
Field Hospitals	0.5	0.25	0.5	0	1.25	3

² The factors include the number of units required in the force structure to allow generation of the deployed force and the units held to rotate the enduring operations.

³ The sum of preceding columns rounded to the nearest whole number.

⁴ There is an element of choice in the type of aircraft deployed from the pool held at readiness. The actual numbers of aircraft are driven by peacetime training and maintenance requirements. Aircrew numbers are driven by rotation.

⁵ The fast jet numbers reflect aircraft required at readiness. The actual numbers of aircraft are driven by peacetime training and maintenance requirements. Aircrew numbers are driven by rotation.

⁵⁸ Ministry of Defence, *Delivering security in a changing world: future capabilities*, Cm 6269, July 2004

FORCE STRUCTURE - MEDIUM/MEDIUM/SMALL CONCURRENCY

Force Element	Enduring Medium Scale Operation	Enduring Small Scale Operation	Medium Scale Intervention	Standing Commitments	Factors ⁶	Total ⁷
Maritime						
Aircraft Carriers	0	0	1	0	1	2
Destroyers and Frigates	2	2	9	1	11	25
Amphibious Shipping	0	0	8	0	0	8
Minewarfare Vessels	0	0	8	2	3	13
Strategic Deterrent Submarines				4		4
Attack Submarines	0	1	2	1	4	8
Maritime Patrol Aircraft (MR2)	2	2	4	6	2	16
Land						
Armoured Squadrons	3	0	8	0	3	14
Armoured Recce Squadrons	2	0.25	2	0	2.25	7
AS90 Batteries	3	0	4	0	3	10
Lt Gun Batteries	0	1	3	0	1	5
AD Artillery Batteries	0	0	3	0.5	2	6
GS Artillery Batteries	2	0	3	0	2	7
Engineer Regiments	1.5	1	4.66	0.66	2.5	11
Infantry Battalions	3	1	4	7.33	5.33	21
RM Commandos	0	0	3	0	0	3
Equipment Support Battalions (REME)	1	0.25	1	0	1.25	4
Royal Logistic Corps Regiments	1	0.25	1	0	1.25	4
Support Helicopters ⁸	8	5	28	24	N/A	65
Attack Helicopters	8	0	20	0	8	36
Air⁹						
Air Defence Aircraft	0	0	16	4	N/A	20
Offensive Support Aircraft	10	10	32	0	N/A	52
C4ISR						
Signal Regiments	2	0.3	3	0	2.3	8
Airborne Early Warning Aircraft	0	2	3	0	1	6
Reconnaissance Aircraft	1	0	2	0	0	3
Logistics and Strategic Enablers						
Transport and Tanker Aircraft	23	7	47	2	4	83
Royal Fleet Auxiliary Vessels	1	2	9	0	3	15
NBC Regiment	0	0	1	0	0	1
RAF Regiment Field Squadrons	2	1	3	0	3	9
Field Hospitals	0.5	0.25	2	0	0.25	3

⁶ The factors include the number of units required in the force structure to allow generation of the deployed force and the units held to rotate the enduring operations.

⁷ The sum of preceding columns rounded to the nearest whole number.

⁸ There is an element of choice in the type of aircraft deployed from the pool held at readiness. The actual numbers of aircraft are driven by peacetime training and maintenance requirements. Aircrew numbers are driven by rotation.

⁹ The fast jet numbers reflect aircraft required at readiness. The actual numbers of aircraft are driven by peacetime training and maintenance requirements. Aircrew numbers are driven by rotation.

FORCE STRUCTURE – LARGE SCALE CONCURRENCY

Force Element	Large Scale operation	Enduring Small Scale peace support	Standing Commitments	Factors ¹⁰	Total ¹¹
Maritime					
Aircraft Carriers	2	0	0	1	3
Destroyers and Frigates	12	0	1	4	17
Amphibious Shipping	8	0	0	0	8
Minewarfare Vessels	10	0	2	4	16
Strategic Deterrent Submarines			4		4
Attack Submarines	3	0	1	4	8
Maritime Patrol Aircraft (Nimrod MR2)	8	0	6	0	14
Land					
Armoured Squadrons	16	0	0	2	18
Armoured Recce Squadrons	9	0.25	0	3.75	13
AS90 Batteries	10	0	0	5	15
Lt Gun Batteries	6	1	0	2	9
AD Artillery Batteries	8	0	0	3	11
GS Artillery Batteries	11	0	0	0	11
Engineer Regiments	6.66	1	0.66	1	10
Infantry Battalions	15	1	7.33	2.33	26
RM Commandos	3	0	0	0	3
Equipment Support Battalions (REME)	4	0.25	0	0.25	5
Royal Logistic Corps Regiments	3.66	0.25	0	0.25	5
Support Helicopters ¹²	81	5	24	N/A	110
Attack Helicopters	36	0	0	12	48
Air¹³					
Air Defence Aircraft	16	0	4	N/A	20
Offensive Support Aircraft	64	0	0	N/A	64
C4ISR					
Signal Regiments	8	0.3	0	0.3	9
Airborne Early Warning Aircraft	4	0	0	2	6
Reconnaissance Aircraft	3	0	0	0	3
Logistics and Strategic Enablers					
Transport and Tanker Aircraft	74	7	2	0	83
Royal Fleet Auxiliary Vessels	12	0	0	3	15
NBC Regiment	1	0	0	0	1
RAF Regiment Field Squadrons	4	0	0	0	4
Field Hospitals	3	TA ¹⁴	0	0	3

¹⁰ The factors include the number of units required in the force structure to allow generation of the deployed force and the units held to rotate the enduring operations.

¹¹ The sum of preceding columns rounded to the nearest whole number.

¹² There is an element of choice in the type of aircraft deployed from the pool held at readiness. The actual numbers of aircraft are driven by peacetime training and maintenance requirements. Aircrew numbers are driven by rotation

¹³ The fast jet numbers reflect aircraft required at readiness. The actual numbers of aircraft are driven by peacetime training and maintenance requirements. Aircrew numbers are driven by rotation.

¹⁴ We assume that the TA will meet this task after the first route.

Appendix Two – Overall Required Force Levels⁵⁹

OVERALL FORCE LEVELS

Force Element	Planned Force Level
Maritime	
Aircraft Carriers	3 ¹⁵
Destroyers and Frigates	25
Amphibious Shipping	8 ¹⁶
Minewarfare Vessels	16
Strategic Deterrent Submarines	4
Attack Submarines	8
Maritime Patrol Aircraft (Nimrod MR2)	16
Land	
Armoured Squadrons	18
Armoured Recce Squadrons	13
AS 90 Batteries	15
Light Gun Batteries	9
AD Artillery Batteries	11 ¹⁷
General Support Artillery Batteries	11 ¹⁸
Engineer Regiments	11
Infantry Battalions	36
RM Commandos	3
Equipment Support Battalions (REME)	6
Royal Logistic Corps Divisional / Brigade Regiments	6
Support Helicopters ¹⁹	115
Attack Helicopters	48
Air	
Air Defence Aircraft	20 ²⁰
Offensive Support Aircraft	64 ²¹
C4ISR	
Signal Regiments	9
Sentry E3D Airborne Early Warning Aircraft	6
Reconnaissance Aircraft	3
Logistics and Strategic Enablers	
Transport and Tanker Aircraft	83
Royal Fleet Auxiliary Vessels ²²	15
NBC Regiment	1
RAF Regiment Field Squadrons	9
Field Hospitals	3

¹⁵ We plan to replace the Invincible Class with two larger vessels in the longer term.

¹⁶ 4 LSD(A)s, 2 LPD(R)s, 1 LPH and LSL (Sir Bedivere which is currently planned to retire from Service in 2011)

¹⁷ 7 HVM and 4 Rapier

¹⁸ 3 STA, 4 UAV and 4 Rocket.

¹⁹ 37 Chinook, 18 Merlin SH, 31 Puma and 29 Sea King 4

²⁰ This covers both the number of deployable aircraft and the aircraft held at readiness for the QRA air defence of the UK task, the number of the latter being unchanged.

²¹ This is the number of deployable Force Elements.

²² Excludes the amphibious ships shown separately in the maritime component.

⁵⁹ Ministry of Defence, *Delivering security in a changing world: future capabilities*, Cm 6269, July 2004

Appendix Three – Glossary of Terms

ASTOR – Airborne Stand-Off Radar

C4ISR – Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance

CCRF – Civil Contingencies Reaction Force

DII – Defence Information Infrastructure

EBO – Effects Based Operations

ECAB – Executive Committee Army Board

EOD – Explosive Ordnance Disposal

FAS – Future Army Structure

FRES – Future Rapid Effects System

GBAD – Ground Based Air Defence

IAP – Infantry Arms Plot

ISD – In Service Date

JCA – Joint Combat Aircraft

JSF – Joint Strike Fighter

NEC – Network Enabled Capability

QRA – Quick Reaction Alert

REME – Royal Electrical and Mechanical Engineers

RLC – Royal Logistics Corps

SDR – Strategic Defence Review

WMD – Weapons of Mass Destruction