



National Audit Office

## **MINISTRY OF DEFENCE**

# Managing the Defence Estate: Quality and Sustainability

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**MINISTRY OF DEFENCE**  
Managing the Defence Estate:  
Quality and Sustainability

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***John Bourn***  
**Comptroller and Auditor General**  
**National Audit Office**

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The National Audit Office  
study team consisted of:

Karen Jackson, Mark Parrett, Tim Phillips  
and Karen Shaw, under the direction  
of Mark Andrews

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Office web site at [www.nao.org.uk](http://www.nao.org.uk)

**For further information about the  
National Audit Office please contact:**

National Audit Office  
Press Office  
157-197 Buckingham Palace Road  
Victoria  
London  
SW1W 9SP

Tel: 020 7798 7400

Email: [enquiries@nao.gsi.gov.uk](mailto:enquiries@nao.gsi.gov.uk)

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# SUMMARY

**1** The Ministry of Defence (the Department) places great importance on the efficient and effective management of its extensive estate, as it is crucial to the delivery of operational capability and the welfare and morale of Service personnel. Its vision for the estate is:

‘To have an estate of the right size and quality to support the delivery of defence capability, that is managed and developed effectively and efficiently in line with acknowledged best practice and is sensitive to social and environmental considerations’.

**2** The Department has a worldwide estate valued at some £18 billion and is the second largest landowner in the United Kingdom with an estate of 240,000 hectares. The built estate (80,000 hectares) includes offices, living accommodation, aircraft hangars and naval bases. The rural estate (160,000 hectares) comprises mainly training areas and ranges on undeveloped rural land which is often of particular environmental significance. We estimate that the total annual operating cost of the estate was some £3.3 billion in 2005-06.

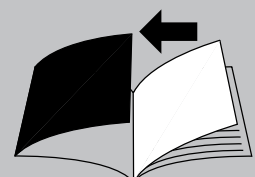
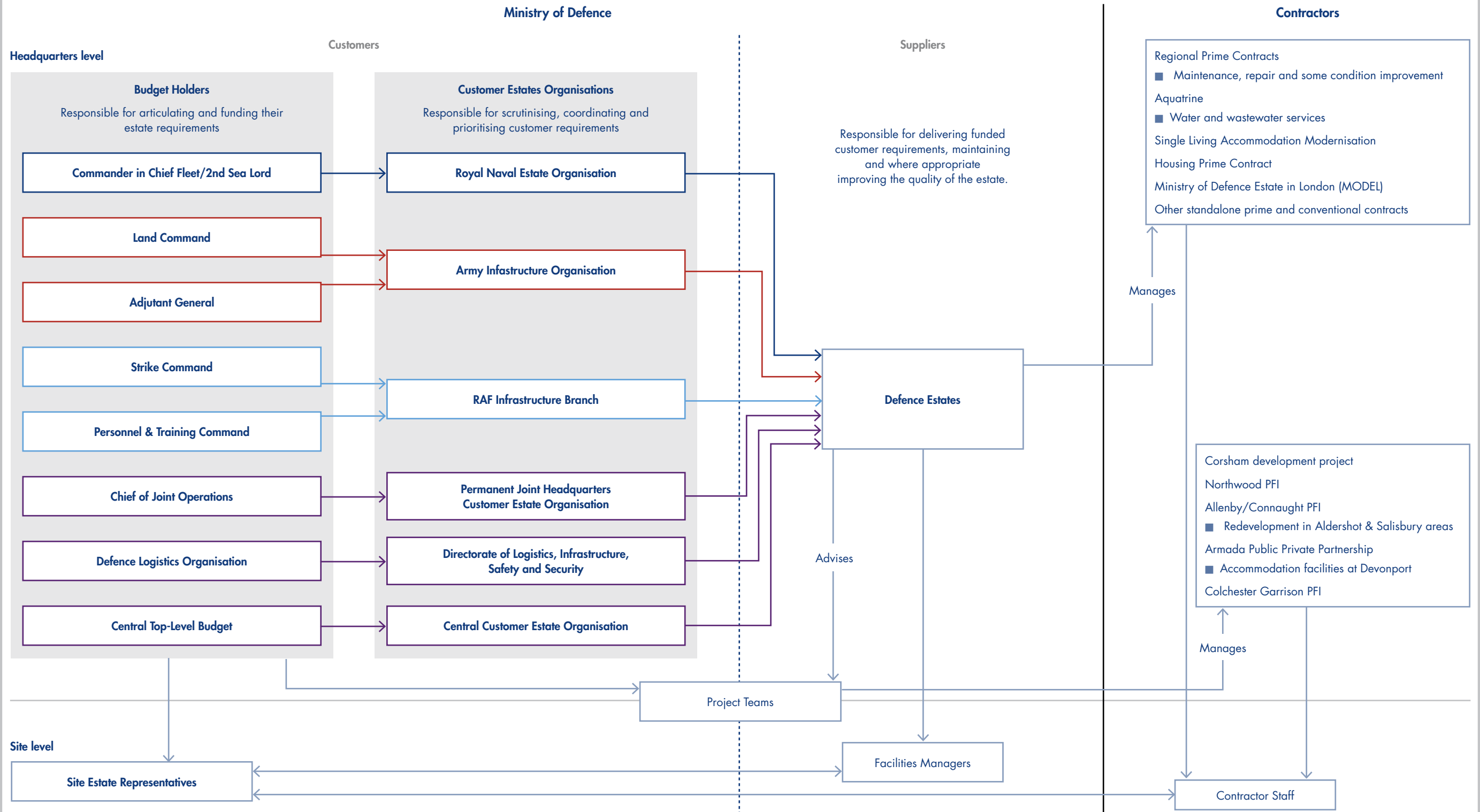


Figure 1 overleaf

**1** Roles and responsibilities in managing the Defence Estate



Source: National Audit Office

3 This Report follows on from an earlier one published in 2005.<sup>1</sup> The 2005 report looked at the changes the Department was making to reverse the deterioration in the quality of the estate; it also reported on progress with estate rationalisation. Given the significance of the proposed changes, this Report focuses on the progress being made to achieve an estate of the right quality. It does not deal with the overseas defence estate for which different arrangements exist.

4 Over the last five years, the Department has reorganised the provision of estate management. The occupiers of the estate, who had run it, (principally the three Services) became internal customers, represented by Customer Estate Organisations, determining their requirements and securing funding for them from the centre of the Department. Defence Estates was created as the supplier organisation tasked with meeting their requirements. The establishment of Defence Estates was a very positive step compared with past practice and has paved the way for future improvements to estate quality.

5 A central part of the changes was the introduction of new contractual arrangements to improve the delivery of estate services. These included Regional Prime Contracts to maintain and improve the estate; Private Finance Initiative (PFI) contracts to operate and maintain water services; functional prime contracts to deliver similar types of building across the estate, such as single living accommodation, and stand alone prime or PFI contracts delivering estate requirements as part of a wider package of work. **Figure 1** illustrates the roles and responsibilities for managing the defence estate within the customer organisations, Defence Estates and contractors.

6 The Department has developed two good systems for measuring the quality of its estate – the Estate Planning Tool and the Estate Performance Measurement System (incorporating Integrated Estate Management Plans).<sup>2</sup> The timetable for implementing them is challenging and the Integrated Estate Management Plans require considerable work to realise the full potential benefits, particularly to ensure that requirements contained within the plans reflect relative priorities across the defence estate as well as the needs of single sites and Services.

7 Another initiative, the Non-Equipment Investment Plan is a positive development enabling the Department to take a more strategic view. The plan mainly includes expenditure on significant investment projects over



£50 million. Significant levels of expenditure on the defence estate are delegated to individual budget holders. While the total cost of the estate can be derived from the Departmental accounts, at the Departmental level resources are allocated either to specific projects in the Non-Equipment Investment Plan or to Defence Estates and the resources allocated by other budgets holders reflect their own programming judgements.

8 The Regional Prime Contracts are improving the way the estate is maintained but it is too early for this to have had an impact on the overall quality of the estate. Internal customers are pleased with the delivery of reactive and planned maintenance; health and safety issues have been identified and are being addressed; and progress is being made towards measuring the baseline quality of the estate.

9 However, the Department has many, often conflicting, demands on its resources and has faced affordability constraints across the Defence budget in 2006-07. In the context of savings measures across the Department, Defence Estates has, therefore, had to find savings of £13.5 million (4.5 per cent) in the funding of Regional Prime Contracts largely through deferrals in planned maintenance and repair. The Department judged that these savings had less impact overall than savings that might have been made elsewhere but recognises that, in general, cuts in planned maintenance put at risk improvements to the quality of the estate and may harm contractors' confidence in the Department's plans. They may also lead to increased costs for the work, given disruptions to contractors' plans and further deterioration to the buildings concerned. However, the Department considers that more broadly there are benefits in permitting delegated budget holders flexibility to allocate resources in response to local priorities.

1 Report by the Comptroller and Auditor General, *Ministry of Defence: Managing the Defence Estate* (HC 25, Session 2005-06).

2 The Estate Planning Tool will hold data on every built asset in the Department. Assessments of the constituent parts of buildings - roofs, walls, heating systems - will be aggregated to reach a view of their overall condition. The tool will also contain information taken from Integrated Estate Management Plans, on the target condition and long-term plans for assets. It will be possible to combine data on individual assets to provide a picture of the quality of the defence estate at site, regional and national level. Data held in the Estate Planning Tool will also form part of the Estate Performance Measurement System, which will give a holistic picture of the performance of the estate. In addition to information on the physical condition of the estate, the system will report on project delivery, customer satisfaction, health and safety and sustainability.

**10** Despite such budgetary pressures, other budget holders have injected additional expenditure of £45 million to fund specific low value projects, such as fire safety systems, sports facilities and upgrades to toilet and shower facilities. Some of this work is to support urgent operational requirements but much of it is routine and foreseeable. Some difficulties resulted from overly complex processes in Defence Estates and insufficient flexibility in the system. The Department recognises that this money was injected in an uncoordinated way, which did not exploit opportunities for bringing together similar projects into a cohesive programme.

**11** The Department has invested considerable resources to improve the quality of Single Living Accommodation and Service Family Accommodation. Some £1.3 billion has been or is planned to be invested in Single Living Accommodation through the Single Living Accommodation Modernisation programme and other accommodation projects. The Defence Training Review will also deliver some 5,000 upgraded bedspaces in Phase 1. Assuming no deterioration of the existing stock, by the end of 2012-13 the number of bedspaces at the required standard will have risen to around 75,000. Given the predicted fall in requirement, this leaves a shortfall of around 35,000 bedspaces which are not at the required standard.

**12** Over 4,300 Service Family Accommodation houses were upgraded to the highest standard over the two years 2004-05 to 2005-06, against a target of 1,100, and a further 1,200 upgrades are planned to have been completed by the end of 2006-07, with some 900 a year thereafter. Nearly 28,000 houses, 60 per cent of Service Family Accommodation in Great Britain, is now at the standard set by the Department leaving some 19,000 houses to be upgraded. A prime contract has been let for the maintenance of Service Family Accommodation in England and Wales. The contractor provides all aspects of property maintenance. There have been some early problems with quality of service which are being addressed.

**13** The Department's key contractual mechanisms for managing accommodation are sufficiently flexible to allow it to upgrade further bedspaces and family accommodation whenever funding can be made available.

**14** Environmental and other sustainability issues have come much more to the fore in recent years. The Department has an environmentally significant rural estate with many important habitats and species, for example, half of it falls into 175 Sites of Special Scientific Interest. The Department has done much to improve the sustainability of its management of the estate. It is well-regarded for its delivery of environmental benefits, especially wildlife conservation, and over three-quarters of its Sites of Special Scientific Interest are reaching the target state. The Department has much further to go to achieve its target of 90 per cent of its new buildings being rated highly for sustainability. The Department needs to do more to ensure that it is meeting the pan-governmental and internal targets it has signed up to. These include targets to reduce carbon emissions, to increase the proportion of its energy that comes from renewable sources, and to use timber from sustainable sources.

## Overall Value for Money

**15** The cost-effectiveness of investment in the defence estate cannot be determined until the Department has completed its work to establish the baseline quality of the estate and to measure changes in performance and quality over time. In addition, the full cost of the estate is not collated and changes in Departmental structure and in the way that costs are identified make trend analysis over time difficult. Information on other estate-related expenditure is available through the Departmental Resource Accounting system. The Department judges that separating out the cost of the estate from other parts of expenditure on the Armed Forces is not necessary to inform the value for money and cost benefit decisions that it has to make. Costs that are readily available are those borne by Defence Estates, where the Agency's sole responsibility is for the estate, and expenditure on major capital and PFI projects.

**16** The new arrangements to manage the defence estate have improved delivery of estate services. It is too early to determine whether this improvement will result in a better quality estate. Such improvement is dependent on continued good performance by Defence Estates and contractors which requires commitment, supplier innovation and client leadership. All this could be at risk if adherence to the current strategy is not maintained. Sufficient stability of funding is necessary to preserve contractor confidence and maximise through-life efficiency.

## Recommendations

### Recommendation 1

The Department should remain committed to its aim of achieving an estate of the right quality and improving through-life efficiency, and should, therefore, adhere to its current estate strategy.

### Recommendation 2

The Department has recently confirmed its strategic vision for the defence estate, reorganised the provision of estate management and put new long-term contractual arrangements in place. The Department should seek as far as possible to avoid making short-term cuts which risk damaging long-term value for money and may mean that the long-term vision and objectives are not achieved.

### Recommendation 3

Having designed systems to provide maintenance in a way that maximises efficiencies through better programming, the Department should as far as possible exploit the full benefits of these systems by reducing the volume of minor short-notice projects and by better prioritisation of all works in line with its estate strategy.

With the exception of urgent operational requirements, the Department should give priority to work necessary to meet the terms of the contracts, to maintain and where necessary improve the quality of the estate.

The majority of injected work should in principle be planned, prioritised and funded at least one year in advance. Work of similar nature should, where possible, be coordinated by customers, Defence Estates and contractors working together to achieve efficiency benefits from the use of established supply chains and bulk purchase.

### Recommendation 4

The Department recognises that letting the five Regional Prime Contracts on different bases has not maximised coherence in some areas, such as scope and required condition improvements. When tendering for replacement contracts, the Department should harmonise the new arrangements as far as possible, in particular, in the use of performance measurement and work processing systems and should incentivise the contractors to improve energy efficiency and sustainability.

### Recommendation 5

The Department should continue to develop a fuller understanding of the costs related to its estate. These costs should include the full cost of ownership and estate valuations in sufficient granularity to facilitate it in making decisions on estate performance, planning and disposals.

### Recommendation 6

The Department should finalise the rollout of the Estate Planning Tool and Estate Performance Measurement System and should adopt those measures needed for immediate improvement listed in Appendix 9. Once the implementation is complete, the Department should consider the additional measures laid out in the Appendix to improve the system further.

### Recommendation 7

Using the information that will be provided by new management systems, the Department should model its future estate needs to enable better planning. With robust underpinning management information and systems, the Department should be able to adapt this model to reflect changing Defence priorities from year to year.

The Department should complete its work to establish the current condition of the estate. It should then determine the quality of the estate required in the future and the trajectory to meet that requirement. This work should be completed in time to inform decisions about possible extensions to Regional Prime Contracts.

The Department should model the costs and benefits of alternative options, such as replacement versus refurbishment, the impact of decisions such as routine maintenance versus new investment, and the level of investment versus the rate of decline in quality.

### Recommendation 8

The Department has improved its planning process through the Non-Equipment Investment Plan and the Estate Performance Measurement System (including Integrated Estate Management Plans), but needs to improve its processes still further to ensure that the decisions it makes using them are robust.

Given the long-term nature of investment required in the estate, the Department should continue its work to identify planned expenditure over a 10 to 20-year period to ensure that the programme is affordable and delivers the required benefits in terms of both quality improvement and financial savings.

To enhance its ability to determine and prioritise expenditure on the estate the Department should improve its visibility of estate-related expenditure in the Short-Term and Equipment Plans and consider this expenditure alongside the Non-Equipment Investment Plan.

The Department at all levels, including Defence Estates, Customer Estate Organisations, budget holders and their staff, should work more closely together to produce robust Integrated Estate Management Plans. The Department should ensure that there is a process in place to challenge and prioritise customer requirements using these plans. In addition, there are a number of interrelated measures at Appendix 9.

#### Recommendation 9

**The Department should clarify and communicate the division of roles and responsibilities between internal customers and suppliers and external contractors to prevent duplication and ensure that responsibility rests where it can best be managed.**

The Department should review Customer Supplier Agreements between Defence Estates and the Customer Estate Organisations. These should set out the specific requirements and targets, tailored for each customer.

The Department should determine the requirement for and role of Site Estate Representatives and Facilities Managers and consider scope for rationalisation of posts. There should, however, be clear lines of responsibility drawn between such roles and the Customer Estate Organisation and Defence Estates to ensure consistency of delivery and purpose.

The Department should address the duplication of roles and responsibilities that it has identified at headquarters and site levels. This work should aim to achieve transfers and reductions in overall staff levels commensurate with the responsibilities that have transferred from customers, both to Defence Estates and to the private sector.

#### Recommendation 10

**The Department should develop an action plan to address skills shortages.**

The Department should continue its work to establish the numbers and skill levels of its estate staff, particularly in key disciplines such as quantity surveyors, safe systems of work staff and facilities managers.

The Department should develop an action plan to address skills shortages which may include changes in recruitment strategy, redistribution of staff and contracting for specific professionals.

#### Recommendation 11

**The Department should further improve its approach to sustainability, in particular by identifying areas to further delegate responsibility for the measures required both to meet its statutory obligations and to achieve targets for sustainable development. Where performance data against targets is poor the Department should collect reliable, consistent and comprehensive management data, setting a baseline and measuring subsequent improvements in performance.**

The Department should delegate responsibility for delivering improvements to where they can best be managed. This is likely to be through a combination of incentives and targets for contractors and targets for the users of the estate, as well as for Defence Estates.

The Department should learn lessons from good and bad practices in managing its estate sustainably. It should also improve the speed with which it adopts and replicates initiatives across the estate where these are shown to be effective in pilots, for example by expediting the wider implementation of the project to reduce carbon emissions and utility bills at RAF Kinloss.



# PART ONE

## Delivering an estate of the right quality

**1.1** The defence estate and its related services are vital to the delivery of defence capability. The Armed Forces require an estate as a base from which to mount expeditionary operations, as a place to train and work and, for many service personnel and their families, as a place to live. The defence estate is valued at some £19 billion. The Department reflected this importance in its estate strategy, *In Trust and On Trust*, published in June 2000. It further endorsed this when a revised strategy was published in March 2006. The importance of the estate for delivering defence capability and the vision for the defence estate has remained the same:

“To have an estate of the right size and quality to support the delivery of defence capability, that is managed and developed effectively and efficiently in line with acknowledged best practice and is sensitive to social and environmental considerations”.

**1.2** There are six strategic aims derived from the vision, each underpinned by statements of priority and measures of success (Appendix 2). This part of the report examines the investment being made, through several contracts, to achieve an estate of the right quality. We found that that the Department has achieved some early successes, but that future delivery is reliant on continued adherence to the strategy.

### The Regional Prime Contracts have begun to deliver benefits but funding arrangements have impeded progress

**1.3** Regional Prime Contracts have made a positive difference to the way that the defence estate is managed and maintained, though the Department is not yet able to quantify the extent of the improvement. Not all of the contracts have been funded to deliver improvements in the condition of the estate. Unplanned cuts and inadequately planned injections of new money for Minor New Works have constrained progress.

The Regional Prime Contracts are delivering benefits, but the Department has limited data to demonstrate performance improvement

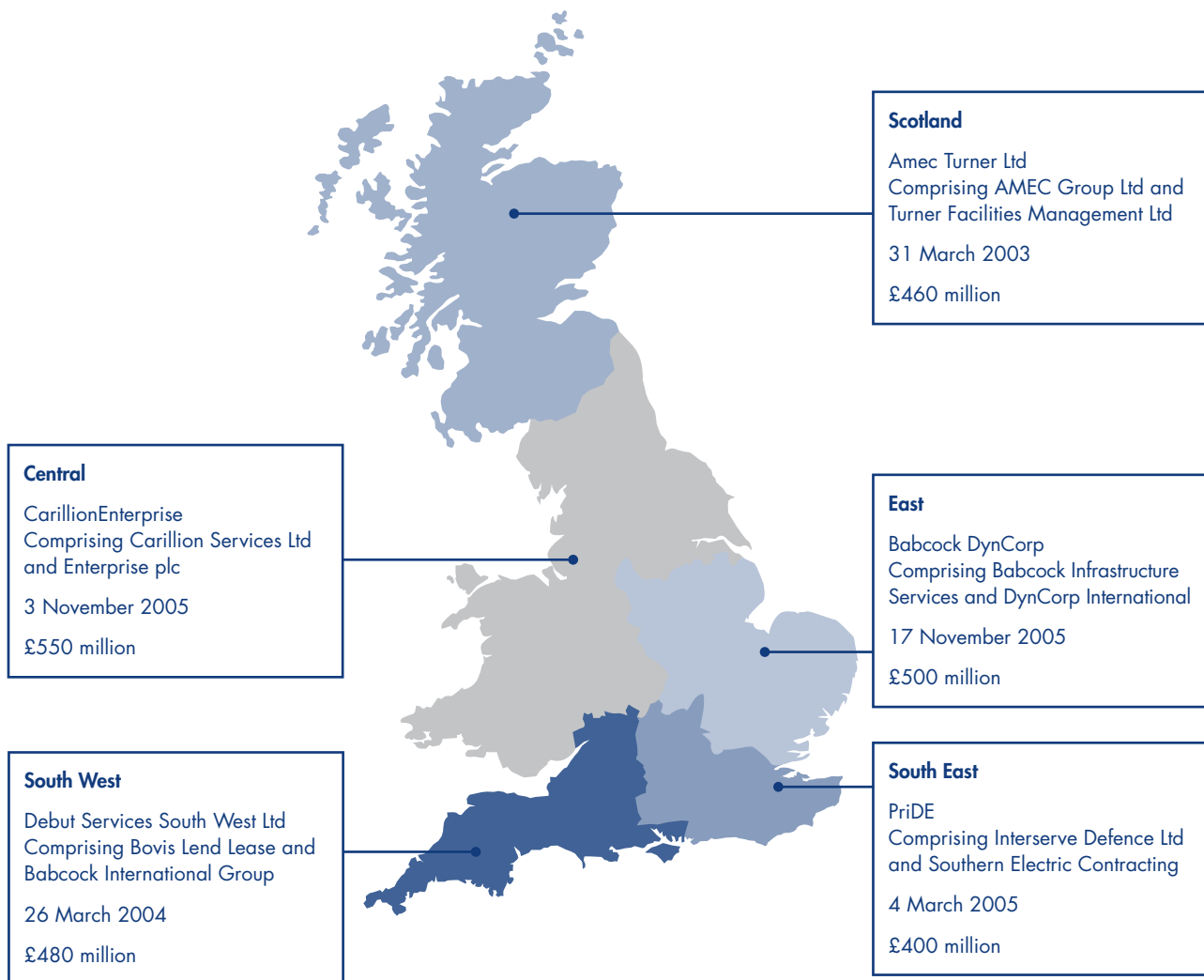
**1.4** The Department has let five Regional Prime Contracts for estate services in Great Britain which are intended to achieve a number of benefits. Previously, estate procurement was undertaken by many parts of the Department and was hampered by many client-customer interfaces, imprecise allocation of risk and vulnerability to fraud and malpractice. Problems including poorly directed funding, inconsistencies in approach and varying standards led to a poor quality estate. The objective of prime contracting is to deliver better long-term value for money through improved supply chain management, incentivised payment mechanisms, continuous improvement, economies of scale and a partnership approach. Regional Prime Contracts have been let to deliver maintenance and some larger improvement and development projects on the estate in Great Britain and are key to achieving the Department’s strategy for an estate of the right quality. In particular, the Department plans to deliver 30 per cent through-life efficiencies by 2009-10.

**1.5** Regional Prime Contracting has been a significant initiative. As noted in our 2006 report on innovation in central government, it took five years and a team of around 50 to implement.<sup>3</sup> It affected around 500 Defence Estates staff (plus those working for the contractors and customers) and cost between £15–20 million to develop. This initiative was accompanied by a major change programme known as Project Alexander which put into place the new processes and relationships necessary to make the new contracts work. These are discussed in Part 2. The five Regional Prime Contracts were let sequentially, which enabled lessons to be learned as they rolled out. The first of the contracts, in Scotland, is now halfway through its initial seven-year period. Details of the values, dates and contractors for each prime contract are at **Figure 2 overleaf**.

<sup>3</sup> Report by the Comptroller and Auditor General, *Achieving innovation in central government organisations* (HC 1447, Session 2005-06).

## 2 Award of the five Regional Prime Contracts

The date is the date contract awarded. The value is the approximate contract value.



Source: National Audit Office

### NOTE

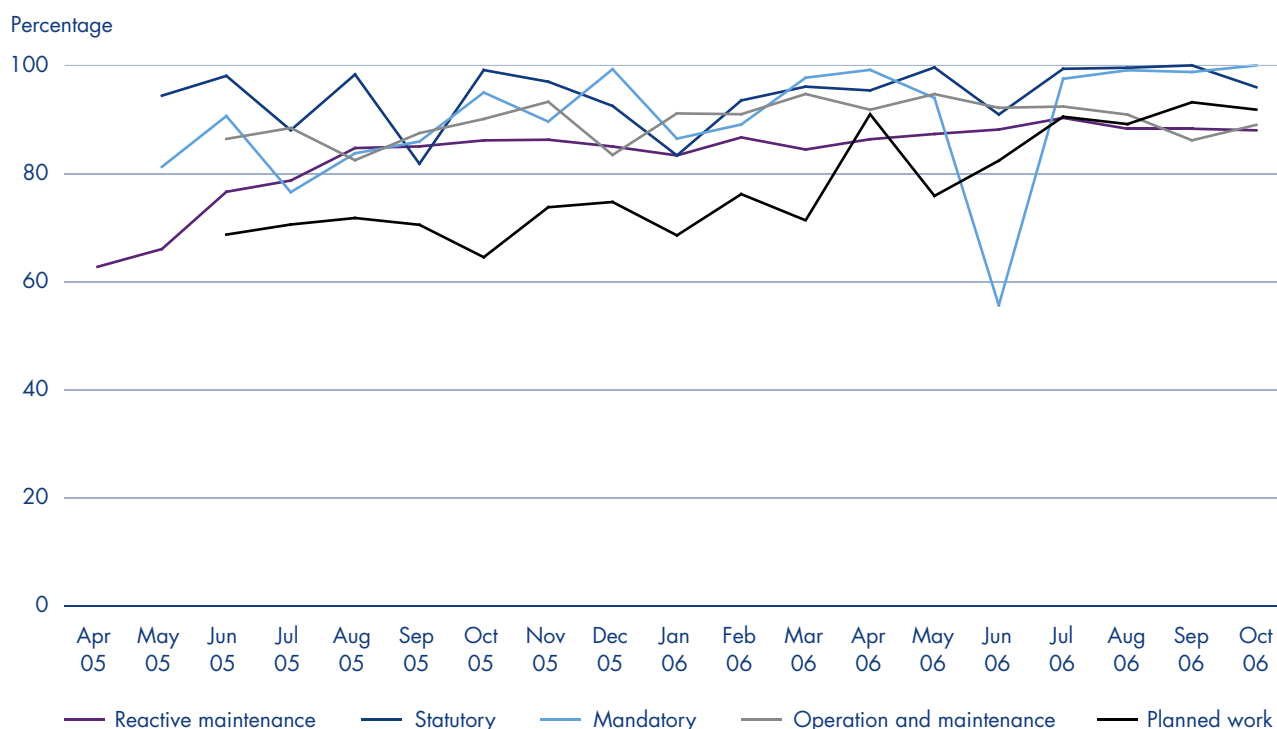
Each of the contracts will run for seven years initially with an option to extend the period to ten years subject to satisfactory performance.

**1.6** Both civilian staff and Service personnel are very satisfied with the core elements of the Regional Prime Contracts. They have been positive about the standard and timeliness of completed maintenance work, both planned and reactive (that which is carried out in response to calls to helplines). There has also been positive feedback about the quality of the larger works projects although there are issues about the process of defining, costing and letting some of these, and about the time that these processes take. These are discussed later in the report. It is difficult

to compare current performance with that before the introduction of these contracts as the Department has no baseline data on previous levels of performance. Evidence from interviews with staff involved in managing the estate under both old and new regimes indicates that reactive maintenance has improved. In the South West Regional Prime Contract, data shows that performance on the timely delivery of core services has improved since the contract was let, as illustrated in **Figure 3**.

### 3 The percentage of work completed on time in the South West is increasing

South West Regional Prime Contract percentage of work completed on time



Source: National Audit Office analysis of Ministry of Defence data

#### NOTE

The anomaly in June 2006 is accounted for by a higher percentage of mandatory work recorded as not being completed on time at five establishments out of over 160. This is due to a number of unrelated problems including the contractor not being able to access the site and rescheduled tasks not being reflected in the monitoring system in that month.

**1.7** There is evidence that partnering is working well at a regional level. For example, in the South West, staff from Defence Estates and the contractor Debut have been looking jointly at how to achieve the savings that the Department has asked Defence Estates to achieve during 2006-07. Collocation of staff from the Department and contractors is now a common feature, both at headquarters and at station level, enabling staff working for Defence Estates, its internal customers and the contractors to work closely together.

**1.8** The Department has also sought to foster closer cooperation between contractors through a supplier association, where best practice can be shared and common issues addressed, with the aim of achieving greater benefits from combined market power. The five contracts are at different stages of maturity and so such wider cooperation between contractors is at an early stage. Examples of the benefits of being able to purchase in bulk in a planned way have already been seen in the South West. These include a reduction in paint supply

costs (a bulk purchase agreement made with a single supplier produced a 20 per cent saving) and a reduction in office supplies costs (a 25 per cent reduction through bulk buying). The South West and Eastern prime contracting consortia both include Babcock, which has already enabled efficiencies, such as a shared helpdesk facility.

**1.9** Traditionally the Department was exempt from many statutory obligations on the wider public and private sectors. However, it has sought to apply health and safety standards at least as good as those required by legislation and it has been Government policy since 1984 for Departments to consult local planning authorities as if they were subject to normal planning controls. The Department has now lost most of its Crown immunity. Like the rest of government, it must now demonstrate that it is meeting minimum standards for health and safety, and environmental and sustainability issues, must comply with planning policies and must go through formal processes to obtain planning permission for construction.

**1.10** By transferring responsibility for maintenance work to the private sector the Department has been able to identify health and safety issues which are being addressed. These include past failures to undertake regular checks and issue compliance certificates for items such as boilers and to undertake control measures for diseases such as Legionella. However, there is still some way to go and in some cases the scope, scale and cost of the risk transferred were greater than anticipated and are subject to negotiation with the contractors.

**1.11** Regional Prime Contractors are required to address a number of statutory sustainable development issues including planning, management, measurement and delivery against the Department’s targets and wider vision. Typical deliverables contained with contracts’ output specifications include: adherence to the Montreal Protocol on substances that deplete the ozone layer; use of sustainable timber; use of the Building Research Establishment’s Environmental Assessment Method or equivalent, achieving an ‘excellent’ rating for new builds and ‘very good’ for refurbishments (see Appendix 3); adherence to all relevant environmental and sustainable development legislation; undertaking a sustainability appraisal for each project; and development and implementation of an Environmental Management System. The contractor in the South West has established a small team of staff to deal specifically with environmental and other sustainability issues. An example of work they have identified and carried out in Cornwall is contained in Appendix 4.

**1.12** Mandatory regulations remain the main incentive for the Department and its contractors to deliver environmental benefits across the full range of activities. The Regional Prime Contractors are not incentivised, for example, to reduce energy costs, as utilities are funded through contracts negotiated centrally by the Department. Hence, it is possible that to improve energy efficiency the contractors could bear the additional capital and maintenance costs, but would not benefit from reduced energy costs.

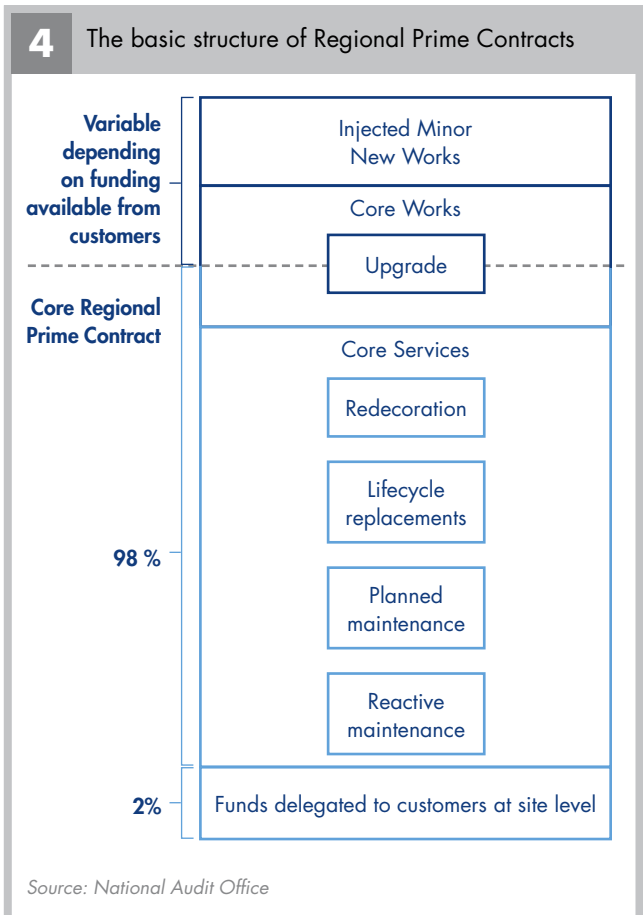
**Funding arrangements have impeded the delivery of quality improvements and wider benefits through Regional Prime Contracts**

**1.13** The process of letting contracts sequentially has inevitably led to there being differences between the five Regional Prime Contracts. Determining what is in and out of scope in different contracts causes problems both for occupants of the estate and for Defence Estates. There is also a lack of consistency in the approach taken by Defence Estates in what it has agreed to deliver to its

internal customers without further customer funding being required. This centres largely on different definitions of ‘maintenance’ and ‘condition improvement’.

**1.14** The major differences arose from the affordability of each contract. The intention was to let all five contracts on an output basis to provide a consistent approach to maintenance across the estate, transfer risk to where it could be best managed and, as part of the output specification, to deliver improvements in the quality of the estate over the life of the contract. In certain key respects, all five contracts are broadly similar and **Figure 4** is a diagram showing the basic categories of work that they undertake, subject to the following provisos:

- Accepted minimum standards have been achieved and all of the contracts require the estate to be handed back at the end in at least the same condition as when the contract was let.
- The first Regional Prime Contract in Scotland was let on an input basis, a more prescriptive approach with less opportunity for innovation and with more risk retained by the Department.
- The remainder of the contracts have been let on an output basis with the exception of Regional Prime Contract South West, where eight sites have limited funding available and are managed on an input basis.



- The Department is able to inject additional funding to achieve condition improvements but only the last two contracts for the East and Central regions include contractual provisions to improve quality by the end of the contract.

Defence Estates has started work to look at the coherence of the Regional Prime Contracts to establish what can be done as part of the current contracts and what should be done when the contracts are re-let.

**1.15** The Department is committed to delivering efficiencies through its management of the estate, including through Regional Prime Contracts. For example, Defence Estates is required to deliver some £22 million of efficiencies in 2006-07 from its management of the Regional Prime Contracts and the Housing Prime Contract and from housing restructuring. It also has an efficiency target to deliver a £21 million reduction in overheads over four years.

**1.16** The Department faces a significant challenge to remain within its budget in 2006-07. To help meet this challenge, Defence Estates was asked to save a further £15 million of which £13.5 million is from Regional Prime Contracts, 4.5 per cent of expenditure of £297 million in 2006-07. These savings will be achieved largely by deferring work planned for this year. Given that the contracts are largely output based, much of this work will need to be done during 2007-08 to ensure that the contractors are able to maintain the quality of the estate and meet statutory obligations, as they are required to do in the

contracts. The Department judged that the risk in 2006-07 was manageable and that this option was less damaging than making savings elsewhere, though it recognises that such in-year changes to the core provision of Regional Prime Contracts are not desirable. As well as presenting a risk that this deferred work will cost more, there is a risk of sub-contractors losing confidence in the programme of work, undermining their longer-term presence on sites.

**1.17** The money to fund Regional Prime Contracts initially came from different budgets across the Department and was transferred to Defence Estates. This paid for the contracts that have been let and was sufficient to allocate two per cent of the value of the contracts to unit commanders to determine some work locally (for example, for small items of work such as removing a partition wall). Budget holders injected an additional £18 million in 2005-06, over eight per cent of the total value of the core contracts, to pay for additional minor new work to be undertaken by Regional Prime Contractors, such as fire safety systems, sports facilities and upgrades to toilet and shower facilities. By July 2006, a further £45 million, over 15 per cent of the total value of the contracts in 2006-07, had been found, including £10 million of work injected for the Defence Information Infrastructure project.<sup>4</sup> See the analysis at **Figure 5**. Whilst injected funding was anticipated as part of the contracts, taking account of the savings mentioned at paragraph 1.16, there was a net increase in expenditure on Regional Prime Contracts during 2005-06 and 2006-07 of around £50 million over that contractually planned.

## 5 Injection of Minor New Works

Injected Minor New Works 2005-06 to 2006-07 as a proportion of Core Contract Costs

	2005-06			2006-07		
	Total injected (£ million)	Contract cost (£ million)	Percentage	Total injected (£ million)	Contract cost (£ million)	Percentage
Scotland	0.6	53.0	1.1	2.2	36.7	6.1
South West	5.0	90.1	5.6	5.6	73.4	7.6
South East	8.2	49.7	16.5	8.5	59.6	14.2
Central	4.5	15.4	29.0	12.8	67.8	18.8
East	–	11.9	–	5.7	59.3	9.6
Defence Information Infrastructure	–	–	–	10.0	–	–
<b>Total</b>	<b>18.3</b>	<b>220.1</b>	<b>8.3</b>	<b>44.8</b>	<b>296.8</b>	<b>15.1</b>

Source: National Audit Office analysis of Ministry of Defence data

### NOTE

Reflects budget transfers from Top-Level Budgets to Defence Estates to fund Minor New Works.

<sup>4</sup> The Defence Information Infrastructure project will replace many individual information systems throughout the Department with a single information infrastructure.

**1.18** The injection of funding on this scale and at such a speed was not expected by either Defence Estates or the contractors who did not have the resources to react quickly to such demands. The Department has also recognised that some difficulties resulted from overly complex processes and insufficient flexibility of Defence Estates' systems to respond to customer requirements. These processes and systems were designed for the assessment and management of larger projects.

**1.19** Some of the injected work was essential, to meet urgent operational requirements or other high priority issues that arose during the year, such as to rectify health and safety problems. As priorities changed during the year, funding has also been released that was not previously available for estate work. Commanding Officers and their units can clearly benefit from the flexibility of being able to inject additional work. The Department recognises that this money was injected in an uncoordinated way, which did not exploit opportunities for bringing together similar projects into a cohesive programme. The Department views this as an inevitable consequence of its approach towards delegated budgets, empowering budget holders to use available funding to deliver their targets which are understandably focused on military capability; the Department considers this the best way to achieve value for money.

**1.20** Nevertheless, the work deferred to achieve savings included many cyclical repairs and redecorations required to ensure that the contractors can meet the requirements in the contracts to maintain or improve the quality of the estate. Earlier planning of injected work would have allowed it to be prioritised alongside the core work that was deferred. An analysis of deferred and injected work in 2005-06 is at Appendix 5. The Department is, therefore, developing a revised approach for injected works to improve, as far as possible, the prioritisation and coordination of these works, while preserving the fundamental principles inherent in delegated budgets. This approach should mitigate against the following risks:

- Highest priority works may not be done. For example, much of the work, particularly in 2005-06, was injected late in the year so that it could only fund projects which could be completed quickly and over the winter, rather than higher priority and more complex work.
- Work on the estate may not be carried out in the most cost-effective way as by injecting work in this way the Department has not been able to achieve fully the benefits of Regional Prime Contracts which accrue from a long-term programme of work with established supply chains.

- The Department's overheads may be increased as, by their nature, Minor New Works require more staff effort to plan, but have less impact on the overall quality of the estate than larger and more strategic programmes of work.
- Working relationships within the Department are adversely affected, as both Defence Estates and contractors are perceived by their internal customers as being inflexible and slow to react.

**1.21** The Department is working to bring more predictability and control to the injection of new work. Following problems in the previous financial year, in 2006-07 the Department required budget holders to identify minor new works programmes and transfer funds to Defence Estates to pay for them by July 2006. However, many transfers took place later in the year. Defence Estates has discussed a number of proposals with their customers to manage the process better and there have been broadly accepted although there is further work to be done to implement the changes.

## The Department is addressing the long-term problems with the quality of living accommodation but there is more to do

**1.22** There has been considerable investment in both Single Living Accommodation and Service Family Accommodation, and, since 2001-02, some 20,000 new Single Living Accommodation bedspaces have been built and some 12,000 Service family houses have been upgraded. The scale of the remaining problem is, however, such that unless more resources can be found, a significant number of Service personnel and their families are likely to be housed in poor quality accommodation for 20 years or more.

## The Department has a major new build programme for Single Living Accommodation but will still have a shortfall in 2013

**1.23** Single Living Accommodation is being progressively upgraded through a number of contracts. The Single Living Accommodation Modernisation (SLAM) programme is over halfway through the first five-year phase and, with planned investment totalling some £480 million, has delivered over 6,000 new bedspaces to date with a further 3,000 to come by the end of 2007-08. On 18 December 2002, Debut Services Limited was awarded a five-year prime contract for Phase 1 of the programme and, in August 2006, the Department approved the award of a further five-year contract to Debut for Phase 2. The

Department currently plans to spend £335 million across the five years of Phase 2, which will fund some 3,800 new single en-suite bedrooms.

**1.24** Separately, many more new Single Living Accommodation blocks are currently being built through a range of large and small individual projects representing investment in accommodation of over £500 million. These 'parallel projects' include the Allenby/Connaught PFI contract in the Salisbury and Aldershot areas (some 11,000 new bedspaces), the Colchester Garrison PFI contract (2,232 bedspaces) and building projects at Faslane (1,754 bedspaces), Plymouth (1,344 bedspaces) and Northwood (720 Bedspaces). A number of these projects are also providing technical facilities and other services. The rationalisation programme driven by the Defence Training Review, which is planned to be delivered in two packages through Public Private Partnerships, is also expected to deliver new single living accommodation. The contract for phase 1 is expected to be signed in the second half of 2008 and will deliver around 5,000 upgraded bedspaces by the end of 2012-13.

**1.25** **Figure 6 overleaf** shows the number of new bedspaces expected to be delivered each year in Great Britain until 2012-13. At current planned funding levels, the Department will increase the number of single bedspaces at the requisite standard from some 25,000 (22 per cent of the requirement) at the start of 2003-04 to around 50,000 (45 per cent) by the end of 2007-08. This would rise to nearly 75,000 (68 per cent) by the end of 2012-13. Given the predicted fall in requirement, this leaves a shortfall of around 35,000 bedspaces below the required standard, but this assumes that mechanisms, such as the Regional Prime Contracts, will prevent further deterioration of the existing stock.

**1.26** A prime contract for the maintenance of Service Family Accommodation in England and Wales has been let to Modern Housing Solutions, a joint venture company established specifically for this purpose, made up from Carillion Holdings Limited, Enterprise Managed Services Limited and Atkins Limited. The contractor provides all aspects of property maintenance but the contract does not include any provision, within the contract value, for condition upgrade. The seven-year contract is worth, at present, in the region of £580 million for an agreed number of houses, with potential to increase to £690 million if a greater number of houses are maintained. There have been significant problems with quality of service, caused by a number of factors, including greater than anticipated backlogs of work from previous contracts, a shorter than planned mobilisation period and a higher than expected number of houses being in use. These problems are being addressed,

albeit with the injection of an additional £20 million (20 per cent of the contract value in 2005-06) by the Department.

**1.27** There is a separate housing upgrade programme to improve Service Family Accommodation in the United Kingdom by completing the upgrade of the stock of properties to Standard 1 for Condition (see definition at Appendix 6). Progress with upgrade is summarised at **Figure 7 on page 18**.

**1.28** For the past two financial years Defence Estates has exceeded its targets for the upgrade of Service Family Accommodation by a significant margin through reprioritisation and allocation of additional funding. Over 4,300 Service Family Accommodation houses were upgraded to the highest standard over the two years 2004-05 to 2005-06, against a target of 1,100. There are over 49,000 houses in Great Britain of which some 2,200 are no longer required by the Department and will be disposed of in due course. Of the 46,800 remaining over 19,000 (over 40 per cent) remain below Standard 1 for Condition. At this stage the Department is uncertain how long it will take or how much it will cost to upgrade the majority of Service Family Accommodation to Standard 1. Work is in hand to accelerate a detailed assessment of the condition of the housing stock and to develop a focused plan of improvement.

**1.29** The Department's key contractual mechanisms for managing accommodation are sufficiently flexible to allow it to upgrade further bedspaces and family accommodation whenever funding can be made available.

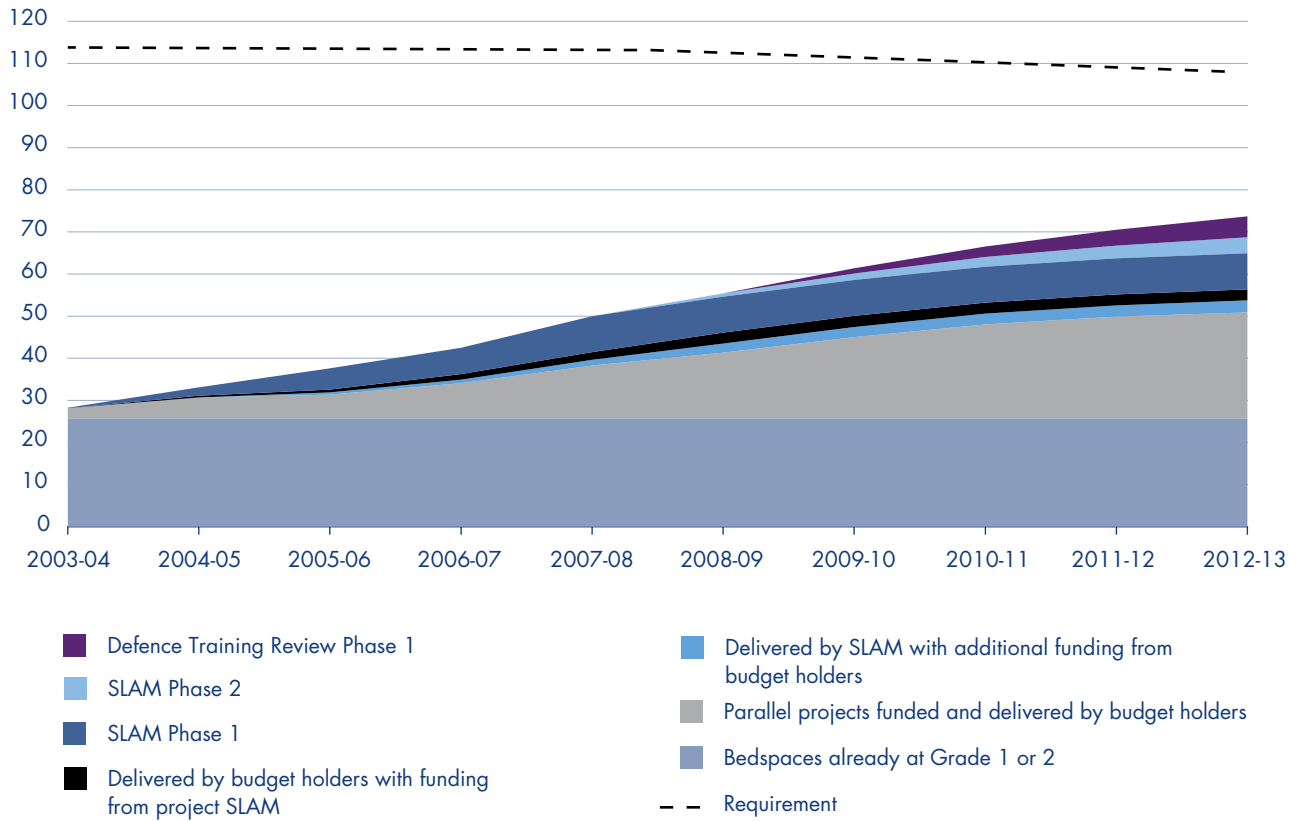
## The Department is improving the quality of its estate through other wider projects

**1.30** There are a number of other projects aimed at improving the quality of the estate. Some of these projects are being managed by Defence Estates whilst others are being managed by other budget holders. Some are being achieved through PFI contracts whilst others are being delivered through prime or conventional contracts. The projects described in **Boxes 1 to 3 on pages 19 and 20** provide a small sample of the sorts of improvements that are being achieved. Separately, the operation and maintenance of the Department's water and wastewater assets and infrastructure – Aquatrine – have been transferred to private sector providers. The Aquatrine contracts so far, however, have been focused on putting in place mechanisms to calculate a baseline measure of actual consumption and addressing emerging health and safety issues (see Appendix 7).

## 6 Cumulative delivery of new Grade 1, En-Suite Single Living Accommodation in Great Britain

Cumulative Delivery of Upgraded Single Living Accommodation

Bedspace (000s)



Source: National Audit Office analysis of Ministry of Defence data

NOTE

1 Figures for SLAM Phase 2 and the Defence Training Review Phase 1 assume an equal delivery of bedspaces each year from contract commencement.



An example of one type of old Single Living Accommodation. Photograph by Mike Weston. ABIPP; © Crown Copyright/ MOD, image from [www.photos.mod.uk](http://www.photos.mod.uk).

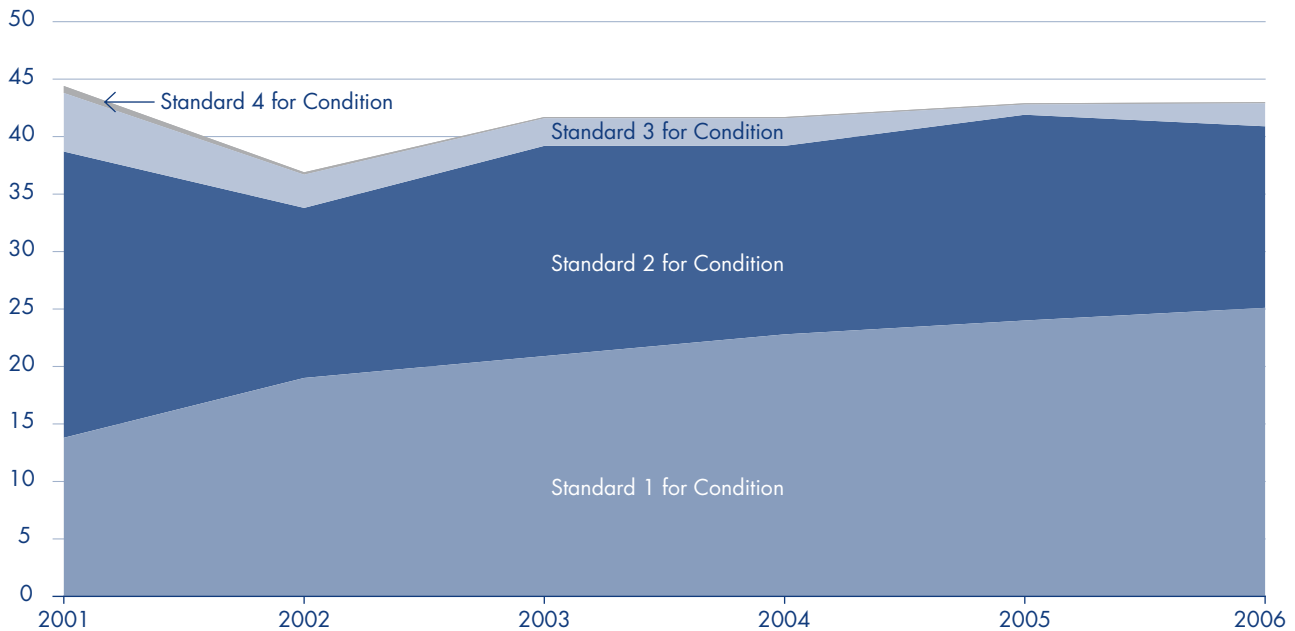


New accommodation built under the Single Living Accommodation Modernisation contract

## 7 Condition of Service Family Accommodation

Service Family Accommodation upgrades planned and achieved (Great Britain only)

Number of properties (000s)



	2004-05	2005-06	2006-07	2007-08 onwards
Target for number of properties to be upgraded by Defence Estates	500	600	1,200	900 per annum
Number of property upgrades achieved	2,610	1,705	–	–

Source: National Audit Office analysis of Ministry of Defence data

### NOTE

Figures in the graph are for properties which the Department requires in the long-term, currently around 43,000, and do not reflect the total stock of properties held. Total stock of properties in Great Britain on 1 April 2006 was 48,900.

**BOX 1****Woodbridge Airfield****Working with the local community and the environment**

Now home to 23 Engineer Regiment (Air Assault), Woodbridge airfield has been developed at a cost of £82 million through a prime contract with Skanska. Handed over to the Department in May 2006, the redevelopment provided accommodation, training, medical, sport, leisure, and vehicle maintenance facilities. Woodbridge is used as a case study of community involvement in the Office of Government Commerce procurement guide, *Achieving Excellence 11: Sustainability*. Skanska worked with the local community, police, ambulance service and fire brigade. Local representatives visited the site to discuss the potential impact and local residents were kept involved by letter updates and visits. The local primary school were actively involved and the children carried out mini-projects based on issues encountered including how buildings are constructed, health and safety and conservation. Much consideration was given to the environmental impact of the work. The airfield is surrounded by a site of special scientific interest and lies within an area of outstanding natural beauty. Heather was relocated within the site, bat boxes installed and a large wildlife pond regenerated. All demolition material was crushed and reused on site.

**BOX 2****Allenby/Connaught****The Department's largest PFI project for the estate**

Worth around £8 billion over its 35-year contract, Allenby/Connaught is the largest estate project undertaken by the Department under the Private Finance Initiative. The contract has been let with Aspire Defence Ltd, a consortium established specifically for the project comprising Carillion, Kellogg Brown & Root and HSBC, to deliver modern living and working accommodation in Aldershot Garrison and Garrisons in the Salisbury Plain area. It has a particular focus on Single Living Accommodation providing nearly 11,000 single en-suite bedspaces. It will also include new dining facilities, theatres and community centres and a number of other support services including domestic services, estate management, document production and handling, stores, transport and waste disposal. With accommodation for 18,000 personnel the project will house nearly 20 per cent of the British Army. The first key milestone is to be ready for the return of the 2nd Royal Tank Regiment from Germany in July 2007. Particular attention is being paid to delivering sustainability improvements including through facilities, such as kitchens, being shared by more than one unit, better planning of space and layout allowing land to be released in the Aldershot area, reuse of demolition materials and 'grey water' and the preservation of historic buildings.

**BOX 3****Ministry of Defence Estate in London (MoDEL)****An innovative approach**

VSM Estates, a consortium of VINCI PLC and St Modwen Properties PLC, was appointed as the contractor on 3 August 2006 for the redevelopment and consolidation of much of the Department's estate in Greater London, known as Project MoDEL. This project combines the efficiencies from consolidation with the provision of better quality living and working accommodation, managed by the contractor and funded through the sale of land, all delivered through a 'Prime Plus' Contract. This project will lead to the release of over 100 hectares of predominantly 'brown field' land, some of which can be used for housing.



## Managing, measuring and planning

**2.1** The Department has made significant changes to the way it manages its estate in recent years. In addition to the new contracts described in the first part of this report, new internal management structures have been created. These structures distinguish between users and occupiers of the estate, who are known as customers, and groups with responsibility for running the estate, who are known as suppliers. In most cases, the supplier is now Defence Estates backed up by a range of contractual arrangements. The new structures have brought changes to the way the Department plans its estate requirements and have added further impetus to attempts to improve how the performance of the estate is measured. Work is in hand to realise the full benefits of the new structures, but this will only be successful if organisational transformation is accompanied by the Department working closely together at all levels, including Defence Estates, Customer Estate Organisations, budget holders and their staff. Part 2 of this study examines the achievements to date and highlights the work that remains to be done.

**New structures and processes for managing the estate are well-established, but internal customers and suppliers lack confidence in one another in some key areas**

**2.2** In 2001, the Department instituted Project Alexander. It set out to transform the organisational structures through which the defence estate was managed, to help the Department to optimise the condition and size of its estate. The key changes are outlined below.

- Responsibility for maintaining and improving most of the estate has been transferred to Defence Estates, which should now manage the interface with private contractors.

- The parts of the Department which work and live on the estate have become the customers of Defence Estates and are responsible for articulating and funding their estate requirements.
- Written agreements, a high-level Defence Estate Committee and a large number of other committees and working groups have been formed to act as an interface between customers and the supplier.

Most recently, balance sheet ownership of the estate has been transferred from the many parts of the Department that work and live on it to Defence Estates, which specialises in estate management.

**2.3** To assist customer groups in framing their estate requirements and to act as points of contact for Defence Estates, six Customer Estate Organisations were created for the Navy, the Army, the Royal Air Force and for central parts of the Department. The relationship between these Customer Estate Organisations and Defence Estates is governed by individual Customer Supplier Agreements, which are agreed annually by both parties. In practice, all six Customer Supplier Agreements are almost identical and change little from year to year.

**2.4** Alongside Customer Estate Organisations, customer groups have advocates at site level, known as Site Estate Representatives. Each site has its own representative, who reports to and takes direction from the site's Head of Establishment and has no formal link with the Customer Estate Organisations. Their core role is to ensure that estate-related work does not compromise the operational business of the site by liaising with Facilities Managers (local representatives from Defence Estates) and with contractors to de-conflict programmes. Recently, they have taken on an important role in articulating the estate priorities for their sites through the Integrated Estate Management Plans.

**2.5** Additionally, in a situation where money becomes available to spend on estate projects at very short notice, Site Estate Representatives sometimes have discretion to decide which projects on their site should be undertaken without consulting the Customer Estate Organisation. Whilst on-site expertise is beneficial, there is a risk that Customer Estate Organisations and Site Estate Representatives develop and pursue inconsistent or conflicting aims for the sites that they jointly represent.

**2.6** In general, relationships between Defence Estates and its customers are good and continue to improve at all levels. The heads of both Defence Estates and the Customer Estate Organisations have devised a joint action plan to address some of the challenges they jointly face. Similar behaviour can be seen at some sites, where there is close cooperation between Site Estate Representatives and Facilities Managers. However, while this is encouraging, customers and suppliers continue to lack confidence in one another in some areas, which are laid out below.

## The number of staff employed in Defence Estates has increased, but there are serious shortages of some key skills

**2.7** The new structures for estate management were intended to make savings in staff costs and allow some military personnel to be redeployed to the delivery of frontline capability. With more people working in Defence Estates and fewer in customer groups, it was anticipated that there would be some reduction in the number of staff managing the estate. However, it is very difficult to analyse changes to the number of staff in estate-related posts because the Department has no accurate, agreed baseline of the number of staff employed on the estate prior to the implementation of Project Alexander.

**2.8** As a result of its increased role in managing the estate and its merger with the Defence Housing Executive, Defence Estates has, as expected, nearly trebled in size since 2001-02. It now employs nearly 4,200 civilian and military personnel. Separately, the Department maintains some 850 personnel in estate-related roles, both civilian and military, in Customer Estate Organisations, on units and in stand-alone project teams. There is an issue about whether the balance between staff in Defence Estates and customer staff at site level is appropriate. Due to the lack of agreed baseline data, the Department has not been able to demonstrate that the customers' staff numbers have

reduced commensurate with the transfer of responsibilities to Defence Estates. However, the Department is actively working to optimise the balance and has identified some areas where roles and responsibilities may be duplicated.

**2.9** There are shortages of skills in key areas within Defence Estates, for example safety systems and specialist engineering staff and quantity surveyors (**Figure 8**). In some cases, problems are exacerbated by national shortages, but generally the Department is not paying competitive rates to recruit and retain the highly qualified estate professionals it has identified as being necessary. Unsurprisingly, the situation is often worst in London and the South East. The Department sometimes relies on temporary staff employed through agencies to fill gaps, but this is not an effective solution in the longer term.

**2.10** The Department is examining a number of options to improve recruitment in areas where there are shortages, and may decide to enhance professional pay supplements and institute graduate trainee schemes. Recruitment and retention allowances up to an annual maximum of £3,000 are now being offered to new quantity surveyors and safety systems and specialist engineering staff. Previous actions such as these have had very limited success, with recruitment campaigns failing to attract suitable candidates. Defence Estates is also examining other ways of addressing these skills shortages, which may include changes in recruitment strategy, redistribution of staff and contracting for specific professionals.

**2.11** There is also a shortage of trained Facilities Managers, who have a vital role in managing the estate at site level and liaising with customers' Site Estate Representatives. Whereas each site has a Site Estate Representative, Facilities Managers often have responsibility for more than one site and so it is particularly important that they are fully recruited.

## The Department continues to have difficulty in scoping and pricing capital works projects accurately

**2.12** Traditionally, the Department has found it difficult to estimate accurately the scope and likely cost of capital works projects. Both requirements and costs have tended to increase over time from the initiation of a project through to its completion. Requirements are determined by the customer and costs are estimated by Defence Estates. There continue to be problems with both

## 8 There are significant shortages of key skills

Role	Level of shortages	Potential impact
Safety Systems and Specialist Engineering Staff		
Responsible for conducting audits to ensure that safety rules and procedures are being properly implemented and observed at site level.	15 out of 32 posts are vacant.	Not all necessary audits are taking place. Any accident or lapse in safety that might occur on a site could be partially caused by the shortage of these staff and this could have legal implications.  The possibility of a detrimental impact on the delivery of operational capability: there are shortages of, for example, explosives engineers and military airfield paving engineers.
Quantity Surveyors		
Responsible for planning and pricing construction projects and for scrutinising contractors' bids.	32 out of 60 posts vacant.	Delays in developing robust and costed capital works projects within Defence Estates.  Risk to value for money with insufficient time dedicated to each project. Statutory pricing systems, such as the Reference Cost System, may not be applied in all cases.  Loss of confidence in Defence Estates' ability to meet requirements cost-effectively.  Reduction in the amount of audits carried out on completed projects to provide assurance that quality and value for money are being achieved.

Source: National Audit Office analysis of Ministry of Defence data

processes, exacerbated by shortages of quantity surveyors and the unforeseen volume of unplanned work. For example, over a period of two years the cost of resurfacing the runway at RAF Leuchars has increased from an initial estimate of £14 million to an estimate that is currently around £37 million. The different stages at which problems occur are discussed in detail in Appendix 8.

The Department has developed a good system for measuring the quality of the estate but the timetable for implementation is challenging and there is a risk that it will not be met

**2.13** In the past, the Department maintained many systems for collating information about the assets in its estate. The data held on these systems were not readily comparable and, as a result, it had no way of measuring the quality of its estate or the relative quality of assets within it. The Department has developed new systems, which will improve the quality of information that it has about the estate.

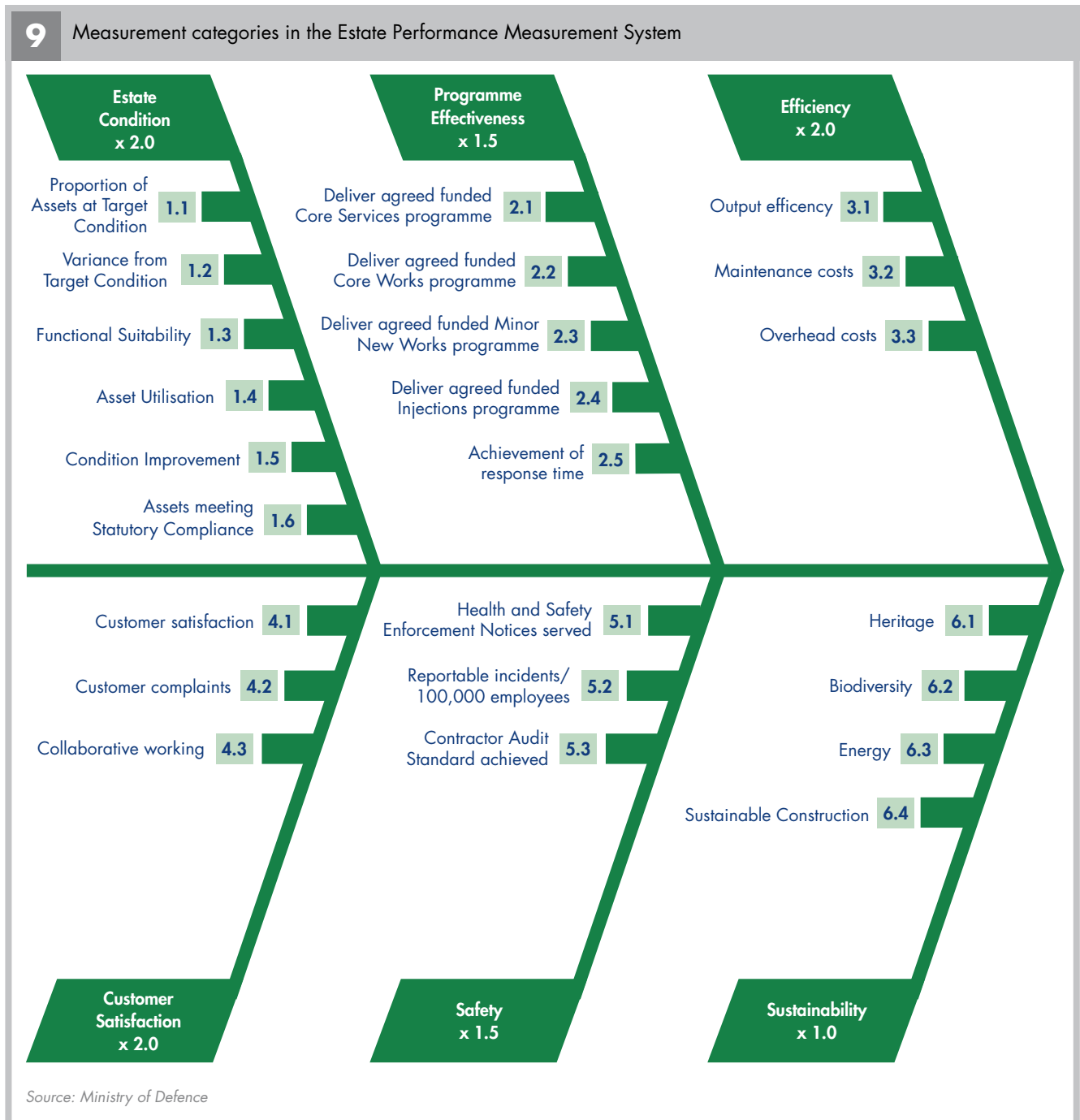
The Department has developed good systems for measuring the quality of the estate

**2.14** With such a dispersed and complex estate, the Department has had difficulty in compiling detailed and timely information on a comparable basis about its estate assets. Previously, many systems were maintained, each of which provided information only about individual aspects of the estate, such as asset values, or about discrete parts of the estate, such as bases occupied by the Army. This did not allow the Department to look holistically at the quality and performance of its estate. It was not easy to make decisions about which parts of the estate needed investment most and it was hard to identify where there was spare capacity.

**2.15** Better information about estate assets is crucial to the success of new structures for managing the estate. Defence Estates and contractors must understand the condition of all the assets they are responsible for in order to make decisions on how best to spend limited resources. Customers now need high-quality management information to gain assurance that their estate requirements are being met.

**2.16** For these reasons, the Department has spent the last two years developing two new systems for maintaining information about the estate: the Estate Planning Tool and the Estate Performance Measurement System. The development of these systems is a very positive step. Together they will hold information about the quality and performance of every asset that the Department owns, and will be capable of showing how the estate is changing over time and whether targets are being met

**(Figure 9).** The Department also intends that these systems should play an important role in assessing the through-life efficiency of new contracting methods. We commissioned work to examine how the two systems will work, to look at the timetables for their implementation and to identify the outstanding actions required to ensure their success. Appendix 9 details how these systems operate and contains recommendations to improve the performance of these systems.



**NOTE**

Performance across the six categories shown in the diagram is weighted differently and weighted scores are aggregated to provide an overall assessment for a particular part of the Defence Estate.

The timetable for implementing the new systems is challenging and there is a risk that it will not be met

**2.17** Some elements of the two systems are already in operation. An early version of the Estate Planning Tool is in use in Scotland and has brought benefits to the operation of the contract. It has been used not only to report on the changing condition of the estate, but, integrated with the contractors' systems, has also proved an effective mechanism for ordering, authorising and monitoring progress on works projects. The Department has also recently trialled the Estate Performance Measurement System in Scotland. The timely implementation of the two systems throughout the defence estate will make a vital contribution to the Department's ability to manage its estate and plan strategically for the future.

**2.18** In the short term, the Department is right to focus on introducing the Estate Planning Tool by April 2007. There is, however, work to be done before both systems can be used effectively. Our analysis identified a number of issues which require prompt attention, such as improvements to system controls and work to define a number of the performance measures to be used. Once this has been achieved, there are further improvements and enhancements which it might make to increase the strategic usefulness of the tool and of the Estate Performance Measurement System. These urgent and longer-term measures are set out in Appendix 9. The Department is now addressing these issues and is confident that its timetables will still be met.

## The Department does not fully understand the overall cost of its estate

**2.19** The Department has systems to provide it with necessary information to support investment decisions involving the estate and other related expenditure. Information on other estate-related expenditure is available through the Departmental Resource Accounting system. The Department judges that separating out the cost of the estate from other parts of expenditure on the Armed Forces is not necessary to inform the value for money and cost benefit decisions that it has to make as the estate is only one of the necessary components of the delivery of military capability. Costs that are readily available are those borne by Defence Estates, where the Agency's sole responsibility is for the estate, and expenditure on major capital and PFI projects. We collated and analysed data from the Department's Resource Accounts and estimate that at the end of 2005-06 the Department had estate-related assets totalling some £18.9 billion and that the estate accounted for some £3.3 billion in operating costs (see Figure 10).

### 10 Breakdown of the cost of the estate 2004-05 to 2005-06

#### Estimated Operating Cost Statement

	2004-05 (£ million)	2005-06 (£ million)
Operating costs		
Staff costs	97	145
Utilities	241	291
Property management and accommodation charges	1,850	2,050
Depreciation and write off/on	907	784
Cost of capital and interest	501	597
Other operating costs	83	68
Gross operating costs	<b>3,680</b>	<b>3,940</b>
Operating income	(560)	(590)
Net operating costs	<b>3,120</b>	<b>3,350</b>

#### Estimated Balance Sheet

Tangible fixed assets		
Land and buildings	17,600	18,000
Other fixed assets	846	1,040
	<b>18,446</b>	<b>19,040</b>
Current assets	<b>424</b>	<b>399</b>
Current liabilities	<b>(282)</b>	<b>(368)</b>
Creditors due after one year	(72)	(70)
Provisions for liabilities and charges	(144)	(147)
Net assets	<b>18,400</b>	<b>18,900</b>

Source: National Audit Office

#### NOTE

The costs are for the estate as a whole and include the estate overseas. Totals are rounded.

**2.20** Changes in Departmental structure and in the way that costs are identified make trend analysis over time difficult prior to 2004-05. Thus, for example, the Department has developed information on overheads but does not have the information needed to assess how estate overhead costs have changed. We have not been able to extract the cost of manpower in estate roles working outside Defence Estates. However, based on manpower numbers of around 850 we estimate these costs to be in the order of £30 million annually. The cost of providing estate-related services such as cleaning and catering will also have been largely excluded as these services are typically funded separately or form part of one of many multi-activity contracts.

**2.21** A significant proportion of estate expenditure remains within the control of budget holders other than Defence Estates, although the resulting estate projects are managed by Defence Estates. This serves to increase the importance of effective customer supplier relationships, which are the only means of ensuring that this expenditure is in line with the estate strategy as a whole. The Department judges that the current balance, where customers ensure a focus on the delivery of military capability and a central focus is provided by Defence Estates is correct. Nonetheless, in our view wherever delegated budgets lie, it is important to maintain complete and accurate information about the cost of the estate, without which there is a risk of future decisions not being as cost-effective as they could be.

## A number of positive developments are enhancing the Department's ability to plan for an estate of the right quality, but there is more to be done

**2.22** Many factors influence the Department's estate requirements and its ability to realise them. It is not easy to plan holistically for the estate and to ensure that different programmes, projects and plans do not conflict with one another. The Department is in the process of developing and implementing new procedures which will enhance its ability to plan for the needs of its estate holistically. In particular, Integrated Estate Management Plans and the Non-Equipment Investment Plan are positive developments. In conjunction with better and more visible data about the condition and performance of the estate, these strategic plans, if used effectively, can improve the quality of decision making.

**2.23** Each site is to have its own Integrated Estate Management Plan, compiled by the customer occupying the site, Defence Estates and contractors working together. Plans will be reviewed on an annual basis. Many sites already have plans and all sites which are managed by Defence Estates are to have one by April 2007. This timetable is very challenging. The plans will detail the impact of long-term strategies on each site. They will outline the operational importance of each building and its fitness for purpose and will assign a target condition. At present, the plans do not extend to anticipated minor new works although the Department is considering this. The roles and responsibilities in contributing to these plans and testing the robustness of requirements are currently unclear. In particular, processes for challenging site-level decisions about asset importance and target condition need to be better articulated. The Department intends to produce detailed guidance on responsibilities by July 2007.

**2.24** The Non-Equipment Investment Plan is proving to be a useful tool for the Department in the current spending round, enabling it to take strategic decisions about funding across a range of different projects. It comprises Departmental plans for estate, information systems and business change programmes with an investment of £50 million and above. Smaller value projects may be included where these involve more than one top-level budget or are funded by the Defence Modernisation Fund. Use of the tool was previously focused on the four year annual planning round (currently 2007-08 to 2010-11) but has now been developed to look forward 10 years. Separately, the Department is planning to develop a 20-year Estate Development Plan.

**2.25** The Non-Equipment Investment Plan accounts for some £2.5 billion of expenditure each year, around 8.5 per cent of the Department's budget. Over the period 2007-08 to 2010-11 a significant proportion (some 35-40 per cent) is accounted for by PFI projects. Some 20-25 per cent is accounted for by estate maintenance (primarily the Regional Prime Contracts) with around 10-15 per cent representing estate improvement. Thus the plan encompasses around 45 estate programmes with an annual spend of some £2 billion (£1.5 billion resource and £0.5 billion capital). The balance is investment in information systems, notably the Defence Information Infrastructure project. A significant amount of the resource element of the Non-Equipment Investment Plan is committed to long-term contracts, limiting the scope for reprioritising resources within the plan, either to achieve savings targets or to incorporate additional projects. The capital element provides greater scope for balancing competing priorities.

**2.26** The Department considers the Non-Equipment Investment Plan and other plans together, enabling it to reach a broad, high-level judgement about the balance of investment and resources in the estate and other activities to contribute to the overall delivery of military capability. It does not have complete visibility of every aspect of estate-related expenditure and judges that this is neither necessary nor desirable.

The Department has made many aspects of its estate more sustainable, but should do more to ensure that all statutory requirements and other undertakings are being met

**2.27** The Department faces an unparalleled challenge in managing its estate in a sustainable way. It must care for an enormous array of sensitive assets on an estate of unrivalled size, whilst pursuing its primary military outputs. The Department must work with a large number of external stakeholders in seeking to manage its estate in a sustainable manner. In some cases, the Department is subject to statutory and legal obligations, which are administered by external stakeholders. In others, it is subject to pan-Government undertakings and guidelines which promote best practice. In a few cases, it has developed its own targets independently. Appendix 10 summarises the Department's statutory and other sustainability obligations and examines recent progress.

**2.28** Unlike other aspects of estate management, the development and delivery of estate sustainability targets remain primarily the direct responsibility of the Department and have not been transferred to the private sector. In conjunction with policy advisors, a dedicated Environmental Support Team within Defence Estates supports those who occupy the estate and project teams, to develop and implement programmes to improve sustainability. Specialist groups within the Environmental Support Team focus on biodiversity, archaeology and historic buildings.

**2.29** The Department is carrying out much good work both to make its estate more sustainable and to build effective relationships with external stakeholders. Personnel throughout the Department increasingly understand that good links with stakeholders, in particular in the field of sustainability, are essential if the Department is to maintain both the statutory permission and public goodwill that are increasingly key to the effective delivery of defence capability. An annual conference is now held with statutory bodies and non-governmental organisations, supplemented with bi-lateral meetings where necessary. In March 2006, the Department received the results of a stakeholder satisfaction survey. Though response rates were low, respondents generally endorsed Defence Estates' approach, indicating that the Department's proactive attitude is bringing benefits.

**2.30** Externally, the Department reports progress on the sustainability of the estate through its annual Sustainable Development Report and to the Sustainable Development Commission. Internally, the Defence Estates balanced scorecard contains information on a small selection of the most important sustainability targets. Some of these targets are poorly defined and have not been aligned with current pan-government targets introduced in June 2006. For instance, the balanced scorecard currently undertakes to report on the number of sustainability appraisals carried out across a range of estate-related activities but has yet to define actual metrics for measuring this. The Department is also currently unable to measure its success against the government target to conduct sustainability appraisals on all office relocations. Beyond the balanced scorecard, a number of other metrics have also not been defined and it is therefore not clear how the Department monitors progress against the full range of its sustainability targets (see Appendix 10).

**2.31** In many areas, the estate is already becoming more sustainable, but not all targets are being met. In some areas, the Department is not yet measuring whether targets are being met.

- **Sustainable construction.** The Department has a long way to go to achieve its target of 90 per cent of new buildings being rated 'Excellent' for sustainability and 90 per cent of refurbishments being rated 'Very Good' or above. In 2005-06, when the Department used the Building Research Establishment Environmental Assessment Method, only 15 per cent of all construction projects which were assessed achieved 'Excellent' or 'Very Good'. The new Defence Related Environmental Assessment Method, introduced in March 2006, rated around 60 per cent of new buildings as achieving an 'Excellent' rating. This improvement is in part due to the new methodology being focused on sustainability targets relevant to Defence construction, rather than the broader range of criteria typically assessed by the Building Research Establishment methodology.
- **Sites of Special Scientific Interest.** By 2010, the Department must have 95 per cent of these sites in favourable condition or, if in unfavourable condition, in a recovering state. There has been continuous improvement in the quality of the Department's sites, with 82 per cent of sites in England, 69 per cent in Scotland, 75 per cent in Wales and 63 per cent in Northern Ireland now meeting the target. Further improvement is dependent on funding levels being maintained. Cuts to Regional Prime Contract funding in the South West in 2006-07 mean that sites in this area are now at risk, following marked improvements in recent years.

- **Energy Use.** The amount of carbon dioxide produced by the estate has increased in every year since 2001-02, despite a target to reduce carbon emissions. The Department has been slow to encourage the uptake of simple measures to reduce the amount of energy used by the estate. It is yet to implement widely the 'Minimum Environmental Standards – Quick Wins' developed by the Department for the Environment, Food and Rural Affairs and a successful project in 2005 to reduce energy consumption at RAF Kinloss is yet to be repeated at other sites, although it is estimated to result in annual savings of over £340,000. Plans are being developed to replicate the project at eight other sites. The Department is also now engaged in a number of small-scale pilots using biomass fuel.
- **Historic Buildings.** There are some 770 listed buildings and more than 1,000 Scheduled Monuments on the estate; structures are added to both lists on a regular basis. In 2006, English Heritage reported that the Department did not know

the condition of 77 per cent of its listed buildings. The Department undertook to establish the condition of all but 15 per cent of listed buildings by the end of March 2007. Currently, it estimates that it knows the condition of over 40 per cent of listed properties, and believes that it will know the condition of 85 per cent by the end of March this year. At the time of the English Heritage Biennial Conservation Report, the Department had 28 entries, comprising some 50 individual buildings, on the Buildings At Risk Register. Four entries have since been removed, two through repair or reuse and two because they have been sold. At the same time, five other listed properties have been added to the register.

**2.32** At times the Department has been innovative in developing methods to protect the environment in a way that does not hamper the delivery of military capability unduly. The relief roads which have been built and are being planned on Salisbury Plain to protect the valuable grassland habitat are a good example, described in greater detail at Appendix 4.



# APPENDIX ONE

## Study scope and methodology

**1** This Appendix sets out the scope of our examination of the management of the defence estate and the methodologies we used in the course of the study.

### Scope of the study

**2** Our 2005 report made some high-level conclusions and recommendations relating to the new management and contracting arrangements including plans for rationalisation. This study has focused on the element of the Department's strategy for the defence estate that seeks to achieve an estate of the right quality. **Figure 11 overleaf** sets out the scope of the study in terms of the overall aim, delivery mechanisms and measures used by the Department in managing the quality of its estate.

**3** In looking at the quality of the defence estate we focused our examination on whether the Department was progressing towards a working estate of the right quality.

**4** The estate overseas was excluded from the study. We did examine progress with the upgrade of both single living accommodation and service family accommodation and progress with the Housing Prime Contract in England and Wales. However, we have not considered the wider personnel issues concerned with accommodation.

### Methodology

#### Meetings and interviews with key personnel

**5** During fieldwork we consulted a number of key individuals and organisations (**Figure 12 overleaf**) responsible for delivering improvements in the quality of the defence estate. We also visited units to understand how the delivery of an estate of the right quality is being viewed at that level, typically meeting with the Site Estate Representatives, Facilities Managers and the contractors' staff. We also conducted a field visit to the Salisbury Plain Training Area, guided by specialist staff from the

Department's Environmental Support Team, to see how the Department is managing an area so diverse in both its natural habitats and archaeological features whilst conducting training of Armed Forces personnel and their equipment on such a large scale.

#### Review of the Estate Performance Measurement System

**6** The ability to measure and analyse estate performance is a critical component in effective estate management. The Department recognised this and is introducing a new Estate Performance Measurement System. We commissioned PricewaterhouseCoopers to review whether the new system:

- provides a robust system that is secure, controlled, user-friendly and ensures data integrity;
- adopts performance measures that are useful, focused and sufficiently defined; and
- will encourage continuous improvement through better information for decision-making, target setting and contractor performance management.

**7** PricewaterhouseCoopers, in partnership with the National Audit Office study team, conducted this work through a number of meetings and interviews, system demonstrations, a system walk-through, an analysis of Departmental papers and drew on commercial best practice in this area. PricewaterhouseCoopers made a number of recommendations which have been passed to the Department and which are summarised in this report.

#### Quantitative analysis

**8** We collected a range of financial and non-financial data from the Department. Information on the total cost of the estate was drawn from the Departmental Resource Accounts data submitted to the National Audit Office for audit.

## Review of departmental papers

9 We undertook a review of the Department’s documentation. This included policy and planning papers related to the estate, performance reports, the results of

studies by the Department into various aspects of the estate, minutes of key meetings and other information produced by Defence Estates, the centre of the Department and customer organisations.

### 11 Defining and measuring quality

The overall aim of the Department is to improve its estate in a sustainable manner to improve its fitness for purpose and condition. For the purposes of this study quality comprises three key elements which, with the associated delivery mechanisms and high level performance indicators used by the Department, are as follows:

#### Delivery mechanisms

##### Physical condition and Fitness for Purpose

- effective maintenance and new build through PFI, Prime Contracting and other contractual arrangements.
- implementing the programme to upgrade accommodation to provide good quality housing for Service personnel and their families.
- completing the programme to upgrade Single Living Accommodation in support of the Department’s targets for improving recruitment and retention.

##### Quality of service

- meeting performance targets set out in Customer/Supplier Agreements and Service Level Agreements
- providing high standards of customer care to Service personnel and their families
- improving levels of stakeholder satisfaction

##### Environmentally sustainable

- Meeting the Department’s commitment to the Government’s strategy for Sustainable Development through achievement of estate-related targets for Sustainable Development.

#### Measurement

- target standards of condition of working accommodation
- targets for modernisation and upgrade of living accommodation

- service delivery targets
- customer satisfaction surveys

- proportion of estate-related Sustainable Development targets placed on the Department that have been met

Source: National Audit Office

### 12 Visits and Interviews

#### Defence Estates

- Members of the Management Board, finance and planning staff, Sutton Coldfield
- Operations staff, Rosyth, Aldershot and Andover
- Project teams (Aquatrine, SLAM, Housing Prime Contract, MoDEL, Regional Prime Contracts Scotland, South East and South West)

#### Customer Estate Organisations

- Royal Naval Estate Organisation, Portsmouth
- Army Infrastructure Organisation, Salisbury
- RAF Infrastructure Branch, RAF High Wycombe
- Directorate of Logistics Infrastructure, Safety and Security, Bath
- Central Top-Level Budget Customer Estate Organisation, London

#### Unit Visits

- RAF Lyneham
- Royal Marines, Norton Manor Camp, Taunton
- Allenby/Connaught, Tidworth
- Defence Communication Services Agency, Corsham
- Field visit to Westdown Camp and the Salisbury Plain Training Area

#### Ministry of Defence Central Staff

- Directorate of Resources and Programmes

#### Contractors

- Debut Services Ltd
- Amec Turner Ltd

Source: National Audit Office

## APPENDIX TWO

# The Defence Estate Strategy 2006: Strategic aims, priorities and measures of success

Strategic aim	Priority	We will measure success by
<p>To have an estate of the right quality that efficiently and effectively meets the military need and raises the quality of life for users. This will be achieved through high standards in design, construction and ongoing maintenance.</p>	<p>Improve the overall condition of the estate to support the military need through strategic partnering and collaborative working.</p> <p>Raise the quality of life for estate users, particularly our service personnel, through high standards of construction and design.</p> <p>Continue to review our procurement arrangements and have plans in place to implement the next generation of estate procurement contracts.</p>	<p>The proportion of built estate assets at target condition by 2010 (to be determined by Integrated Estate Management Plans for all sites); the delivery of upgraded Single Living Accommodation; the delivery of upgraded Service Families Accommodation.</p> <p>Increasing levels of satisfaction with the quality of our Service Families Accommodation; and increased levels of satisfaction with the management and maintenance of our Service Families Accommodation.</p> <p>Demonstrating 30 per cent through-life value for money in Prime Contracts against 2004-05 baseline, by 2010.</p> <p>Reviewing our procurement arrangement and having plans in place to implement next step developments alongside emerging best practices by 2009.</p>
<p>To have an estate of the right size to meet the military need. This will be an estate of fewer, larger sites in the UK and overseas, appropriately located and making the best use of available resources while remaining fully capable of meeting military needs.</p>	<p>Work up a long-term costed programme for the rationalisation and development of the estate.</p> <p>Continuing to develop partnerships with stakeholder bodies in relation to the size, use and management.</p>	<p>Identifying our anchor locations.</p> <p>Having a long-term strategic plan for the development and rationalisation of the estate in place by the end of 2007.</p> <p>Reporting against Lyons, Gershon and progress against rationalisation plans in the annual Stewardship Report.</p> <p>Maintaining our relationships with stakeholder bodies to build confidence and trust.</p>
<p>To develop defence communities where civilian and military personnel and their families wish to live and work both now and in the future. We will recognise also the sustainable development needs of other communities.</p>	<p>Incorporate the Government's Sustainable Communities agenda into Departmental estate planning, and in doing so recognise the sustainable development needs to the wider community.</p>	<p>Having defence communities recognised as being active, inclusive and safe; well run; environmentally sensitive; well designed and built; well connected; thriving; well served and fair for everyone.</p>
<p>To proactively integrate the Government's overarching objectives for sustainable development whilst ensuring the delivery of defence capability.</p>	<p>Incorporate the Government's sustainable development priorities into the management and development of the defence estate in the UK and overseas.</p> <p>Deliver the adaptations and efficiencies necessary to address the predicted impacts of climate change.</p> <p>Promote the Department's achievements in contributing to sustainable development.</p>	<p>Delivering and implementing strategies to meet all targets within the Framework for Sustainable Development on the Government Estate.</p> <p>All estate-related plans, programmes and projects demonstrating that sustainable development effects have been addressed through the application of the appraisal tool suite.</p> <p>Achieving Environmental Management System coverage in line with Government targets.</p>

Strategic aim	Priority	We will measure success by
<p>To be an exemplar of best practice. To manage and develop our estate in line with best practice and foster a culture of continuous development and improvement.</p>	<p>Seek, influence, develop and implement best practice and legislation relating to the built and rural estate.</p> <p>Introduce a Supplier Management Initiative to improve working relationships.</p> <p>Have in place an excellent and comprehensive health and safety regime.</p> <p>Measure and report performance in an open and transparent way.</p> <p>Foster a culture of continuous development and improvement while building the capacity to support this process.</p>	<p>Consideration of factors affecting sustainable development becoming routine in decision making.</p> <p>Developing a strategic approach which prioritises how we will address climate change impacts.</p> <p>Reducing our energy consumption, improving our energy efficiency and increasing our sourcing of energy from renewable sources in line with Government targets.</p> <p>Ensuring that our communication and reporting on sustainable development issues is independently recognised as open and honest.</p> <p>Seeking stakeholder satisfaction with the type and frequency of our engagement on sustainable development.</p>
<p>To have an estate underpinned by excellent management with structures, systems and processes enabling us to deliver optimum corporate solutions through collaborative working.</p>	<p>Ensure the right structures are in place to deliver corporate solutions through collaborative working.</p> <p>Put systems and processes in place to ensure effective corporate management of the estate, generate management data and drive optimum performance.</p>	<p>Implementing a programme of benchmarking exchanges with Other Government Departments and others.</p> <p>Implementing measures to improve working relationships between Defence Estates and its suppliers.</p> <p>Improving the implementation of the Department's systems and processes for managing safety and environmental protection.</p> <p>Implementing a more robust safety culture in which safety and environmental risks are identified and appropriate action taken to manage them.</p> <p>Reporting our performance in the annual publication of the Stewardship Report and the Sustainable Development Report.</p> <p>Having a comprehensive estate performance and risk management regime in place and incorporated into Departmental business planning by 2008.</p> <p>Having training available to meet our requirements.</p> <p>Continuing to examine the management overhead involved in delivering estate-related activities, reviewing the estate customer/supplier arrangements, and put recommendations in place by 2009.</p> <p>Reviewing the geographical boundaries used to define procurement regions to ensure they are consistent with each other and with regional defence boundaries.</p> <p>Splitting supply and demand requirements for the training estates with responsibility for the supply resting within Defence Estates in 2006.</p> <p>Put in place new Reserve Forces and Cadets Association estate management arrangements by 2007.</p> <p>Put in place an improved capability to conduct estate business in support of operations in operational theatres by 2008.</p> <p>Implementing new management arrangements for the overseas estate by 2010.</p> <p>Establishing a corporate data set of core estate information.</p> <p>Continuing to develop and populate the estate information portal.</p> <p>Having all estate-related processes on the Departmental Business Management System by 2007.</p>

Source: Ministry of Defence

## APPENDIX THREE

## Environmental assessment methods

### The Building Research Establishment Environmental Assessment Method (BREEAM)

BREEAM was developed by the Building Research Establishment to assess the likely environmental performance of buildings, and can be used on construction or refurbishment projects. Independent, certified assessors conduct assessments in several categories: management; pollution; water; ecology; land use; materials; energy use; transport; and health and well-being. Credits awarded in each area are weighted to produce a single overall score, on which the Building Research Establishment awards a certificate for a BREEAM rating of 'Pass', 'Good', 'Very Good' or 'Excellent'. The assessment takes approximately one week, although the assessors may also provide consultancy advice during the design and specification stages of a project to increase the likelihood of achieving the desired BREEAM rating. Versions of BREEAM are available for offices, homes, schools, prisons, health centres and industrial units, and bespoke versions can also be developed. BREEAM can be used to assess different stages of a building's life cycle but it is used mostly at the design phase. BREEAM is not a panacea, but it is a helpful tool: by designing a construction or refurbishment project to achieve the desired BREEAM rating, project teams can reduce the likely environmental impacts of the building.

Source: National Audit Office.

### Defence Related Environmental Assessment Method (DREAM)

Defence Estates (an agency of the Ministry of Defence) introduced DREAM in March 2006 to measure the environmental performance of new build and refurbishments projects. The assessment covers four key project stages (pre-design; design; construction; and operation) and includes issues for which cross-government targets have been set (such as energy, water, waste, travel and procurement). Defence Estates believe that for defence construction projects the assessment is comparable to BREEAM. In line with the OGC Common Minimum Standards, Defence Estates aims for a DREAM rating of 'Excellent' for new build projects and 'Very Good' for refurbishments. The web-based approach, carried out by Defence Estates nominated assessors, is tailored to defence construction projects and designed to raise awareness of environmental issues in Defence Estates' project teams.

## APPENDIX FOUR

### Examples of sustainability improvements



Debut Services (South West) Ltd, prime contractor in the South West, has a small team dedicated to environmental protection and sustainable development. Examples of their work include the improvements made to the Site of Special Scientific Interest at Royal Naval Air Station Predannack in Cornwall. The site occupies 350 hectares of Cornish heathland which, over many years, has seen the growth of invasive species of European gorse which was beginning to threaten the site's favourable status and inhibit the growth of native and valuable species. The scrub was cleared to allow the grazing of cattle, thus benefiting the flora and general wellbeing of the land. To provide water to the cattle Debut came up with an innovative solution, a stand alone water

trough supplied by a borehole which uses a solar powered pump to draw up the water, thus avoiding the need to excavate trenches for a piped supply. Elsewhere, Debut have made adjustments to the grounds maintenance practices to enable hay meadow management, provision of cover for nesting birds and a more strategic approach to the management and replacement of trees. This has been done in cooperation with Defence Estates and commanding officers to ensure that operational requirements and standards are not affected and so that such measures are not treated as poor performance and in breach of the output specification.



### Relief roads on Salisbury Plain

Salisbury Plain is the United Kingdom Armed Forces' largest training area, and the only one where large-scale armoured manoeuvre training can be carried out. The plain is crossed by many heavy vehicles and pieces of ordnance during exercises throughout the year. It is also home to a number of endangered species, rare grassland plants and significant ancient monuments. Following a particularly wet winter in 1993, when training on Salisbury Plain caused severe damage in certain areas, measures were put in place to reduce the potential for vehicle and personnel movements to spoil delicate habitats. In the west of the plain, a 13-mile concrete track was designed and constructed over several

years and was opened in 2001. This track became the main route for all non-tactical heavy-vehicle and personnel movements across the western part of the plain; the plain itself may still be used for movements that form part of actual training exercises. The reduction in non-essential traffic has had an extremely beneficial impact on the plain's flora and fauna.

A second concrete track, across a busy stretch of the eastern part of the plain, is now being planned by the Department. Detailed environmental impact assessments have been carried out and external stakeholders have been involved since the project's inception. The proposed route has gone through several iterations as different stakeholders' requirements are taken into consideration.

# APPENDIX FIVE

## Analysis of deferrals and injections

We analysed Departmental information about the level and type of deferred projects and injected Minor New Works of four of the five Regional Prime Contracts: Scotland, South West, Central and Eastern. No data was provided by the Regional Prime Contract South East. There was strong evidence of potential risks to value for money caused by a number of factors. In some cases:

- high priority works are not being done;
- planned programmes of work across a number of buildings or sites are being deferred;
- part or all of some deferred work is being 're-injected' as Minor New Works;
- many Minor New Works are being injected for similar projects, which could have been brought together into a single programme, which would have brought cost reductions, supply chain efficiencies and the release of management time; and
- many Minor New Works, however important and necessary, are unlikely to have been urgent, sudden or even short-notice requirements and could have formed part of an advance, planned programme.

Regional Prime Contract	Deferrals	Injections
Scotland	<ul style="list-style-type: none"> <li>■ Some £1.3 million of planned work was deferred in 2006-07.</li> <li>■ This included over £500,000 of projects described as 'operationally essential', for example work to repair a jetty at the Defence Munitions Centre Crombie (£136,000) and to upgrade buildings at the Defence Munitions Centre Beith (£207,000).</li> <li>■ £269,000 of the deferrals were pre-construction design and preparation works for projects to be undertaken next year. This may limit what can be done next year.</li> </ul>	<ul style="list-style-type: none"> <li>■ There have been unanticipated injections to pay for additional works totalling some £3.5 million, not including planned injections for the Defence Information Infrastructure and Bowman training of some £600,000.</li> <li>■ Three separate injections with a total value of £258,000 have been made at different Army sites to pay for enabling works for Multi-Activity Contracts.</li> <li>■ Five separate injections with a total value of £273,000 have been made to pay for works on sports pitches and other fitness facilities.</li> </ul>

**Regional Prime Contract**

## South West

**Deferrals**

- 231 projects have been deferred this year to meet budget cuts.
- 83 building upgrades were deferred until later years.
- The contractor had devised a programme of re-roofing for 2006-07 but this was stopped, with repairs or replacements of roofs being postponed on 13 different buildings across the region.
- 75 redecoration projects were postponed.

**Injections**

- £206,000 of injections for Minor New Works were made on buildings which had other works deferred. In some cases, the deferred and injected works appeared to be broadly the same: for instance, a £10,000 project to fit an automatic door at the United Kingdom Hydrographic Office and a £60,000 programme of work on the electrical distribution system at Hullavington.
- Three separate injections totalling over £11,000 were made at two sites to install outdoor smoking shelters. Three further injections were made at Erskine Barracks totalling £14,000 to convert former indoor smoking rooms to offices. These projects could have been brought together as a single programme with likely savings. It is highly probable, in the light of forthcoming changes to legislation on smoking in the workplace, that many other sites will require similar work. If necessary, a comprehensive programme of work should be planned for the coming financial year.
- Six separate projects to upgrade or create new sports facilities were injected by budget holders, including two new all-weather pitches – at RNAS Yeovilton and Blandford Camp – costing some £500,000 and £300,000 respectively and a new polo pitch at Buckley, costing £4,000.
- Despite the deferral of many planned redecoration projects, six other redecoration projects were injected across the region with an estimated value of £113,000, more than £66,000 of which was for the redecoration of public areas at the Royal Marines base in Poole.

## Central

- This contract was only let in November 2005 and, therefore, no firm programme of upgrade works had been put together. However, funds which had been allocated to unspecified condition improvement works were removed.

- There have been unanticipated injections to pay for additional works totalling some £19 million.
- Fifteen separate injections have been made totalling £213,000 for works to improve fire safety by fitting fire doors and other features at one Army site and three RAF sites.
- Seven separate injections have been made totalling £191,000 for work to install or refurbish shower facilities at five Army sites and one RAF site.
- Five separate injections have been made totalling £98,000 for work to install or refurbish toilet facilities at three Army sites, one RAF site and one Defence Logistics Organisation site.
- £275,000 was injected by the Army to build a cardiovascular training and rehabilitation room at Weeton Barracks. £195,000 was injected at another Army site to install Sky digital receivers in eight buildings.

## Eastern

- This contract was only let in November 2005 and, therefore, no firm programme of upgrade or lifecycle replacement works had been put together. However, funds which had been allocated to unspecified condition improvement works were removed.
- Additionally, redecoration programmes of varying sizes have been deferred at nine sites, including Carver Barracks, the Military Corrective Training Centre and RAF Cottesmore.

- There have been unanticipated injections to pay for additional works totalling some £19 million.
- Six separate injections have been made totalling £340,000 for work to install or upgrade fire detection systems at two RAF sites and one Armed Forces Career Office.
- Injections included £260,000 to build a new firing range at Chetwynd Barracks; £303,000 for additional accommodation at RAF Cranwell; £80,000 to relocate a telephone exchange at Robertson Barracks; and £30,000 to resurface two tennis courts at the Ministry of Defence Police and Guarding Agency Headquarters.
- At least £104,000 of injections were made in November 2006, four months after the Department's cut-off point for transfers. These were to fund the replacement of air conditioning systems which had reached the end of their useful life.

# APPENDIX SIX

## Definition of Standard 1 for Condition of Service Family Accommodation

### Electrics:

Electrical and telephone points to defined requirements.  
Wiring to modern standards.

### Structure:

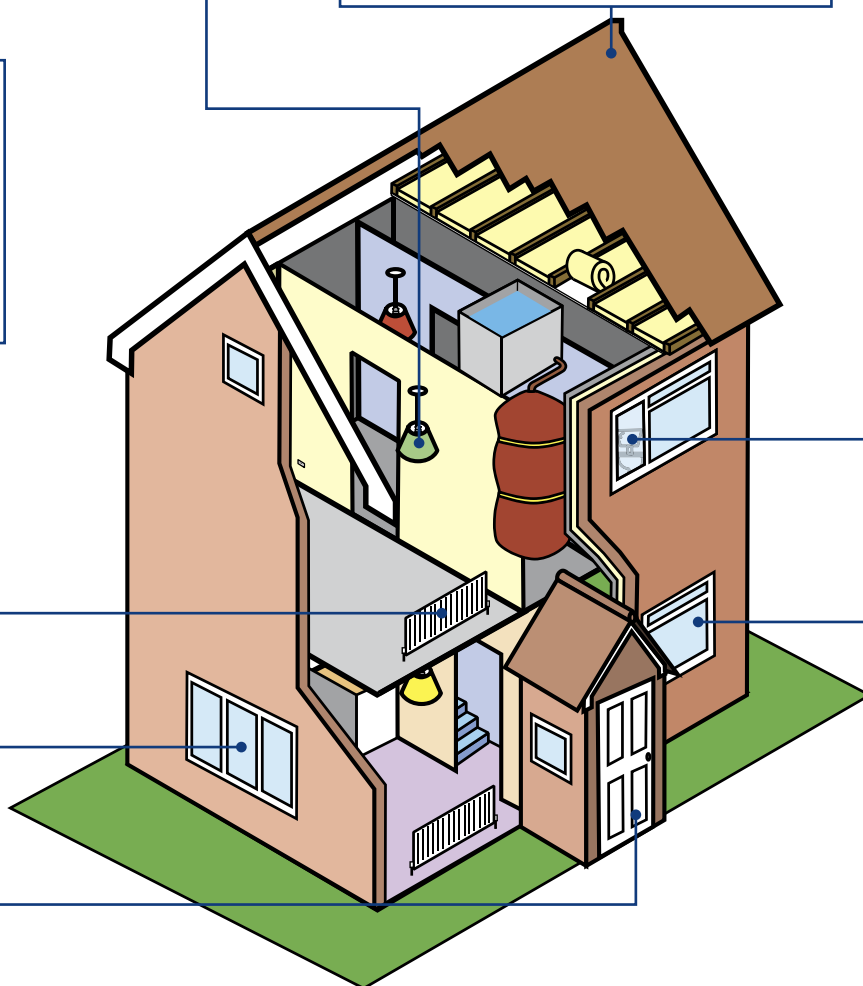
Free from dampness.  
Minimum 150mm loft insulation.  
Loft ventilation.  
Double Glazed windows.  
Good decorative order internally and externally.  
Clean, good condition floor finishes.  
Curtained windows.

### Heating:

Radiators fitted with thermostatic valves.  
Bathroom radiators connected to hot water system to provide heat for towels.  
Focal point fires to sitting rooms.  
Airing cupboards with insulated cylinders and slatted shelving.

### Safety:

Security fittings to external doors.  
External lights over external doors.  
Safety glazing to vulnerable areas (new build only).  
Fire escape windows to Crown Fire Standards.  
Secondary glazing in noisy areas.  
Smoke detection internally.  
Childproof openings to upper windows.  
Fixings for child safety gates to stairs.



**Bathroom and separate toilets:**

Hygienic and undamaged fittings.

WC to be close coupled.

Full height tiling to baths.

Tiled splashback to wash basin.

Mirrors.

Lockable medicine cabinet in bathroom.

Shower to be provided over bath.

Towel rails over radiators.

Shelf and shaver point in bathroom.

Clothes hooks and toilet roll holder.

Privacy locks to doors with override.

**Kitchens:**

Modern units and work surfaces free from damage.

Space with services for fridge, washing machine and where possible dishwasher and tumble dryer.

Electrical point to defined requirement.

Extractor fan as required by building regulations.

Sheet or tiled flooring.

**Standard for Condition categories**

Standard for Condition is calculated from 102 different attributes organised into the following eight categories: Health & Safety, Sanitary, Kitchen, Energy Efficiency, Building Fabric, Electrical, Security and Bedroom Standard. Standard 1 properties achieve a standard of 1 in all eight categories.

A property assessed as Standard 2 achieves a standard of 1 or 2 in each category, with a standard of 1 usually reached in at least five categories. Examples of required improvements are: a thermostatic shower, new kitchen, or an upgrade to loft insulation.

A property assessed as Standard 3 only achieves a Standard of 3 in at least one of the eight categories. Usually a Standard of 1 or 2 is reached in half of the categories. Examples of required improvements are: a complete re-wire and consumer unit, new kitchen, bathroom, and an upgrade to insulation of lofts and plumbing.

A property at Standard 4 is typically assessed as Standard 4 in five or fewer categories. Standard 4 properties will typically require a new bathroom, electrical system, kitchen, insulation upgrade, and health and safety review.

*Source: National Audit Office illustration of Ministry of Defence information*

## APPENDIX SEVEN

# Aquatrine – operation and maintenance of water and wastewater assets

1 The National Audit Office Report in 1997 on the Management of Utilities in the Department<sup>5</sup> concluded that there was significant scope for reducing waste of water, particularly from leaks. The subsequent report by the Public Accounts Committee<sup>6</sup> considered it particularly unsatisfactory that the Department had given insufficient attention to water consumption and were concerned that large quantities of water are apparently being lost through leaks. In the subsequent Treasury Minute the Department accepted the committee's conclusions stating that for the longer-term they were looking to Public/Private Partnership arrangements for the most cost effective provision of water and sewerage.<sup>7</sup> The Department was also concerned about underinvestment, lack of strategic management and the increased risk of failing to comply with statutory regulations, made more challenging by the loss of crown immunity.

2 The Department has now transferred the responsibility for the maintenance and operation of the Department's water and wastewater assets and infrastructure throughout Great Britain to private sector providers through a project known as Aquatrine. The service is being delivered in three packages (**Figure 13**) covering Great Britain and covers the Department's water processing plants and water mains, sewage works, sewers and drains that are outside buildings, removal of surface water and water supply for fire-fighting use. This has involved leasing certain assets to the service providers for the duration of the 25-year service period.

3 A key part of the contracts is to measure water consumption so that the Department can be charged accurately for the water it consumes after leakage has been deducted. Contractors are therefore incentivised to reduce leakage. After an initial period of contract mobilisation each of the contracts operates for two years with an assumed volume. During this time the contractors are putting in place the equipment necessary to measure consumption accurately. Once actual consumption is known, a consumption baseline will be agreed and payments will be recalculated. Through reduced leakage and consumption the Department aims to reduce water supply by 25 per cent by 2020.

5 Report by the Comptroller and Auditor General, *Ministry of Defence: Management of Utilities* (HC 177, Session 1996-97).

6 Committee of Public Accounts – Fourth Report 1997-98, *Ministry of Defence: Management of Utilities* (HC 359, Session 1997-98).

7 Treasury Minute on the Fourth Report from the Committee of Public Accounts 1997-98 – *Ministry of Defence: Management of Utilities* (CM 3880, 25 February 1998).

4 Challenges faced under the contracts include availability of data against which consumption targets can be assessed, and health and safety risks such as the absence of electrical health and safety certification. Because of such complications, measurement of actual consumption on Package A was not achieved and payments recalculated until December 2006. Targets for supply of wholesome potable water, collection and disposal of sewage and occurrences of flooding are currently not being met. A number of recipients of the service have also been identified who sit outside of the Ministry of Defence, and are not entitled to the service, for example, occupants of former military housing now in private ownership and contractors operating on military bases. Where possible the infrastructure will be adopted by the appropriate water company, otherwise such users will be charged. Income from charges is currently some £600,000 and is expected to increase. A number of local issues such as contractor access to sites and levels of response to specific incidents have arisen and are being dealt with through the management boards involving both the Department and the contractors.

### 13 Aquatrine

Area	Contractor	Date Awarded
Package A Midlands, Wales and the South West of England	BREY Utilities Limited Comprising Kelda Water Services Limited and Earth Tech Engineering Limited	17 April 2003
Package B Scotland	Thames Water Nevis (a wholly owned subsidiary of Thames Water Services Ltd)	7 September 2004
Package C North and East of England	Coast to Coast Water (C2C) Comprising Severn Trent and Costain	27 October 2004

Source: National Audit Office

## APPENDIX EIGHT

### Planning and estimating projects

**1** There are three discrete stages at which problems occur with defining the requirement for projects and estimating their cost. First, the Department must determine the likely scope and cost of projects on the estate during the biennial planning rounds. Since projects are paid for by customers, it is they who bid for funding for programmes of capital works. Currently, estimates of cost for the short-term planning round are made without any input from Defence Estates, by Customer Estate Organisations and others who have no or little recent expertise in costing projects. These estimates, which should always be treated as very provisional, are often unrealistic and are not always known to Defence Estates.

**2** When it looks likely that a project will proceed, a firmer indication of cost and timescale is provided to the customer by Defence Estates. This is known as a Rough Order of Estate Information and is supposed to produce estimates for stated requirements with a 40 per cent margin of error. Across a programme of projects defence Estates aims to produce estimates whose total variance from later, firmer project costs and timescales are broadly neutral. This is crucial if customers are to live within their budgets. In reality, most projects end up costing up to 40 per cent more than Rough Orders of Estate Information indicate, with few costing less. In some cases, this is because customers have changed their requirements, a circumstance which cannot be factored into the estimation process. In other cases, this is because insufficient resources are available to generate more accurate estimates.

**3** When a project is almost certain to proceed, a firm cost is developed along with other information. Capital works projects on the estate usually employ the Maximum Price Target Cost method, which provides incentives to contractors to complete projects more cheaply. Customers transfer funds to Defence Estates to meet the negotiated Maximum Price. If the project is delivered for less, the surplus funds are shared between the contractor and Defence Estates. Some customers have expressed concern that Maximum Prices are generally allowed to remain too high by Defence Estates, allowing contractors to benefit unnecessarily from the reduced actual cost incurred during construction. Defence Estates acknowledges that, overall, projects are coming in at less than their Maximum Price. Though this is partly the result of an effective incentive system working well, Defence Estates admits that the quality of its ability to cost accurately needs to improve further. Some improvements have already been made, as indicated by the fact that the difference between funding transferred by customers for capital works and outturn costs has been reducing.

## APPENDIX NINE

# The Estate Planning Tool and the Estate Performance Measurement System

**1** The Estate Planning Tool has been designed to hold data on every Departmental asset. For the first time, information about the condition of buildings is to be gathered using a single methodology throughout the entire estate. In line with best practice, assessments are made about the constituent parts of buildings – roofs, walls, heating systems – and then turned into numerical scores. These scores are aggregated to reach an overall view of the building's condition. Data about individual buildings and other estate assets can be combined to produce a picture of the condition of the estate at site, regional and national level, or to analyse differences between sites occupied by, for instance, each of the three Services. A detailed training programme and manual have been developed to assist staff who will input data to the tool.

**2** In time, the tool will hold historical data on assets, showing how their condition has changed. It will also record a 'target condition' for each asset based on customer requirements, which will form part of the strategic information held in Integrated Estate Management Plans. These plans will also identify where there is spare capacity on sites. By analysing these three categories – historic, present and target condition – the Department will be able to discover whether it is moving towards an estate of the right quality. Additionally, the tool will include strategic information about assets and sites, including any factors which affect their long-term future. People with a role in the estate, whether in Defence Estates, its contractors or in customer organisations, will be able to view the Estate Planning Tool online.

**3** The data contained within the Estate Planning Tool also forms the core of the Estate Performance Measurement System, which has been developed to consider the changing performance of the defence estate across a wider range of categories (see Figure 9).

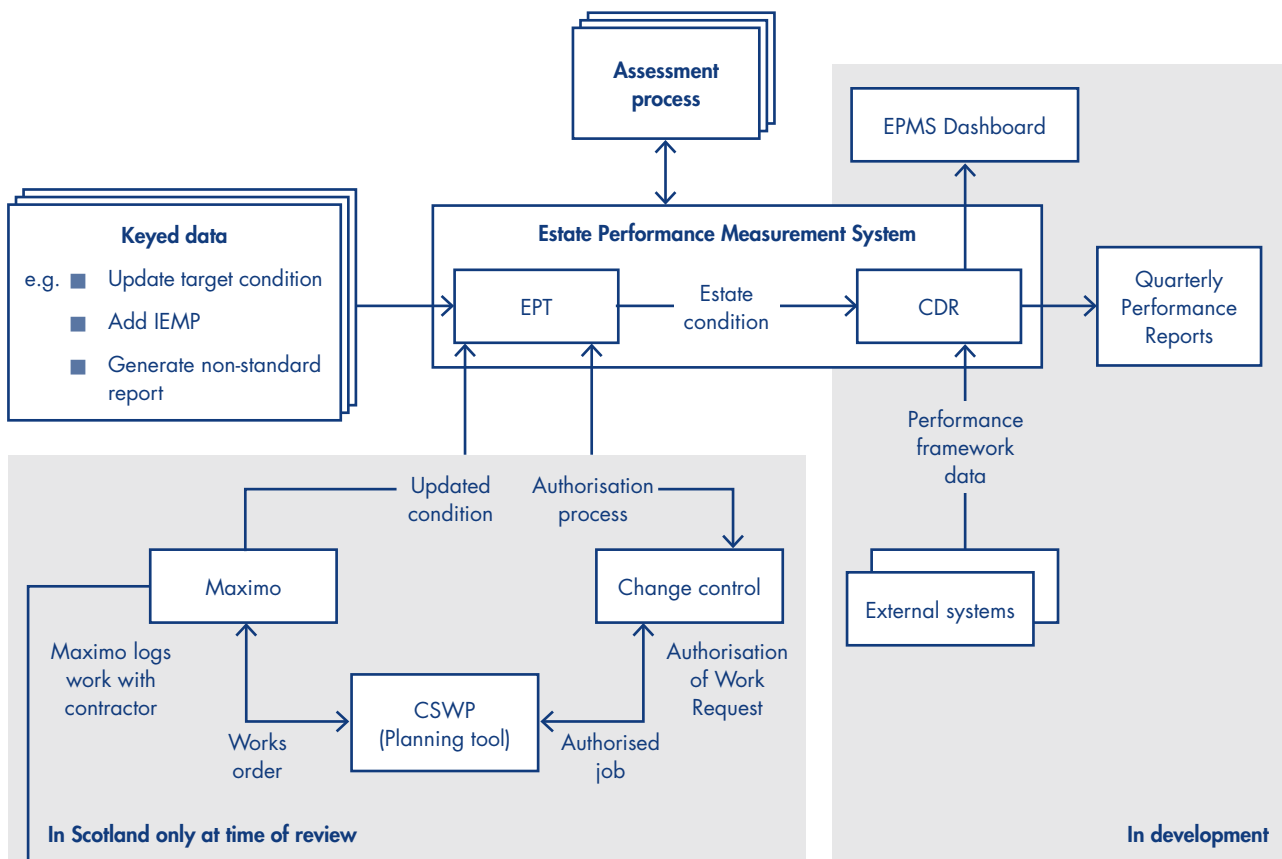
**4** Initially, the system will report on the holistic performance of the five Regional Prime Contracts which are managed by Defence Estates. This is reflected in the data categories, which include the delivery of agreed, funded Minor New Works programmes. In the future, the system can be adapted for use on other contracts and parts of the estate, such as housing. **Figure 14 overleaf** is a diagram showing how the Estate Planning Tool and Estate Performance Measurement System will interact, the processes underpinning them and the activities they will support.

**5** Information will be collated in each of the categories and will then be analysed by a team of trained assessors, who will weigh the results to produce an overall report, made up of a combination of numerical scores and narrative descriptions. Numerical scores across the six categories will be aggregated to provide a weighted overall score for a given part of the defence estate. It is intended that these reports and the data underpinning them will be archived to enable analysis of change over time. Though initially paper-based, the entire system will eventually be accessible through an online interface. The first paper-based assessment exercise under the Estate Performance Measurement System was carried out on Regional Prime Contract Scotland during late 2006.

6 Together these tools will be of great benefit to the Department in monitoring the performance of the estate and will enable better planning. They should also help to enhance the relationships between Defence Estates and its customers, who have frequently expressed concern about the quality of information they receive about the estate through quarterly performance reports and other mechanisms. Customer Estate Organisations have been fully involved at all stages of developing the new tools. Whereas it has at times been difficult to achieve the right

level of detail in old reporting systems, the Estate Planning Tool and the Estate Performance Measurement System will enable users, including customers, to take both a high-level overview of the performance of the estate and to drill down into underpinning data on specific areas of interest. When both tools are working maturely, the customers of Defence Estates will have less data collection and opinion canvassing to do themselves. This will provide the Department with the opportunity to refocus resources elsewhere.

**14** The Estate Planning Tool and the Estate Performance Measurement System



In Scotland only at time of review

In development

Link to Defence Property Gazetteer

**Key**

- EPMS – Estate Performance Measurement System
- IEMP – Integrated Management Plans
- EPT – Estate Planning Tool

- CDR – Corporate Data Repository
- CSWP – Core Services Works Programme

Source: PricewaterhouseCoopers

7 The Department is now developing a new version of the Estate Planning Tool, incorporating important lessons learned from earlier versions and providing enhanced report writing capabilities. The tool is to be fully operational by April 2007, when it will contain data on all buildings covered by Regional Prime Contracts. Other parts of the estate, such as Northern Ireland, and Service Families

Accommodation, will be incorporated into the tool at intervals over the following eighteen months. The collation and assessment of data in the broader Estate Performance Measurement System will continue to be done on paper until a web interface and associated automated mechanisms for transferring data are developed in the future.

## Recommendations to improve the Estate Planning Tool and Estate Performance Measurement System

### Improvement

#### Improve System Controls

Take steps to ensure that there are sufficient controls within the systems to guarantee the quality of data and to enhance security. In particular, the project team needs to define profiles for users with different levels of access to the system to minimise the risk of data being compromised unintentionally.

#### Improve Accuracy of Target Condition

Further work is needed to hone the process through which Integrated Estate Management Plans are compiled and moderated, to ensure that the target conditions held on the Estate Planning Tool are correct. Otherwise there is a risk that the Department and its contractors will commit scarce resources to improving some buildings unnecessarily.

#### Define and Refine Metrics

Considerable work is needed to define and refine a number of the metrics which will be used to measure performance in the Estate Performance Measurement System. At the time that the first assessment took place, data definitions were minimal in a number of cases. For instance, no metric had been devised for measuring the quality of construction projects. In some cases, metrics did not concur with best practice. The Department intended, for example, to measure energy consumption on the estate per person rather than per building. As information begins to be collated from across the entire estate, it is vital that this is done on the same basis, using the same measurement rules and protocols. Failure to refine metrics now, before the systems are up and running, may negatively affect the usefulness and reliability of data collected in early phases, which will hamper the Department's ability to demonstrate how the estate's performance is changing over time.

#### Establish Baseline Performance Data

A key weakness of both the Estate Planning Tool and the Estate Performance Measurement System is the absence of data about the condition and performance of the estate prior to the letting of Regional Prime Contracts. This data could have been used as a baseline. In order to prove the through-life efficiency of any new contracting method, baselines are essential. This issue was raised in our last report, when only two of the five contracts had been let, but the Department did not conduct work to produce baselines in the remaining three regions. Consequently, although the tools will be able demonstrate how Regional Prime Contracts' performance is changing over time relative to the first date on which they were assessed, it will not be able to quantify how much better they are than the systems which preceded them. However, the Department can still take some steps to improve this situation. For some categories on the Estate Performance Measurement System – in particular for information about aspects of sustainability and the delivery of construction projects to time and cost – it is likely that baselines could be constructed retrospectively.

### Timescale

With regard to the Estate Planning Tool, these issues need to be resolved before April 2007.

Following the introduction of the Estate Planning Tool in April 2007, but before the first annual review of Integrated Estate Management Plans.

Poor metrics will affect even paper-based assessments using the Estate Performance Measurement System and so the Department plans to have tighter measurement rules in place by March 2007.

After the implementation of the Estate Planning Tool in April 2007 but before April 2008.

Improvement	Timescale
<p><b>Automation of Data Collection</b></p> <p>When it developed the Estate Performance Measurement System, the Department chose an assessment method which placed great importance on the role of a team of assessors in interpreting raw data. Though this has the merit of ensuring that data are considered in context, the system is potentially cumbersome, involving considerable time and effort on the part of relatively senior managers within the Department. There is a risk of miscalculation and that assessments made by different teams may not be comparable. When the Estate Performance Measurement System is working across all five Regional Prime Contracts, the Department should examine again whether aspects of data collection and aggregation would not be better performed through automatic processes.</p>	Before April 2008.
<p><b>Improve links with Contractors' Information Systems</b></p> <p>When it comes to re-let Regional Prime Contracts and when it lets any new estate-related contracts, the Department should consider carefully how best to link the Estate Planning Tool and Estate Performance Measurement System with the information systems used by new contractors for routine management. It may be that the Department can move towards mandating a single management information system for all contractors working on its estate. This system should interact with the Estate Planning Tool and the Estate Performance Measurement System in a predictable and uniform way, thus reducing overheads required to input data and strengthening confidence in comparability. The Department should also examine whether the practice adopted by the Regional Prime Contractor in Scotland, where estate works can be ordered and tracked through the Estate Planning Tool, is more efficient than other systems and could therefore be applied more broadly.</p>	Before 2010.
<p><b>Measuring Cost of Individual Assets</b></p> <p>The Estate Performance Measurement System will measure some aspects of the cost of the estate, in particular the delivery of projects to cost targets. However, it does not currently attempt to analyse how much individual assets cost the Department relative to one another. In time and with improved management information from financial systems, the Department should be able to use the tools for this purpose, thus enhancing its ability to make mature decisions which are value for money.</p>	<p>By March 2007, the Department intends to label each building on its estate with a unique number, which will be used consistently in all management information systems. In the short term, this will enable manual analysis of the cost-benefit ratio of various estate assets.</p> <p>A fully integrated system should be developed in time for the re-letting of the first Regional Prime Contract in 2010.</p>

# APPENDIX TEN

## Sustainable development

### Sustainability targets

#### General

To implement the Office of Government Commerce's Property Benchmarking Service to improve the efficiency and effectiveness of corporate estate management.

To implement accepted elements of the Sustainable Procurement Task Force National Action Plan.

Using agreed sustainability assessment methodologies, to ensure that 90 per cent of all new construction projects are rated 'Excellent' and that 90 per cent of all refurbishments achieve a 'Very Good' rating.

To conduct sustainability appraisals of office relocations. *Since June 2006.*

### Progress to date

Defence Estates is taking an active role in working with the Office of Government Commerce on this scheme, which applies only to the small number of non-military buildings that constitute the Department's civil estate. It is also involved in developing the High Performing Property project, which seeks to optimise the strategic management of Departmental and pan-government estate portfolios, including through improved sustainability.

The Government as a whole will publish in the near future its response to Sir Neville Simms' Procurement Task Force Report, which will detail those aspects of the plan that it intends to adopt.

The Department is a long way from meeting these targets, though its performance is improving. In 2005-06, only 15 per cent of all construction projects were judged as either 'Excellent' or 'Very Good' for sustainability.

Score for sustainability	Percentage of projects achieving the score in 2005-06
Excellent	4
Very Good	11
Good	78
Pass	4
Poor	2

*Source: National Audit Office analysis of Ministry of Defence data*

Since the introduction of the new Defence-specific assessment methodology in March 2006, its performance has improved considerably.

For new build		For refurbishment	
Percentage of assessments achieving target		Percentage of assessments achieving target	
At pre-design	57	At pre-design	100
At design stage	60	At design stage	71
At construction stage	60	At construction stage	29
At operation stage	60	At operation stage	72

*Source: Ministry of Defence*

The Department's data systems currently cannot distinguish between appraisals of office relocations and those of other programmes and projects. Consequently, it cannot measure whether it is achieving this target.

**Sustainability targets**

Energy and utilities

To reverse the upward trend in carbon emissions from offices by April 2007; to reduce carbon emissions from offices by 12.5 per cent by 2010-11, relative to 1999-2000 levels; to reduce carbon emissions from offices by 30 per cent by 2020, relative to 1999-2000 levels. *Since June 2006.*

To adopt the Carbon Trust's Carbon Management Programme, which involves proactive management of the risks and opportunities relating to Climate Change mitigation. *Since June 2006.*

To increase energy efficiency per square metre by 15 per cent by 2010 relative to 1999-2000 levels; and by 30 per cent by 2020. *Since June 2006.*

To source at least 10 per cent of electricity from renewable sources by 2010.<sup>3</sup>

To source at least 15 per cent of electricity from Combined Heat and Power by 2010.<sup>3</sup>

To contribute to the wider target for the central government's office estate to be carbon neutral by 2012.

To implement the Department for Environment, Food and Rural Affairs' Minimum Environmental Standards – Quick Wins.<sup>4</sup>

**Progress to date**

Following reductions in the first two years of this decade, the amount of carbon dioxide produced by the Department's entire United Kingdom estate has increased in every year since 2001-02. The Department is not yet able to measure separately carbon emissions from office buildings.

Year	Emission of carbon dioxide in tonnes		Total
	United Kingdom Defence Estate	Overseas Defence Estate	
1999-2000	1,684.9	361.5	2,046.4
2000-01	1,665.8	361.5	2,027.3
2001-02	1,574.5	356.0	1,930.5
2002-03	1,592.5	353.8	1,946.3
2003-04	1,614.1	367.0	1,981.1
2004-05	1,655.9	354.5	2,010.4

*Source: Hansard, 10 October 2006 (Columns 652–653W)*

There are five steps involved in the Carbon Management Programme:

- Mobilising the organisation;
- Evaluating the business case;
- Identifying opportunities;
- Developing implementation plans; and
- Managing implementation.

The Department has recently concluded the first step of the process.

The Department is not pursuing this target, although it has measured energy consumption per square metre since 2003-04. The Department does not believe that a measure which relies on square metres is an appropriate mechanism for improving energy efficiency on its estate, where, for example, very small buildings can consume very high amounts of energy and square metre baselines could vary annually. Instead, it intends to develop plans to achieve an overall reduction of 15 per cent in energy usage for all its estate.

Currently, some six per cent of the Department's electricity comes from renewable sources.

Currently, 2.5 per cent of electricity is sourced from Combined Heat and Power and there are plans to increase this by a further 2.5 per cent each year until 2010.

The Department is committed to this target and is currently developing a strategy and plan to implement it on the small number of non-military buildings that constitute the Department's civil estate.

Many of the Minimum Environmental Standards – Quick Wins are estate-related, including standards for new gas boilers, central heating systems, a range of domestic appliances, lighting and air conditioning systems, and paints. These standards are not mandatory and, though it is Departmental policy to implement them, the Department does not yet audit their uptake by its contractors. There are plans to do this in the near future.

**Sustainability targets**

To quantify water consumption and leakage at all sites or site groups within the scope of the three Aquatrine contracts.<sup>2</sup>

To reduce water consumption by 25 per cent on the office and non-office estate by 2020, relative to 2004-05 levels. *Since June 2006.*

**Environmental sensitivity**

To have an Environmental Management System based or modelled on a recognised system.

To meet or exceed the aim of having 95 per cent of Sites of Special Scientific Interest in sole ownership or control in target condition by 2010. *Since June 2006.*

To ensure that 80 per cent of Ministry of Defence sites with a significant biodiversity interest have an integrated land or rural management plan by 2008.<sup>2</sup>

To buy legal timber and, where feasible, from sustainable sources.<sup>4</sup>

To complete desktop assessments of the contamination of defence land by the end of 2007.<sup>2</sup>

**Heritage**

To remove Ministry of Defence Buildings at Risk from the register against the baseline of the previous Department of Culture, Media and Sport Biennial Conservation Report.<sup>3</sup>

**Progress to date**

This target is the contracted responsibility of Aquatrine service providers, who are actively working to quantify water consumption and leakage at all Departmental sites.

The Department is developing a plan to meet these targets, where some of the reduction will come from Aquatrine service providers' work to reduce leakage and the rest will come from actual reductions in Departmental consumption.

The Department is in the process of implementing Environmental Management Systems throughout its estate. It currently estimates that around 80 per cent of sites have adopted one system or another.

There has been continuous improvement in the quality of the Department's Sites of Special Scientific Interest for some time. With 82 per cent of sites in England, 69 per cent in Scotland, 75 per cent in Wales and 63 per cent in Northern Ireland at target condition it is on course to meet its aim by 2010. However, continued improvement is dependent on funding levels being maintained. Cuts to Regional Prime Contract funding in the South West in 2006-07 mean that sites in this area are now at risk, following marked improvements in recent years.

The Department has assessed that there are some 120 sites with a significant biodiversity interest. Integrated Land Management Plans are in place for all of the principle training areas, including Salisbury Plain. 52 sites (43 per cent) with significant biodiversity have an integrated land or rural management plan. The Department is confident that it will meet its target on time.

The Department is confident that all of the timber it uses in construction comes from legal sources. Currently, the Department's data systems cannot measure what proportion of the timber it uses comes from sustainable sources. Regional Prime and Housing Prime Contractors are contractually obliged to source timber from sustainable sources. However, the Department does not currently verify that this is happening.

The Department undertakes one-off assessments to identify areas where there is a significant possibility of land contamination causing harm to human health or the wider environment. Land Quality Assessments are used to quantify risk and identify the most appropriate management action. Over 3,000 Land Quality Assessment Reports have been produced to date, which include all priority sites (such as those to be disposed, and those known or suspected to pose the most significant risk) but it is unlikely that desktop assessment work will be completed by the end of 2007 for all parts of the defence estate.

The Department had 28 entries, comprising some 50 individual buildings, at risk, according to the 2006 Biennial Conservation Report. The Department has succeeded in meeting the target by removing four entries from the Buildings at Risk register, two as a result of repair or reuse, and two as a result of disposal.

**NOTES ON THE PROVENANCE OF TARGETS**

- 1 Unless otherwise stated, these targets were set in June 2006 by the Prime Minister as part of the Sustainable Operations on the Government Estate initiative. In some cases, they reiterate earlier targets contained within, for example, the Framework for Sustainable Development on the Government Estate.
- 2 These targets have been set by the Department itself in response to its particular needs and circumstances.
- 3 These targets were part of the previous Framework for Sustainable Development on the Government Estate and will remain in force until they have been implemented.
- 4 These targets were adopted through separate undertakings by the Department for Environment, Food and Rural Affairs.

# GLOSSARY

Customer Estate Organisation	To assist customer groups in framing their estate requirements and to act as points of contact for Defence Estates, six Customer Estate Organisations were created for the Navy, the Army, the Royal Air Force and for central parts of the Department. The Customer Estate Organisation has delegated authority to act on behalf of the budget holders it represents.
Defence Estates	The agency of the Ministry of Defence responsible for managing the defence estate including the letting of all new construction and maintenance contracts.
Defence Training Review	<p>The Defence Training Review began in 1999 and a report, 'Modernising Defence Training', was published in 2001. Among its recommendations was that the delivery of some types of specialist training should be rationalised. The disciplines included in the rationalisation programme, which aims to introduce modern training methods and concentrate training onto a reduced number of sites, have been divided into two contractual packages:</p> <p>Package 1: Aeronautical Engineering, Mechanical Engineering and Communications and Information Systems;</p> <p>Package 2: Logistics and Personnel Administration, Ministry of Defence Police and Guarding and Security, Languages, Intelligence and Photography.</p>
Estate Performance Measurement System	A system which builds on the data held in the Estate Planning Tool to provide a holistic picture of the performance of the defence estate. In addition to information on the physical condition of the estate, the system will report on project delivery, customer satisfaction, health and safety and sustainability. Data will be submitted by Regional Prime Contractors and others working on the estate and will be analysed by trained assessors. The tool is supposed to drive improvements in the efficiency and effectiveness of estate management.
Estate Planning Tool	A tool which will hold data, compiled according to a single methodology, on every built asset in the Department. Assessments of the constituent parts of buildings – roofs, walls, heating systems – will be aggregated to reach an overall view of its condition. The tool will also contain information taken from Integrated Estate Management Plans, on the target condition and long-term plans for assets. It will be possible to combine data on individual assets to provide a picture of the quality of the defence estate at site, regional and national level. The tool will be accessible through an online interface.
Facilities Manager	The site-level representative of Defence Estates. Responsible for liaising with on-site staff and contractors to ensure that work is done to the right time, cost and quality.

Integrated Estate Management Plan	Plans drawn up by internal customers who occupy Defence sites in conjunction with Defence Estates and external contractors. Each site is to have its own plan, which will be reviewed on an annual basis, and will contain information about the importance and actual and target condition of each building on a site and the role and long-term future of the site as a whole.
Minor New Works	Small estate projects worth up to £240,000 each excluding fees and VAT.
Non-Equipment Investment Plan	A tool to aggregate the costs and savings over the next 10 years arising from Departmental plans for estate, information systems and business change programmes with an investment of £50 million and above. Smaller value projects may be included where these involve more than one top-level budget or are funded by the Defence Modernisation Fund.
Prime Contract	<p>A prime contractor has overall responsibility for the management and delivery of a project and/or service including responsibility for selecting and co-ordinating sub-contractors (the supply chain). The requirement is expressed where possible in output terms, avoiding prescriptive and detailed constraints. Key principles include whole-service procurement, economies of scale and collaborative working.</p> <p><b>Regional Prime Contract:</b> Primarily estate services (for example, grounds and building maintenance, decoration) and some new building work, delivered across a defined geographical region.</p> <p><b>Capital Stand Alone Prime Contract:</b> Primarily provides for technical or other facilities, generally of a complex nature and/or of significant cost, for example the redevelopment of RAF Woodbridge.</p> <p><b>Functional Prime Contract:</b> Meets the need for a similar item to be procured over the whole estate, for example the Single Living Accommodation Modernisation project and the Housing Prime Contract.</p> <p><b>Prime Plus Contract:</b> Currently applies to the Ministry of Defence estate in London (project MoDEL). In this contract the prime contractor is responsible for managing the entire programme including disposals, proceeds from which would allow redevelopment and refurbishment of facilities.</p>

Private Finance Initiative (PFI)	A PFI project involves a long-term contract (typically 15–30 years) with a private sector contractor to provide a clearly defined service. The contractor invests in capital infrastructure using shareholders' money and funds borrowed on the commercial market. The Department pays for the service through a regular 'unitary' charge which covers both the capital investment and service provided. The contractor is only paid for the level and quality of service actually received.
Service Family Accommodation	Houses for armed forces personnel to live in with their families. Known in the past as married quarters.
Single Living Accommodation	Accommodation provided for armed forces personnel who are single or who have elected not to be accompanied by their families. Typically these are single bedrooms with communal facilities, although some accommodation in training establishments is multi-occupancy and many single rooms are now 'en-suite'.
Site Estate Representative	Typically Service personnel, Site Estate Representatives report to and take direction from the site's Head of Establishment. Their core role is to ensure that estate-related work does not compromise the operational business of the site by liaising with Facilities Managers, contractors and Service colleagues.
Site of Special Scientific Interest	An area of land that is of special interest for its plants, animals, geological or physiographical features and has been notified as such by the relevant country agency under section 28 of the Wildlife and Countryside Act 1981.