



Ministry
of Defence

Strategy for Defence Infrastructure



Foreword



Our estate is at the heart of all that Defence does. Whether it's providing the runways for our new F35 fighter jets to land on, to providing the opportunity for personnel to gain the exemplary, challenging training they require to retain their cutting edge, the Defence estate is always integral to the delivery of Defence capability. We see our estate as a key asset where our people live, work and train, from which we operate and from where we deploy. We have a duty in Defence to provide high quality accommodation for personnel and their families, maintain facilities to support Defence's delivery of globally leading technologies and vital operations and to manage appropriately the rural estate for which the department serves as steward.

This overarching responsibility underpins why we are publishing the Strategy for Defence Infrastructure. This strategy provides the framework for the transformation of the Defence estate and development of its assets over the coming decades. The strategy will direct activity across Defence infrastructure and provides an ambitious landmark for future aims.

It is a responsibility Defence doesn't take lightly. Every year 140,000 of our people train from 58 training establishments and on 157,500ha of training estate. In the UK we operate from three major naval bases with seven further supporting maritime establishments, 148 barracks, 37 air stations including 9 major airfields, and over 1,800 Reserve and Cadets sites covering the whole of the country and with a presence in all the Devolved nations. Stretching from our naval bases in Plymouth to our Quick Reaction Alert station at RAF Lossiemouth, the Defence estate plays an active role in communities across the Union. The estate is also where equipment and weapons are stored and maintained in our warehouses and workshops; and is where we carry out essential research to keep ahead of our adversaries. The ability of our Armed Forces to keep the UK safe and prosperous depends on an estate and infrastructure that enables the optimisation of military capability and the delivery of Defence's priorities.

Our estate provides over 100,000 bedspaces and 49,500 homes for personnel and their families, we need to rise to the challenge of how our people live and work, embracing smarter working and providing more accommodation choice. Despite the amount already invested, we recognise that a significant task remains to bring the estate to the size and condition that our service personnel deserve.

Building on Defence's future requirements identified following publication of the Integrated Review and Defence Command Paper, within this strategy we have developed a clear vision to transform and modernise the estate. Through delivering the Defence Estate Optimisation portfolio and working with Commands to prioritise assets, we will enable the improved delivery of Defence capability and outputs across the estate. The results of this work and the realisation of this strategy will improve the standard of living and working accommodation for our people over generations to come. It will also help the UK achieve our vital net zero and sustainability commitments, whilst ensuring the estate is resilient to future threats, whether from climate change or our adversaries. Defence supports UK growth and the Government's Levelling Up agenda through investment and development.

We are committed to delivering this ambitious strategy, which will require all those within the MOD infrastructure enterprise to play their part, together in collaboration with our partners across wider Government, the Devolved Administrations, local government and industry. We are all proud of the amazing work our Armed Forces carry out protecting our country. And we are committed to providing a Defence estate and facilities fit for all personnel, one of which everyone can be proud.

Jeremy Quin MP
Minister for Defence Procurement

The Defence estate is fundamental to the delivery of military capability

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Vision for the Defence Estate

A safe estate, fit for purpose to deliver military capability and support our people



The Defence Estate

Part of the community

Our establishments are at the heart of their local communities across the UK, supporting local economies and providing access to facilities e.g. social hubs and cadet units as well as access to green space. A strong community supports the moral component of military capability. It can also help improve wellbeing and reduce social isolation. Our footprint also supports links with civil society, aids the ability to recruit effectively and enables the military to deploy rapidly in UK resilience emergencies through the provision of Military Aid to Civilian Authorities (for example through flood relief or support through the Covid pandemic). Defence Estate Optimisation (DEO) Portfolio alone will also invest over £4.3bn over the next 10 years; contributing to UK prosperity, regional investment and the Government's Levelling Up agenda.

More than buildings and concrete

The estate is where we live, work, train, deploy and operate from. It is more than just a series of buildings; it is a living system which is fundamental to the delivery of Defence capability and our operations at home and overseas.

- Service family accommodation
- Welfare & community facilities
- Messes & catering facilities
- Single living accommodation
- Sports facilities
- Overseas training estate
- Reserve units
- Training schools
- UK training areas



- Communication facilities
- Air operating surfaces
- Hangars
- Offices
- Headquarters
- Workshops & garages
- Jetties
- Dockyards
- Test and evaluation ranges

The Defence Estate

UK Defence establishments



Overseas Defence Estate



The Defence Estate

The rural estate

The rural estate is **157,500 hectares (68%)** and is used for training and ranges.

13 national parks



33 Areas of Outstanding Natural Beauty



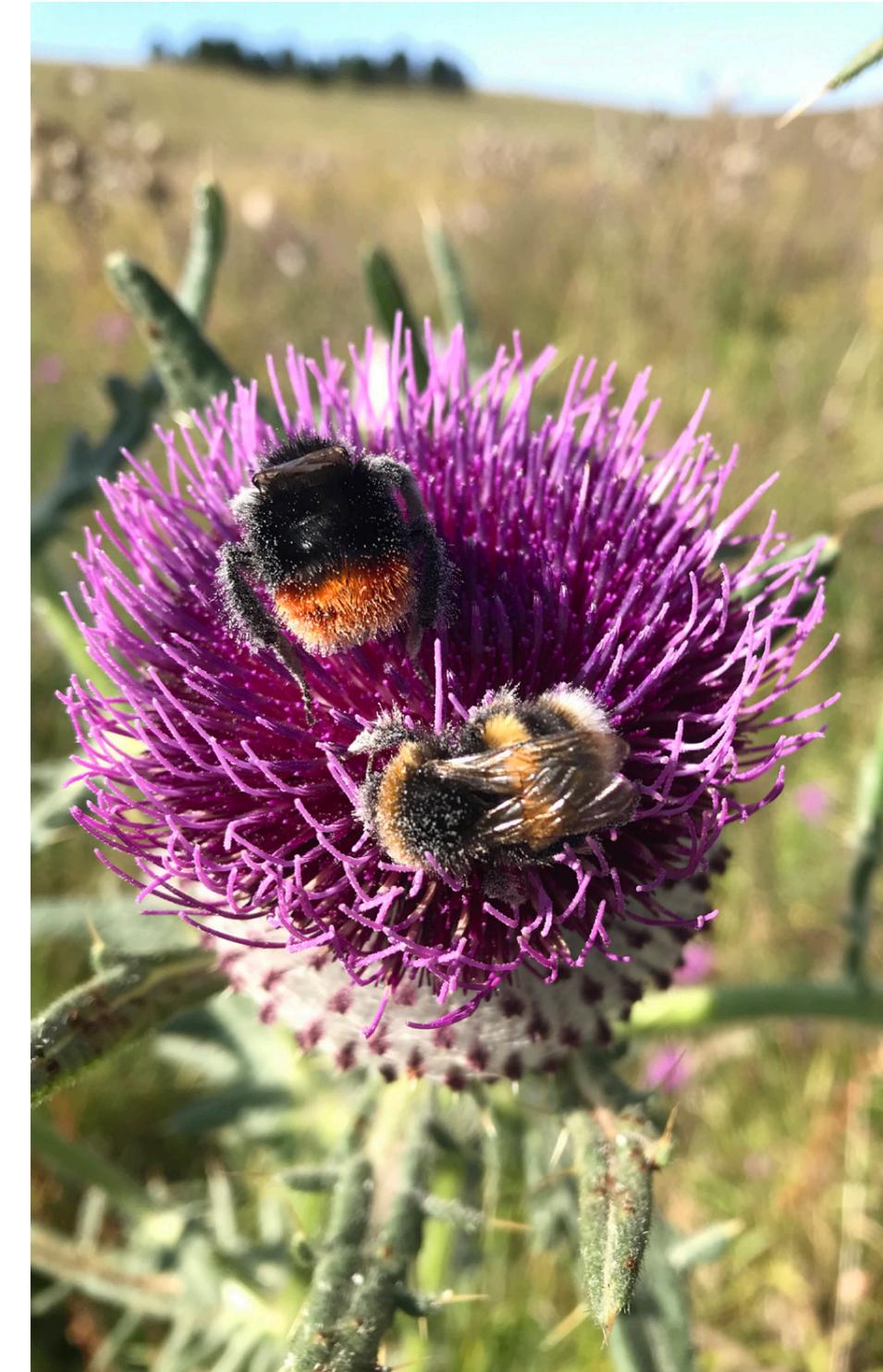
11 National Scenic Areas



The built estate

The built estate comprises **75,400 hectares (32%)** containing offices, technical facilities, and storage and support for military equipment and inventory.

It consists of **900 sites**, which have roughly **96,000 buildings** including houses, technical assets, such as storage units and training facilities, and other assets such as runways and electrical networks.



An estate held in trust for the UK

Defence has access to around 1.8% of the UK landmass. We have a statutory duty to protect and safeguard the environmental and heritage value of our sites. We have the largest heritage estate across Government and a third of the estate is designated for its international and national importance for wildlife.

Resilient to risks and flexible for our future needs

To deliver Defence capability, it is essential our infrastructure is resilient to existing and evolving security threats and other risks such as the impacts of climate change and seismic activity. We will ensure our infrastructure is secure and resilient to mitigate potential risks. The Covid pandemic has highlighted the need to ensure that our estate is responsive to new demands and different ways of working.

Modern and sustainable

What we build today needs to reflect changes in the way our people choose to live their lives, emerging military capabilities and ways of working. We need to future-proof the estate and assets to adapt to future demands. Just under half of our buildings are over 50 years old. We will progressively modernise the estate to ensure it can support our changing needs and is as efficient as possible to operate.

The Defence estate has an important role to play in helping to achieve the Government sustainability and climate commitments, including the UK's vital commitment to net zero greenhouse gas emissions by 2050 through reducing the use of fossil fuels across the estate and in supporting the Government's green recovery agenda.

It is essential that Defence infrastructure is resilient to constantly evolving security threats, natural hazards and climate change



Transforming our ways of working

We are making our infrastructure operating model more effective by incorporating asset management processes, informing decisions with comprehensive data and management information, having clear infrastructure plans aligned to Defence strategy and capability plans. This also means challenging how and why we do things, learning from our peers and adopting industry best practice, and maximising the potential of our whole workforce by ensuring they have the skills and knowledge to effectively manage and deliver the transformation of our estate.

We have an ambitious agenda for change for the Defence estate and this Strategy sets out what we will do in the next 5 years and beyond, which can only be achieved by working with others. By working collaboratively across Central Government, the Devolved Administrations, the regions and local government we will ensure we can deliver our plans. Our partnership with our industry supply chain is also key to delivering change on the estate, from Tier 1 contractors to small and medium-sized enterprises (SMEs) imparting their expertise, skills and innovation. This also supports the Government's wider construction and Levelling Up agendas.

We need to adopt innovation and technology from other industries and sectors, in order to help achieve our vision, reduce costs and to help us future-proof the estate.



A safe and compliant estate

The safety and wellbeing of our people is paramount, this includes our contractors and those that may be affected by our activities. To fulfil our duty of care, we have a comprehensive health and safety regime on our estate. As a major landowner, we work to ensure we protect and enhance our estate and appreciate its biodiversity and opportunity to help reduce net carbon emissions.

Innovation can reduce costs and help us to future-proof and 'green' the infrastructure and assets

Progress since 2015

In support of military capability, the Department has delivered significant change since 2015, including establishing the Defence Estate Optimisation Portfolio in 2017. Notable achievements have been the:

- Establishment of a new infrastructure operating model and infrastructure Function to deliver the changes required, including clear roles and responsibilities to enable strategic decision making
- Delegation of budgets and decision making to the Front Line Commands (FLCs) to incentivise investment, optimisation and modernisation of the estate
- Improvement of the infrastructure capabilities across Head Office, Defence Infrastructure Organisation (DIO), the FLCs and other organisations across the Department
- Implementation of an asset management programme to enhance decision making, balancing cost, performance and risk to improve the condition and utilisation of our estate
- Continued operation of the Defence estate throughout the Covid-19 pandemic
- Increased expenditure on managing the estate to £3.3bn in 2019/20, a 24% rise in maintenance investment since 2015
- Delivery of the Army Basing Programme which allowed 20,000 soldiers to return to the UK from Germany (including over 90 unit moves), with over 4,400 SLA new bed spaces, 1,475 new Service family homes and over 200 workshops, garages, armouries, messes, HQs, technical buildings, stores and offices being provided
- Delivery of the new College of Logistics, Policing and Administration at Worthy Down and the £150m upgrade of MOD Stafford
- Completion of the £1.3bn Single Living Accommodation Modernisation (SLAM) project which delivered 22,800 bed spaces across 52 locations
- Upgrade of 10,000 Service family homes in 2020/21, for a total of £86m
- Renovation of the runways at RAF Akrotiri in Cyprus to support operations in the Middle East and RAF Lossiemouth to support the fleets of Poseidon P-8A and Typhoon aircraft
- Improvements to our Naval Bases at Clyde (£1.6bn) to support our submarine fleet and £139m of work to prepare Portsmouth as the home of the new Queen Elizabeth Class aircraft carriers
- Delivery of £250m programme of works at RAF Marham to support the arrival of the F35 Combat Aircraft
- Initiating the roll-out of electric vehicle charging points to support our sustainability ambitions
- Reduction in our estate related greenhouse gas emissions (tCO2e) by 39%; waste (in tonnes) by 41%; and water usage (m3) by 2.3%
- Release of enough land to support 11,500 homes
- Generation of £929m from the sale of land and property
- Reduction of our built estate by 1,600ha

Challenges

The scale, nature and location of the estate needs to be better aligned to current and future Armed Forces' size and composition. While the Armed Forces have reduced in size since the turn of the century, the required changes to the estate have not always kept pace resulting in assets not being sufficiently optimised to support Defence's current and future capability. Striking the right balance between the need to consolidate onto a smaller estate whilst retaining flexibility and resilience for future capability is a key consideration for infrastructure planning.

Striking the right balance between the need to consolidate onto a smaller estate whilst retaining flexibility and resilience for future capability is a key consideration for infrastructure planning

The approach to investment following the SDSR (Strategic Defence and Security Review) in 2010 has resulted in the declining condition of the Defence estate impacting on resilience and potentially increasing capability delivery risk. Defence spends around 12% of the Defence budget on the estate, and in 2019/20 this amounted to £4.6bn. As pressures on the Defence budget have increased, funding allocated to the estate was reduced. The Department recognises that much of its built estate is old, poor quality and expensive to run. Around 40% of its estate assets are more than 50 years old. The Department regularly reviews the condition of its estate to prioritise maintenance investment and seek to improve the condition of its assets. Addressing our most pressing infrastructure risks was a key priority within the 2021 Spending Review. In addition to DEO and TLB investment, the Department centrally invested an additional £740m funding over the next four years. to improve the condition and sustainability of the estate over this period.

The projected increase in electricity demand will require our energy infrastructure to be updated, and necessitate a greater reliance on self-generated renewable energy

We need to strengthen further the infrastructure skills and capability across the Defence enterprise to mature the infrastructure operating model. While we have many highly skilled individuals working across the estate, a shortage of suitably qualified and experienced people could impact delivery. We will need to invest in securing the right skills that our professionals will need in the future, including in areas such as technology and net zero.

Scale of the estate

- The Department has access to approximately **432,500 hectares** of land in the UK, which comprises 1.8% of the country's landmass.
- It owns or controls **225,800 hectares** of this land and has access rights to a further **206,700 hectares**.
- The Department also manages **200,000 hectares** of land overseas.

Objectives

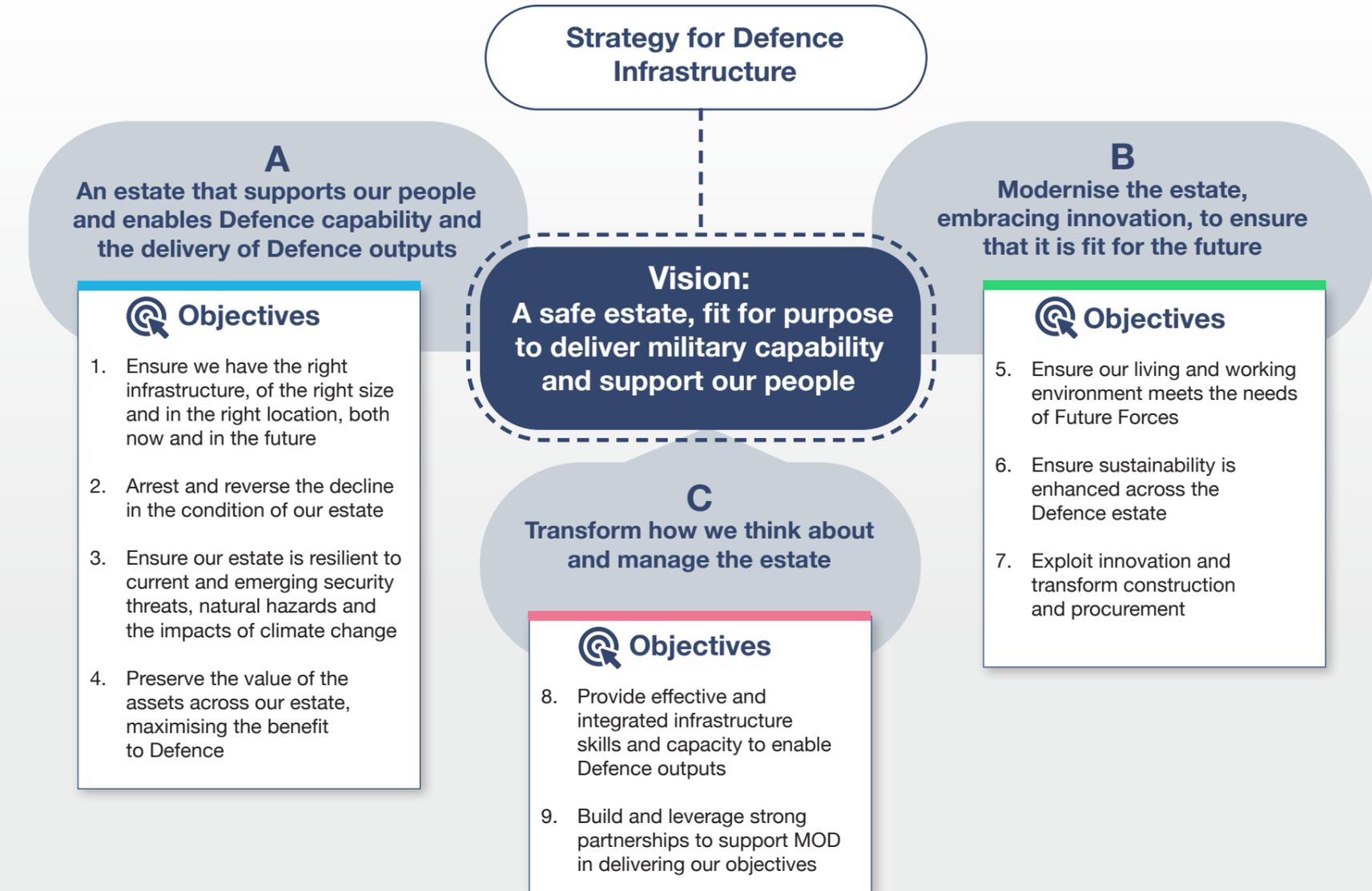
This Strategy will enable MOD to optimise the estate to deliver Defence outputs and capability requirements. It strengthens long-term estate planning and the Defence ambition in the Integrated Review. This Strategy sets out nine objectives aligned to three policy themes.

The objectives will focus our estate delivery and improve coherence between the capability demands of the estate and estate business activity, and support better infrastructure planning and decision-making.

It will also allow us to build on our progress to date and provide opportunities to modernise and innovate on the estate. The increased focus on infrastructure planning and asset management will provide better value and utilisation of our infrastructure assets, further support to our people, and will future-proof our resilience and flexibility to meet future capability demands. To enable this outcome, the SDSR 2015 target to reduce the built estate by 30% is being reviewed. The objectives will also allow Defence to support national and regional economic prosperity and provide new and sustained employment through supply chains.



Objectives



An estate that supports our people and enables Defence capability and the delivery of Defence outputs

1. Ensure we have the right infrastructure, of the right size and in the right location, both now and in the future

The Defence estate has not evolved at the same pace as the changing demands placed upon it over recent decades. As a result, the estate is larger than it needs to be, and parts are underutilised. We need to adjust the size of the estate, investing into a smaller consolidated estate footprint that is better able to support the delivery of current capability and adaptable to future demands. We will dispose of assets no longer required, creating a smaller and more affordable estate. In developing this approach, we need to be conscious of Defence's wider ambition for accommodation and other asset types, recognising the economic benefits that military establishments generate across the devolved nations and regions. At the same time, we must also ensure we build resilience and flexibility into the estate to respond to incidents and adapt to future requirements as well as supporting wider Government commitments.

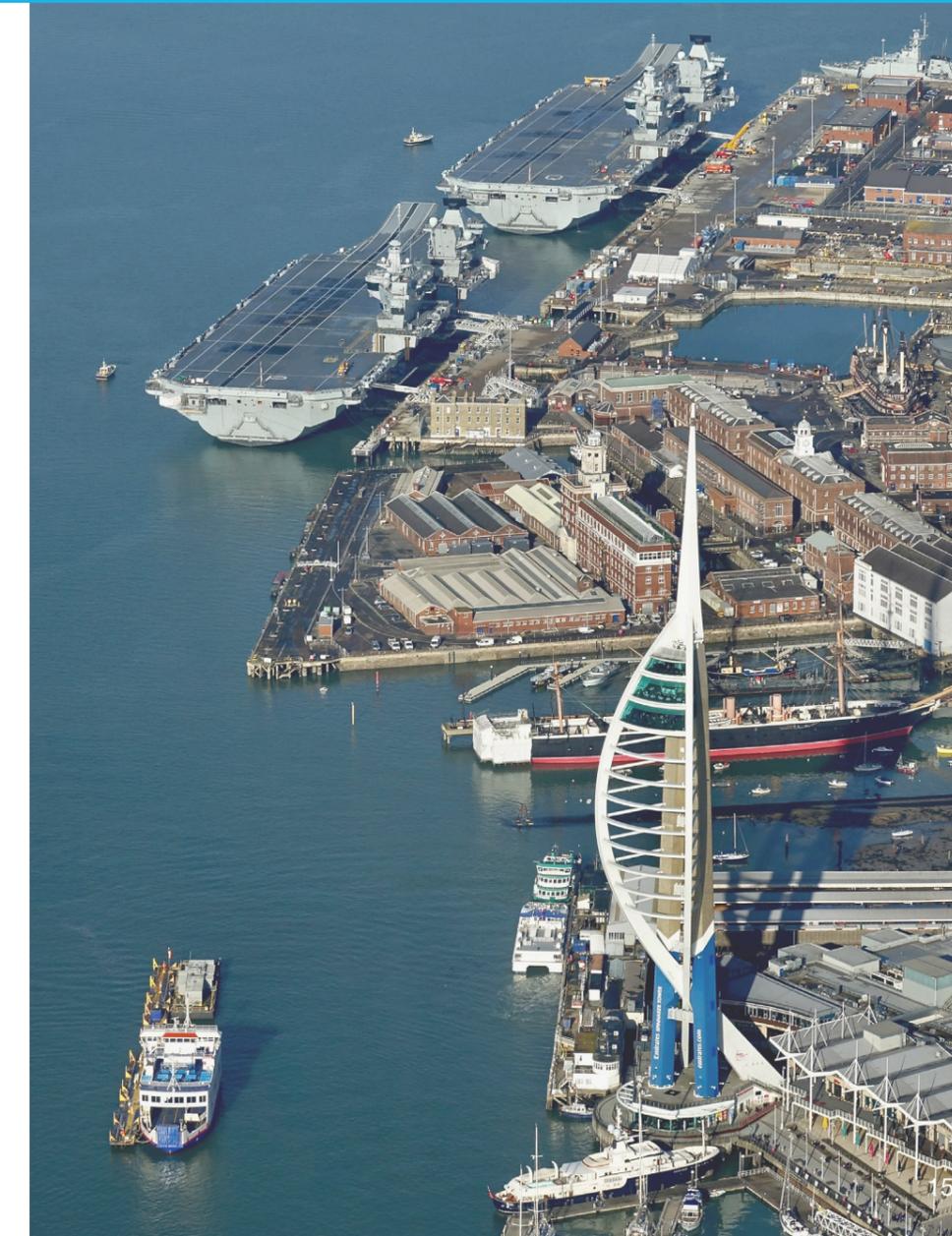
All Defence organisations will be developing their own infrastructure management plans to enable the long-term management of the estate and inform establishment level plans with a mature and comprehensive evidence base. We need to understand the demand on the estate in terms of military capability and Defence outputs, as well as supporting our people.

The DEO Portfolio is our main estate transformation programme to deliver a more efficient, better and smaller estate. DEO will enable core capability, create centres of mass, improve military capability through the co-location of units, improve the effectiveness of training and improve the lived experience of our people through modernising of the estate where they work, train and live.

What we will do in the next 5 years

- Deliver on the Defence Estate Optimisation Portfolio¹ and develop plans to optimise other areas of the estate and asset types
- Develop and maintain infrastructure management plans for all Defence organisations and update management plans for all establishments and training areas
- Align supply with demand, define our future estate footprint and composition and consolidating our asset base, disposing, demolishing or repurposing assets that no longer meet Defence outputs
- Improve the utilisation of accommodation and ensure its supply is responsive to evolving demands and the ambition to increase choice for Service Personnel
- Basing decisions will continue to consider implications for the Devolved Administrations and regions across the UK

¹The Defence Estate Optimisation Portfolio has a 25-year life.



An estate that supports our people and enables Defence capability and the delivery of Defence outputs

2. Arrest and reverse the decline in the condition of our estate

Our priority focus is on those parts of the estate that are most critical to the delivery of Defence capability and support our people. As new infrastructure is built it will automatically be placed onto a planned preventative maintenance regime. Reducing the number of assets will also reduce the maintenance burden. The Future Defence Infrastructure Services (FDIS) Programme will change how facilities management is delivered and support the transition away from reactive maintenance.

A comprehensive evidence base with data drawn from across the estate is crucial

We will focus on meeting our regulatory requirements, providing a safe working and living environment for our people. We need to maintain and where necessary improve asset condition to ensure safe and legal compliance.

While 97% of our UK military family housing meets Decent Homes standard, in some places, it falls short of our people's legitimate expectations. In response, we are improving the standard for our military accommodation that reflects how we live in the 21st century. We also need to ensure our estate is a great place to work, enabling smarter ways of working and exploiting technology to create a flexible and inclusive working environment.

What we will do in the next 5 years

- Prioritise investment to those sites and assets that are most important to the delivery of Defence capability, outputs and support our people
- Implement a blended maintenance regime balanced between planned preventative and reactive maintenance that supports the needs of the asset
- Transition to the Future Defence Infrastructure Services programmes in 2022
- Support delivery of the Defence Future Workplace Strategy and commitments to smarter working through providing modern, activity-based workspaces
- Review our whole-life asset management standards to enhance the performance of our buildings
- Develop and implement a new standard for our Service accommodation



An estate that supports our people and enables Defence capability and the delivery of Defence outputs

3. Ensure our estate is resilient to current and emerging security threats, natural hazards and the impacts of climate change

To safeguard the delivery of Defence capability, our infrastructure needs to be resilient and secure against direct attack, the loss of utilities, natural hazards and climate change. This means having a comprehensive understanding of the threats, how they might evolve and how we adapt our asset management and building standards in response.

A resilient estate also means retaining flexibility in our asset base. A balance must be struck between keeping only the estate we need whilst ensuring our assets can be flexible to respond to changing requirements to ensure we can continue to deliver Defence outputs. This includes being responsive to assets becoming unusable e.g. by direct attack, flooding or because of new capability needs. Increasing the use of self-generated renewable energy and reducing our energy demand will both improve energy security.

The Covid-19 pandemic has demonstrated we are dependent on resilient supply chains to deliver projects. Their disruption could undermine our ability to deliver the ambition of this strategy and the delivery of Defence capability. We will work with our industry partners to help them to improve their resilience, in terms of commercial, data security, and their own supply chains.

*To safeguard the delivery of Defence capability;
our infrastructure needs to be resilient and
flexible to change*

What we will do in the next 5 years

- Mature our understanding of current and future security, natural hazard and climate change threats and implications on the estate
- Develop a climate change adaptation strategy for the estate and its operation
- Update our whole-life asset management standards to ensure they address the range of threats we face and ensure resilience
- Review our redundancy and dispersal sites to ensure operational resilience to deliver military capability
- Ensure the resilience of energy supply across our establishments.
- Ensure we understand and address the threats to our supply chain and work with our partners to ensure improved supply chain resilience
- Continue to develop the necessary skills, standards, protocols and processes to securely store and manage our data, management information and cyber assets in light of continuously evolving new technologies



An estate that supports our people and enables Defence capability and the delivery of Defence outputs

4. Preserve the value of the assets across our estate, maximising the benefit to Defence

A comprehensive evidence base is vital to balance cost, performance and risk to maximise the value of our assets. We are transforming the way we manage our infrastructure as a strategic asset with an effective asset management capability. This will support better whole life decisions, improve alignment between infrastructure planning, capability priorities and risk management. Our asset management approach needs to be supported by accurate, accessible and trusted data with the estate users having the tools to be able to exploit it.

We need to ensure we maximise the return on our investment to bring it onto a more sustainable financial footing and to optimise the value and enhance the productivity of our asset base and supply chain. There is the potential to drive down the operating cost further by reducing utility consumption, harnessing new technology, better contracting and reducing the number of assets we have.

Digital transformation in the construction, facilities management, and property management sectors, allied to advancements in data analytics, machine learning and automation, offer real opportunities to make improvements. The digitalisation of infrastructure is becoming a reality. We will use Building Information Modelling (BIM) to create an intelligent 3D model of the built environment that can enable coordination and simulation during the lifecycle of a project (plan, design, build, operate and maintain, dispose or demolish).

In addition, we should look for opportunities to develop facilities that support interoperability between military units or can be shared with other Government Departments.



What we will do in the next 5 years

- Improve the utilisation of our land and property holdings
- Improve the utilisation occupancy rates of our single living and family accommodation
- Ensure our buildings are designed and procured to ensure their future use is flexible and allows interoperability
- Implement a whole life cost, performance and risk approach to investment decision making
- Deliver our asset management programme milestones
- Implement our Infrastructure Data and Management Information Strategy to improve the definition, collection, management and exploitation of estate and asset data
- Work with our infrastructure supply chains to improve productivity, maximising the application of asset management principles, Government Soft Landings and Modern Methods of Construction
- Exploit opportunities for income generation across the estate

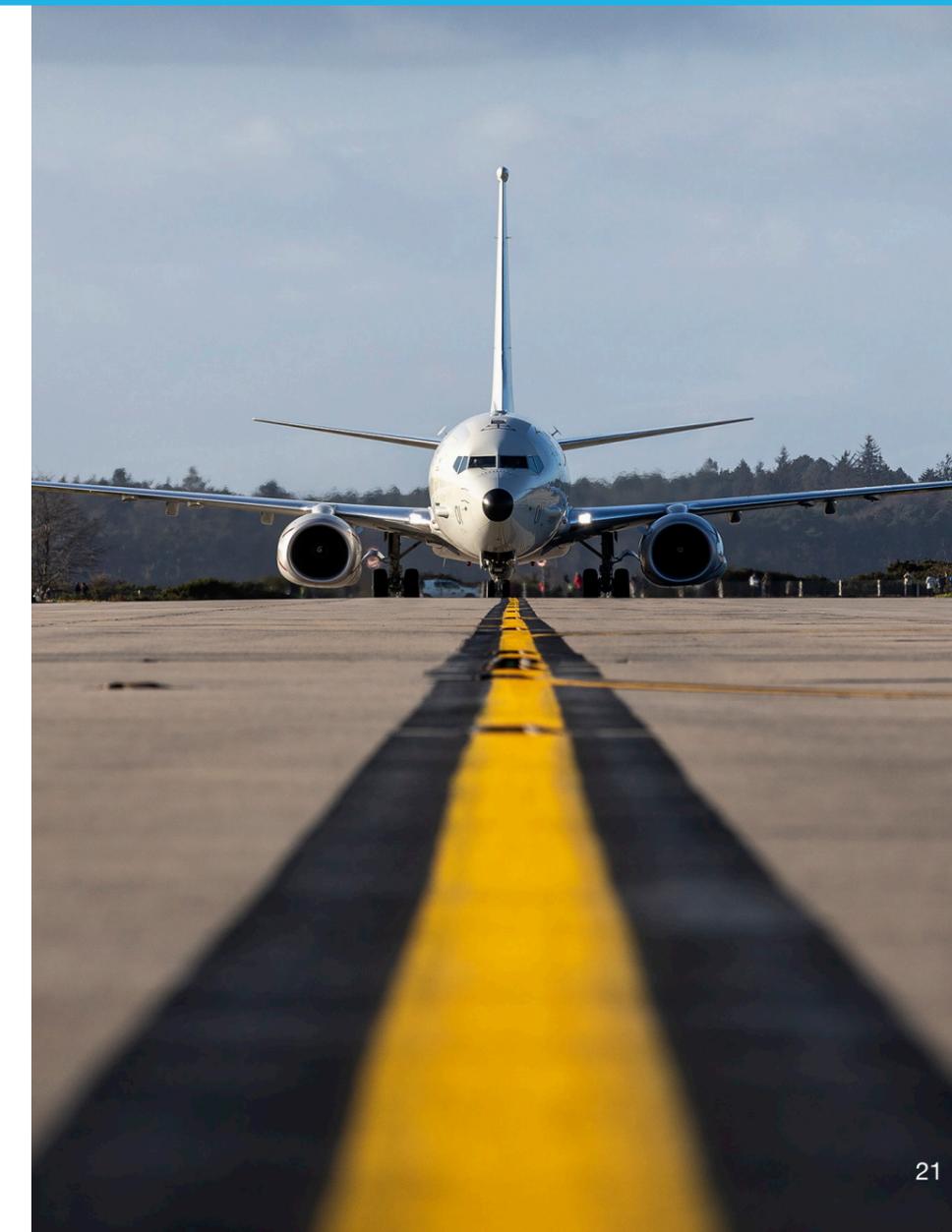
Finance

Spent **£4.6Bn** on Defence estate in 19/20, **12%** of Defence Budget

The value of the Defence estate was **£35.6bn** in March 2020

95% of maintenance spend is on the built estate

DIO manages approximately **500** contracts with a value of **£32.1bn**



Modernise the estate, embracing innovation, to ensure that it is fit for the future

5. Ensure our living and working environment meets the needs of Future Forces

Our infrastructure must also reflect the standards and expectations of future military personnel. New generations joining Defence will expect to see greater connectivity, energy efficiency, workspace flexibility and flexible working. The demographics of our military and civilian workforce will also change as we achieve our aim of a more diverse workforce, driving changes in the accommodation demand.

As we modernise the estate, we must adopt a master planning approach to the development on our establishments. In addition to delivering military capability, this will emphasise the importance of spaces, both built and natural, in fostering a sense of community and place, to enhance the wellbeing of our people and support modern ways of living. For example, as Service Personnel increasingly choose to live off-site, the need for on-site social facilities may grow.

We need to ensure our infrastructure is sufficiently flexible to adapt to future changes in demand

Supporting our people

The Defence estate supports:

140,000 Regulars

58,000 civilians

33,000 Reserves

Supporting services

133 Education facilities for military children

1287 Messes

1004 Sports pitches

307 Health centres

5666 Welfare facilities



100,000

Single Living
Accommodation
bedspaces

50,000 new SLA
bedspaces built in
last 20 years



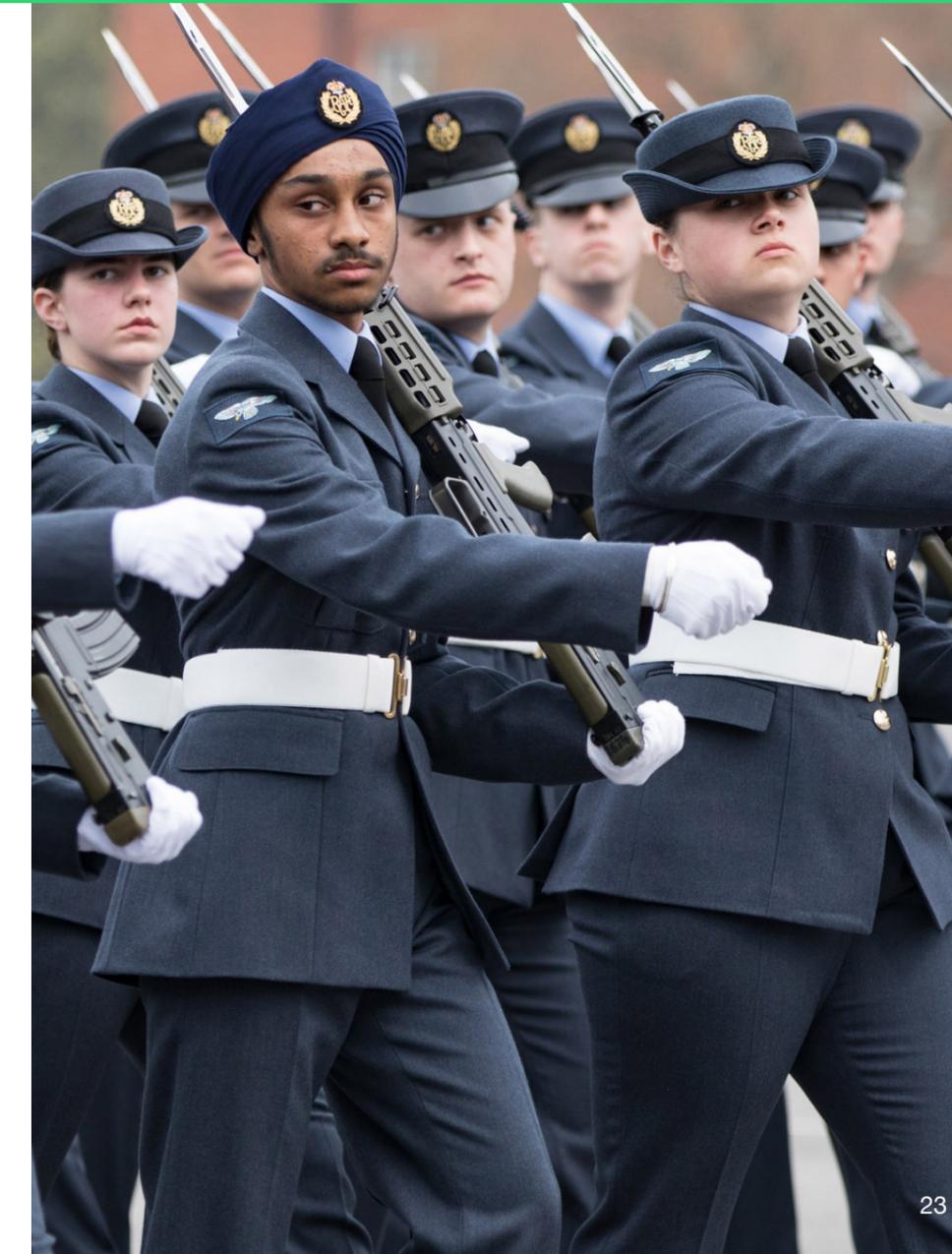
49,500

Service Families
Accommodation
properties

97% of our SFA
is of Decent
Homes Standard

What we will do in the next 5 years

- Evolve and implement our understanding of estate requirements based on the Integrated Operating Concept, Future Force structure and planned change programmes
- Ensure whole life design, performance, construction, operating and maintenance standards are aligned to current requirements and reflective of modern living, working and training expectations and Government policy commitments
- Ensure all new builds and refurbishments are designed around the needs of our Future Force structure and support a sense of community, drawing on best practice
- Support delivery of the Defence Accommodation Strategy
- Improve the capability to actively monitor and manage the performance and operation of our assets



Modernise the estate, embracing innovation, to ensure that it is fit for the future

6. Ensure sustainability is enhanced across the Defence estate

For Defence, sustainability is about delivering military capability and Defence Tasks in a way that takes account of the socio-economic and environmental impacts and opportunities. It is about planning for changes in future operating environments, the availability of resources and finances, environmental change, and factoring these into continuous improvement in infrastructure procurement, design and delivery. Proactive management is required to build on existing plans and identify new opportunities to protect and enhance the value of the natural and historic environment and adapt to the impacts of climate change.

Adapting to climate change and taking advantage of the opportunities will take time to achieve. Our infrastructure management will lead the way for Defence by delivering decarbonisation and helping to attain and deliver our net zero commitments. Our ambition is for a net zero built estate with an optimised rural estate which supports carbon offsetting and contributes to delivering national biodiversity commitments and the improvement of soil, water and landscape quality. This will present challenges, and we therefore need to seek out innovation and new technologies that will help us achieve commitments.

The MOD Climate Change and Sustainability Strategic Approach sets out our next steps and how we will contribute to climate commitments, including across the estate. Our estate activity will focus on 3 key areas:

- Reducing emissions from the estate by reducing demand, increasing efficiency and moving away from fossil fuels
- Ensuring the rural estate and its primary purpose for defence training is as sustainable as possible
- Embracing opportunities to diversify energy streams with renewable, emission-free energy generation, to build resilience of supply and reduce cost

A net zero and climate resilient infrastructure – designed, constructed and operated now to enable decarbonisation by 2050

What we will do in the next 5 years

- Facilitate and implement the infrastructure related near-term and Epoch 1 actions within the MOD Climate Change and Sustainability Strategic Approach
- Deliver Defence's infrastructure contribution to corporate and Government targets
- Develop and implement a rural estate sub-strategy to cohere climate and sustainability benefits whilst supporting Defence outputs
- Deliver a digitally enabled natural capital asset register and accounts to inform future management decisions and nature recovery planning
- Implement whole life carbon modelling to inform infrastructure investment decisions
- Ensure sustainability and emission reduction commitments are embedded within our standards, guidance and processes
- All new buildings will be able to become carbon neutral as the electricity and heat networks decarbonise to align with future Government building standards
- Deliver an infrastructure net zero and sustainability strategy
- Implement Nature Recovery Plans across the estate

Sustainability



Estate carbon emissions have reduced by **48%** since 2010



MOD has reduced the amount of estate waste generated by **38%** since 2009/10



Water consumption has reduced by **11%** since 2009/10



Modernise the estate, embracing innovation, to ensure that it is for the future

7. Exploit innovation and transform construction and procurement

MOD has one of the largest construction pipelines within Government and is one of the largest procurers of infrastructure services in the UK. We aspire to be a fast follower of infrastructure innovation in the delivery of major construction programmes. Our adoption of Modern Methods of Construction (MMC) is transforming how we deliver new buildings and improve productivity by utilising pre-manufacturing technologies. This allows for greater quality control, more efficient use of materials and labour, and accelerating project timelines while minimising on-site disruption. MMC also means we can exploit modular and scalable builds, enabling us to modify our assets as the demands placed upon them change, supporting the delivery of estate optimisation.

Innovation can also support supply chain resilience and enhance the connectivity of our living and working environment. It will deliver energy efficiency and improve the sustainability of construction on the estate. Innovation is not restricted to technology and as we evolve our operating model we will challenge why and how we do things, seek out best practice, and encourage creativity in developing new approaches.

The Defence Innovation Initiative² was launched in 2016 to help develop a culture of innovation and encourage adaptability. It inspires our people to think and operate more creatively and become adept at harnessing new opportunities and best practice.

Our supply chain relationships are a key tool to support and drive innovation. In order to be successful, our partners, whether with government or industry, need to:

- identify the specific challenge they can solve - the best ideas come from combined solutions developed from different perspectives
- establish a shared goal, with common purpose, fostering clear, transparent and open lines of communication
- bring together the best talent and strengths from individual organisations

We will develop a culture of innovation in our estate management

What we will do in the next 5 years

- Continue to adopt a “Modern Methods of Construction by default” approach on suitable infrastructure projects, as MMC allows for better quality control and efficiency, and particularly look to exploit modular construction across the estate
- Commence digitising our estate, its management and operation, taking a security-minded approach
- Employ smart Operational Technology to allow Defence to make efficiencies and enhance user experience
- Identify and exploit alternative commercial models where they provide opportunities to enhance delivery of Defence outputs
- Identify the most promising ways of working and technologies, collaborating with industry to deliver innovation



² Advantage through Innovation. The Defence innovation initiative. MOD, 2016.

Transform how we think about and manage the estate

8. Provide effective and integrated infrastructure skills and capacity to enable Defence outputs

People are at the heart of delivering our infrastructure. We need to ensure our civilian and military personnel, who deliver our infrastructure, have the right skill sets in order to plan and deliver our infrastructure. We will invest in the specialist skills required for our estate and infrastructure management and anticipate future skills requirements to keep pace with changes in the way our estate is managed.

We will continue to build the professionalisation of our people and to attract a diverse workforce through offering fulfilling career pathways, enhancing training and development opportunities, experiences and broaden knowledge to enable progression at all levels.

MOD has implemented a Functional leadership framework to drive a more coherent approach to manage the Defence estate and maintain an enterprise-wide oversight. This requires clear direction, policy and standards across Defence, a mature infrastructure operating model and strong governance. We have also developed a strengthened framework to monitor all aspects of estate performance, which provides assurance of the effectiveness of the infrastructure system.

People are at the heart of delivering our infrastructure

What we will do in the next 5 years

- Develop, adopt and embed a professional career framework, that sets out the required level of skills, experience and knowledge so that infrastructure professionals have fulfilling career opportunities
- Review and where necessary improve access to enhance the current training and development opportunities to ensure our people have the right skills to deliver our ambition, including apprenticeships, the Fast Stream and secondments to industry
- Improve our communications to publicise our great work and the opportunities and development Defence infrastructure provides to attract the best people and a diverse workforce
- Continue to evolve and mature Defence infrastructure organisational systems, processes and governance (Infrastructure Operating Model)
- Manage the effective development, delivery, maintenance, operation and assurance of estate and infrastructure management policy, standards and guidance
- Continue to evolve the DIO and other delivery agents to support the Infrastructure Enterprise and operating model



9. Build and leverage strong partnerships to support MOD in delivering our objectives

MOD cannot achieve the ambition set out in this strategy on its own. We already have long-established partnerships with the Devolved Administrations, other Government Departments and our industry to deliver change across the estate. The delivery of the DEO Portfolio will continue to rely on close collaboration with wider stakeholders.

We must also broaden our partnerships with industry and encourage new companies, especially small and medium-sized enterprises to work with us, to exchange best practice and bring innovative ideas to help us better deliver the estate. Encouraging secondments with industry and increasing engagement with professional bodies such as the Institute of Asset Management and the Green Building Council will also bring new ideas and raise skills and knowledge across Defence infrastructure.

What we will do in the next 5 years

- Continue to collaborate across wider Government to deliver the relevant Government strategies, commitments and priorities
- Build strong partnerships at a local level including with local authorities to support and deliver our ambition and contribute to Government priorities within the regions
- Maintain and foster strong commercial business partnerships with industry and best practice hubs
- Work with smaller, more innovative companies and encourage new companies to work with us
- Ensure our infrastructure procurement models enable Defence outputs and wider Government priorities e.g. the Construction Playbook and Government Construction Metrics



Leadership and Enablers for Delivery

This strategy sets the direction to drive change and improvements across MOD and the estate to ensure it is managed as a strategic asset. MOD Head Office, Front Line Commands, Enabling Organisations and our infrastructure delivery agents (Defence Infrastructure Organisation, Future Maritime Support Programme, Submarine Delivery Agency, our Long Term Partnering Arrangements, and non-Departmental Public Bodies) all have a part to play in the delivery of this strategy. While the Infrastructure budget has been

delegated to TLBs, their decisions and behaviours are driven by the objectives within this strategy.

The strategy is one of a suite of infrastructure planning documents. It provides strategic guidance for all infrastructure management and investment decisions. It sits alongside other Functional Strategies to support and inform Defence planning.



Governance

The Deputy Chief of Defence Staff Military Capability (DCDS MilCap) is responsible for overseeing implementation of the SDI and monitoring progress, supported by the Infrastructure Joint Committee (IJC) with representatives from across the FLCs and Enabling Organisations.



Delivery

The SDI will be delivered through the Defence Plan and through asset class sub-strategies, monitored annually to ensure we are delivering the benefits and outcomes we want for the estate.



Performance and Assurance

Progress against the SDI will be monitored quarterly through MOD's Defence Plan performance and risk reporting and by the Infrastructure Joint Committee, and through a regular State of the Estate report. It will be assured through the Defence assurance mechanisms.



Review

The SDI will be reviewed every 5 years in line with strategic defence and security reviews to ensure it is in line with changes to Defence and wider Government policy, or before if there is a strategic or operational need to do so.

Policy Aims

The strategy sets out three policy aims that are designed to realise our vision for the estate. These policy aims are closely aligned to the MOD Defence Aims.

Strategic objectives

We have set nine strategic objectives that will enable us to deliver our policy aims. These objectives will govern priorities and resource allocation across the enterprise.

What we will do

Against each objective we have set out a series of specific actions that we will take, or principles we will adopt, in years 1-5 to help to deliver our objectives.

SDI Strategic Approach

Articulates how we will achieve the objectives set out in the SDI, including a:

- Programme of work, identifying leads and timing
- Set of targets, standards, principles and accountabilities to guide and direct the TLBs
- Measures of success, against which we can measure progress

SOFTE

The State of the Estate (SoFTE) Report will measure progress against delivery of the SDI.

Linked strategies

Climate Change and Sustainability Strategy Approach, Government Estate Strategy, Future Workplace Strategy, Defence Accommodation Strategy, Government Construction etc.

Defence Plan

The Defence Plan provides detailed direction to TLBs and Enabling Organisations, describing the outputs Defence will deliver and the key activities it will undertake in a particular year

Defence Infrastructure Direction

The Defence Infrastructure Direction forms an annex to the to Defence Plan, and sets the annual requirements for Defence's asset management and provides priorities and detailed direction for Command / Corporate Plans and TLB Infrastructure Management Plans

TLB Command Plans / Corporate Plans

Each TLB agrees a Command Plan with Head Office for the delivery of its outputs, based on the approved Defence Plan for the year ahead



Beyond 5 years

The SDI sets out what we aim to achieve over the next five years to 2026. However, our ambition stretches beyond 2026 to deliver our Vision to modernise and transform the Defence estate. This strategy set the foundations for us to deliver the following beyond the next 5 years, we aim to:

- Continue to consolidate our asset base to maximise the benefit to Defence capability
- Have fully integrated infrastructure within capability planning
- Be reinvesting any rationalisation saving to improve the estate
- Have committed further investment and innovation funding into the estate through the next Defence/Spending Review
- Have improved the living standards of our accommodation
- Have delivered the DEO portfolio
- Have all our operational assets under a PPM regime
- Have a mature enterprise-wide strategic asset management system in place, including having asset class strategies to efficiently utilise our assets
- Have embraced Digital Twins to actively manage asset performance and operation, supported by mature and robust data and management information
- Be actively managing and mitigating climate and other threat across the estate ensuring operational resilience using new technologies to reduce emissions further
- Be a Fast Follower of infrastructure innovation
- Have developed strong partnerships with industry, including small and medium enterprises to drive innovation and further operating cost efficiencies
- Be exploiting opportunities for income generation and have increased sharing of facilities with other organisations

Glossary

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| Building Information Modelling (BIM) | Building Information Modelling is the process of creating and managing digital information about a built asset. |
| Deputy Chief of Defence Staff (Military Capability) (DCDS Mil Cap) | Deputy Chief of Defence Staff (Military Capability) is responsible for the Defence Capability Strategy, advising and directing balance of investment choices, capability coherence, collaboration and the design of the Future Force. They are also responsible for enabling MOD to deliver capability that gives the UK a military edge over its enemies and delivering elements of UK military capability. |
| Defence Estates Optimisation (DEO) Portfolio | The Defence Estates Optimisation is a 25-year investment portfolio of construction activity to modernise the Defence estate that will also involve unit and personnel moves and site disposals. |
| Defence Infrastructure Organisation (DIO) | The Defence Infrastructure Organisation is the estate expert adviser for Defence and supports FLC military capability through planning, building, maintaining, and servicing infrastructure. DIO is an Enabling Organisation of the Ministry of Defence. |
| Defence Nuclear Organisation (DNO) | The Defence Nuclear Organisation is responsible for the delivery of submarines (from procurement to disposal) and nuclear warheads, infrastructure, skills and policy. |
| Enabling Organisation (EO) | Enabling Organisations are Defence organisations that provide supporting services to the FLCs, DNO and Head Office. |
| Future Accommodation Model (FAM) pilot | The Future Accommodation Model a programme to understand Service personnel will choose to live in the future with increased flexibility in the provision of living accommodation. |
| Future Defence Infrastructure Services (FDIS) | The Future Defence Infrastructure Services is a future facilities delivery management programme for the Defence estate in the UK. FDIS will replace the Next Generation Estate Contracts (NGEC) for the built estate, accommodation and the training estate. |
| Front Line Command (FLC) | The Front Line Commands are the military commands that generate military capability and operate it in accordance with Defence policy objectives as directed by Head Office. There are four FLCs: Navy Command; Army Command; Air Command; and UK Strategic Command. |
| Infrastructure Operating Model (IOM) | The Infrastructure Operating Model sets the core principles and parameters, roles and responsibilities and processes undertaken by Defence organisations for planning, delivering, maintaining and operating the Defence estate. It is a sub-set of the wider Defence Operating Model. |
| Modern Methods of Construction (MMC) | Modern Methods of Construction offers a range of offsite manufacture and onsite construction techniques that provide an alternative to traditional construction. |



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| Planned Preventative Maintenance (PPM) | Planned Preventative Maintenance is a scheduled regime of asset maintenance, informed by regular inspections to prevent the decline in asset condition and ensure its efficient operation. |
| Strategy for Defence Infrastructure (SDI) | The Strategy for Defence Infrastructure provides long term strategic direction on how the MOD will manage and develop its infrastructure as an enabler of military capability and Defence outputs. |
| Service Family Accommodation (SFA) | Service Family Accommodation is subsidised living accommodation provided to entitled and eligible Service personnel and their families. The DIO manages c.50,000 properties in the UK. |
| Single Living Accommodation (SLA) | Single Living Accommodation is subsidised living accommodation provided to single and unaccompanied Service personnel. It is generally within barracks at duty stations. |
| Small and Medium-sized Enterprise (SME) | Small and Medium-sized Enterprises are either small business with fewer than 50 employees with a turnover under £6.5m or medium business with fewer than 250 employees and a turnover under £25.9m. |
| Top Level Budget-holder (TLB) | Top Level Budget Holders are responsible for implementing corporate governance arrangements within their organisations including risk management and assurance procedures, in line with broader Departmental policies and guidance. There are currently five TLBs, the four FLCs and DNO. |