Natural Capital & Infrastructure Community of Practice 10/6/26 – Agenda 13.00 -15.00

#	Agenda Item	mins
	Welcome and introductions from participants – Eion Bailey (TD-Info)	
	Updates and latest news - Will Masters (Amentum) and Phil Anderson (Babcock)	
	Context and Purpose of meeting from Co-Chairs – Will and Phil	
	Overview of a more structured approach to the COP -– led by Will and Phil – All to contribute • Review and discuss draft framework (Enabling a Natural Capital Approach)	
	Insights and case studies • 2019 – 2026 Mega Trends – Andrew Slaney (Low Carbon Estates) • An RAF Perspective - Sarah Martin	
	AOB DONM – 30 September 2026	

CSOC Command Strategy 2026–2029

Key messages

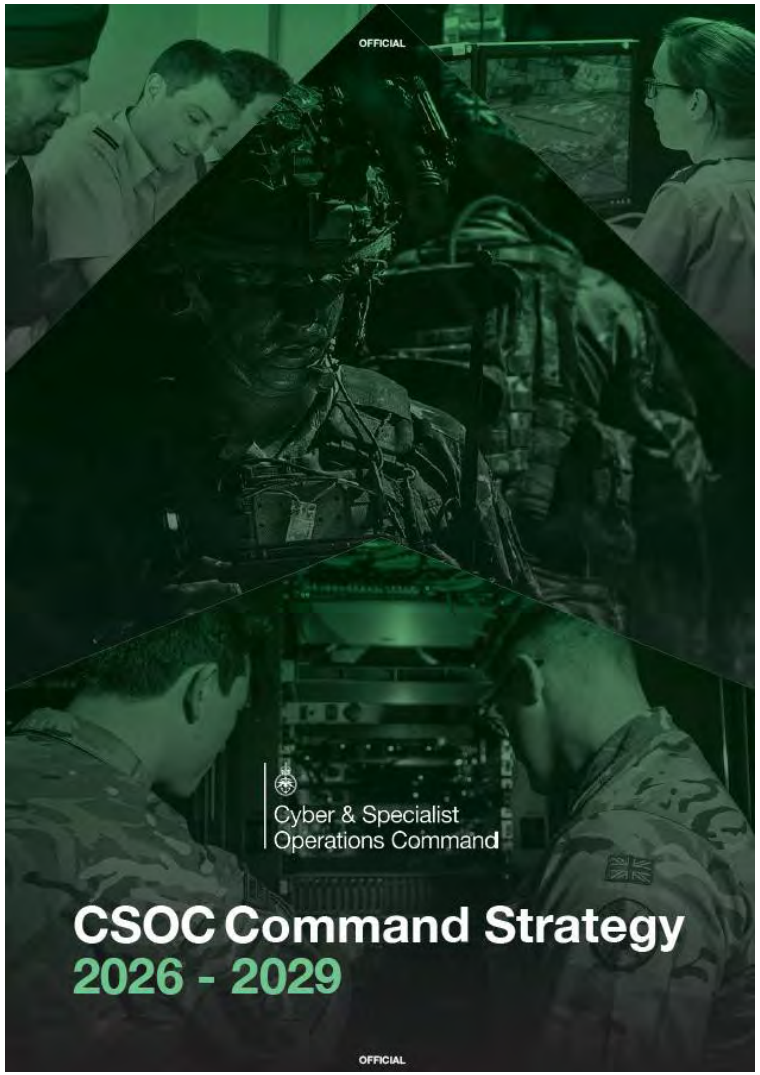
- Data is now a strategic capability.
- Resilience is an operational advantage.
- Climate and energy security are Defence issues.
- Stronger sovereign supply chains are a priority.
- Innovation and adaptation must happen faster.

Why it matters to the CoP

- Infrastructure must support increasingly digital operations.
- Estates need to be resilient to future risks and threats.
- Procurement must enable innovation and agility.
- Industry has a key role in strengthening capability and resilience.

Questions for the CoP

- What does a data-centric estate look like?
- How can infrastructure improve operational resilience?
- How can industry accelerate innovation through delivery?
- What changes are needed in procurement and requirements?



CSOC Command Strategy 2026–2029

Our principles

5. Climate and energy security aware

The Command is climate and energy security aware, ensuring resilience as a source of operational advantage.

WHY:

Climate change and energy insecurity will increasingly strain Defence capabilities, infrastructure and resources, while also creating opportunities for innovation and resilience.

HOW:

The Command works across government and with partners to modernise its estate and infrastructure, maximising sustainability and resilience. We mainstream climate awareness into planning and decision making, exploiting emerging technologies where they contribute directly to readiness, affordability and long term operational advantage.

6. Enabling a sovereign and competitive industrial base

The Command supports a resilient, sovereign, secure and scalable UK industrial base that drives choice, modernisation and global influence.

WHY:

Shifting global trade patterns, contested supply chains and scale requirements challenge the balance between sovereign capability and international interoperability.

HOW:

The Command builds and sustains strong relationships with the UK industrial base, modernising supply chains and strengthening resilience. We prioritise capability that is relevant, affordable and deliverable, safeguarding operational readiness while demonstrating the value of world leading UK technologies to allies and partners.

Global threats: key themes

Geopolitical competition and security threats

The resurgence of state-based threats, particularly from Russia and China, marks a return to great power rivalry. Russia's aggression in Ukraine and its broader ambitions in Europe, combined with China's assertiveness in the Indo-Pacific, are reshaping global power dynamics. The UK must also contend with regional disruptors like Iran and North Korea and the growing alignment among authoritarian states. Persistent threats from non-state actors, including terrorism, organised crime and increasingly influential private sector entities, will continue to challenge both UK homeland security and international stability. In response, the Command must devote resource on homeland defence and resilience and reinforcing and developing partnerships and alliances with states and relevant non-state actors.

Technological disruption

Breakthroughs in artificial intelligence, autonomous systems, quantum computing and space technologies are transforming warfare and the global economy. The UK must adapt to a battlespace where decisions are made at machine speed and where uncrewed and autonomous platforms dominate. The digital domain, including cyberspace and the electromagnetic spectrum, is now a critical arena of daily competition and conflict. To remain competitive, the Command must rapidly innovate and deepen collaboration with industry.

Climate and environmental pressures

Climate change will exacerbate global instability, drive migration and increase competition for resources. The Arctic and other shared spaces will become new theatres of strategic competition. Environmental degradation and extreme weather events will also challenge national resilience and defence readiness. Building adaptability and resilience across the Command is essential to operating effectively in a climate-impacted environment.

Demographic and societal change

Global demographic shifts will influence migration, economic productivity and social cohesion. Rising inequality and political polarisation may further strain governance structures and increase the risk of internal and external conflict. To cope with these changes, the Command will need a resilient, adaptable and cohesive whole force.

1. NATO first by design

The Command is NATO first by design, prioritising interoperability of people, processes and technology with our closest allies.

WHY:

The Command must evolve its international relationships and dependencies to keep pace with a changing threat and international landscape. Operational success depends on seamless interoperability, trust and security across all domains.

HOW:

The Command proactively sets and adopts NATO standards across defence lines of development. We prioritise what improves interoperability and collective defence outcomes, while retaining essential sovereign freedom of action. We bring partners and allies with us, learning continuously and operating as an indispensable part of the integrated force.

2. Data centric by default

The Command is a data centric organisation, maximising the value of information to drive better decisions, productivity and warfighting advantage.

WHY:

Slow, inaccurate or poorly exploited data undermines timely and effective decision making across both organisational and operational contexts, reducing our ability to anticipate and respond to the threat.

HOW:

The Command treats data as a strategic capability. We simplify and standardise where possible, stop processes that do not add value, and invest in the technology, skills and partnerships needed to innovate faster than the threat. We use data intelligently to drive readiness, efficiency and operational advantage across the integrated force.

3. Valuing people

The Command values its people, creating a resilient, empowered and specialist workforce committed to delivering Command Objectives.

WHY:

Our people are our decisive advantage. Retaining specialist talent and developing professional mastery is essential to sustaining excellence, resilience and operational credibility in a rapidly evolving battlespace.

HOW:

The Command places the development of those we lead above that of ourselves. We empower our people, invite a diversity of voices, and foster an inclusive culture built on trust, curiosity and high standards. We align effort and resources to outcomes, ensuring our specialists are enabled to excel and deliver with confidence and pride.

4. Resilient, agile and adaptive

The Command is resilient, agile and adaptable, maximising Defence's technological, skill and operational advantages, particularly in the cyber and electromagnetic domain.

WHY:

The proliferation of capability increases vulnerability. In a constrained environment, advantage will only be retained through speed of learning, adaptation and disciplined innovation.

HOW:

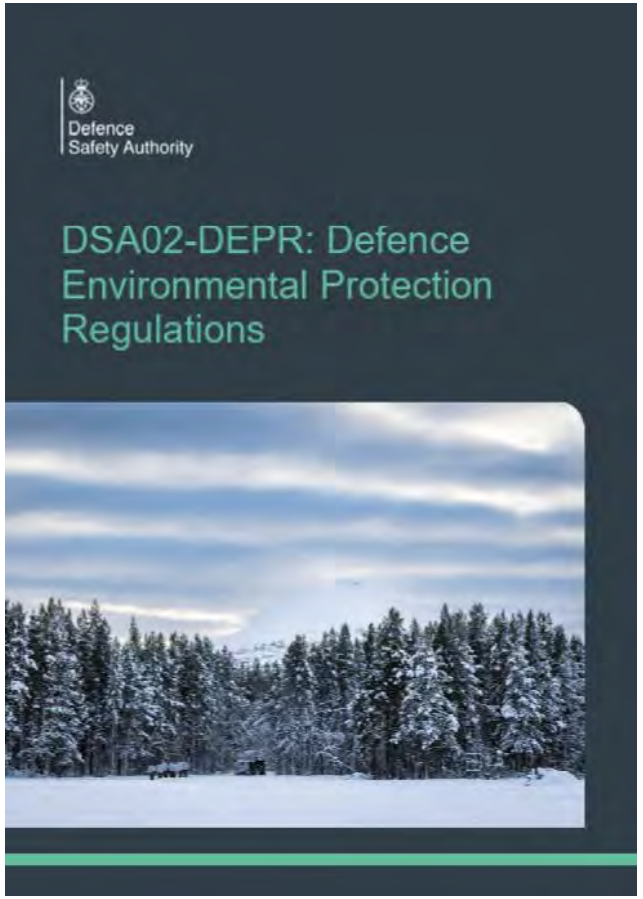
The Command is inquisitive and imaginative. We use iterative approaches, experiment at pace and mature innovation rapidly into operational capability. Continuous improvement is the norm. Combined with expertly skilled people, our simple and direct ways of working will deliver scalable advantage across maritime, land, air, cyber, electro magnetic and space domains.

DEPR & Defence Green Network: opportunity for collaboration

Why this matters
- Environmental protection is becoming increasingly important across Defence.
- Infrastructure, procurement and estate decisions are under greater scrutiny.
- Industry has practical delivery experience that can help shape better outcomes.

What we heard
- Strong interest in greater collaboration between MOD and industry.
- Opportunity for TDinfo to present at a Defence Green Network session (October).
- Shared interest in environmental protection, resilience and natural capital.

Potential areas for collaboration
- Environmental protection through infrastructure delivery.
- Natural capital and nature-based solutions.
- Sustainable procurement and supply chains.
- Sharing lessons learned and best practice.

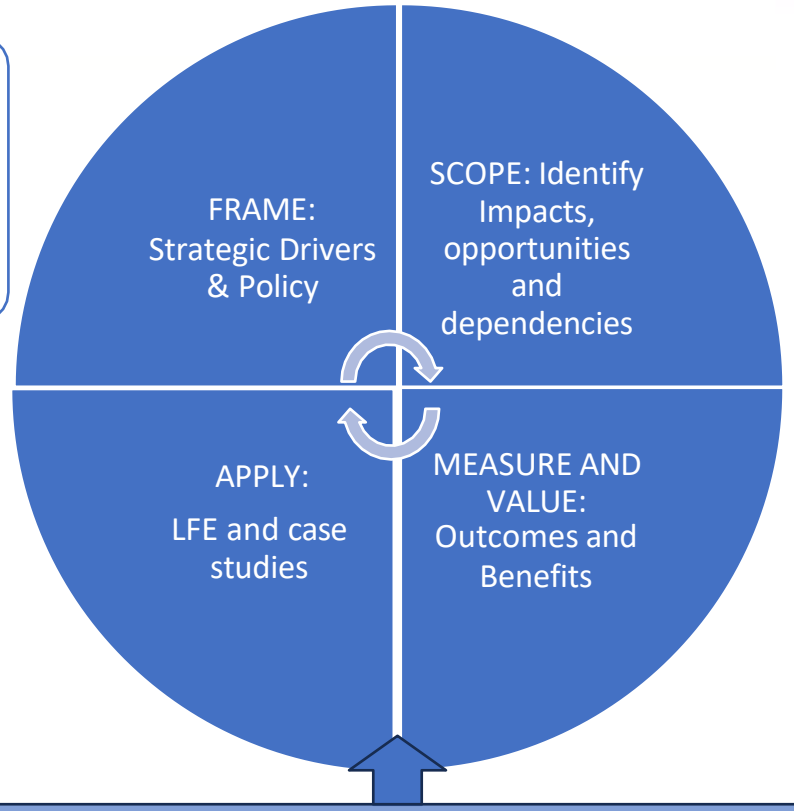


NC&I COP – Delivery Model Framework (1)

Natural Capital Protocol:
A globally recognised decision-making framework for integrating nature into business decisions.
[Natural Capital Protocol – Capitals Coalition]

Official guidance for the UK Treasury Green Book.

- What are the MOD's core drivers? (e.g. resilience, estate cost efficiency)
- What policy levers matter? Where are the mandates vs. opportunities?
- Why is this important?



- How do we understand key impacts and dependencies? What is the use case across the delivery domains. What types of projects could be explored.

- Share example Projects and case studies

- What are the key outcomes the customer is looking for? What data, tools and assessment mechanism can we apply to get projects of the ground

Delivery Domains

Products & Services
Infrastructure and capability solutions

Estates & Assets
Operational estate and infrastructure performance

Supply Chain
SMEs, resilience and industrial capability

Technology, Tools & Data
Enabling better, evidence-based decisions through: Analytics, Modelling, Standards, digital tools, & shared insight

NC&I COP Delivery Model Framework (2)

FRAME - Strategic Drivers & Policy

Purpose:
Define why natural capital matters to MOD and what decisions it should inform

Inputs/ Questions

What are the key drivers? (operational resilience, estate optimisation, compliance, cost avoidance, reputation)

Where does MOD depend on natural capital? (training environments, water, land condition)

What are the risks of inaction and opportunities from investment?

What decision are we trying to inform? (policy, investment, estate strategy)

Insights

Defence Priorities
- Operational resilience
- Estate productivity
- Capability enablement
- Sovereign infrastructure

Programme Delivery
- Cost pressures
- Procurement complexity
- Delivery risk
- Infrastructure resilience

Policy & Regulation
- Net Zero
- Biodiversity Net Gain
- Planning reform
- Climate adaptation

Industry & Supply Chain
- Skills shortages
- SME participation
- Materials resilience
- Innovation demand

Local & Environmental Context
- Community priorities
- Natural capital
- Place-based needs
- Environmental constraints

Outputs:

Agreed "business case narratives" tailored to MOD

Justify why nature matters to defence

Classification:UNCLASSIFIED

NC&I COP Delivery Model Framework (3)

TEAM DEFENCE INFORMATION
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SCOPE - Identify Impacts, opportunities and dependencies

Purpose: Focus effort on what the key material issues and opportunities may be

Inputs/ Questions

How do we understand key impacts and dependencies?

What is the use case across the delivery domains.

What types of projects could be explored.

Which natural assets are relevant? (land, soils, habitats, water, coastal zones)

What are the key impacts (what MOD activities affect)

What are the key dependencies (what MOD relies on)

Which issues are material to MOD outcomes (cost, readiness, compliance)?

Insights

- What are the key impacts to the MOD
- What are the MOD dependent on?
- Infrastructure Projects use case / opportunities to build resilience or mitigate impacts
- Engineering Projects requirements and impacts
- Examples where a Natural Capital approach delivers value.

Outputs:

List of opportunity typologies (e.g. peatland restoration, woodland creation, habitat banking)

List of key estates and assets?

Consider the Materiality of natural capital risk?

NC&I COP Delivery Model Framework (4)

MEASURE AND VALUE - Outcomes and Benefits

Purpose: Build a credible evidence base to inform decisions

Inputs/ Questions

What are the key outcomes the customer is looking for?

How do we quantify benefits in MOD-relevant terms (operational capability, avoided costs, compliance risk)?

What data, tools and assessment mechanism can we apply to get projects of the ground?

What tools are already approved or usable?

Can we assign economic or strategic value?

Insights

- Better procurement decisions
- Improved operational resilience
- Reduced delivery risk
- Lower whole-life cost
- Enhanced natural capital outcomes
- Stronger sovereign capability
- Faster adoption of best practice
- More value-driven infrastructure delivery

Outputs:

Summarise key metrics, datasets, indicators

Shortlist of tools and standards

Enabling better, evidence-based decisions through: Analytics, Modelling, Standards, digital tools, & shared insight

NC&I COP Delivery Model Framework (5)

APPLY - LFE and case studies

Purpose: Turn insight into action and embed into MOD processes

Inputs/ Questions

What case studies and examples can we draw on to show the opportunity?

Are there new opportunities to collaborate across the COP?

Who are the key stakeholders and responsible owners?

Can we define pilot projects?

Insights

Products & Services
Infrastructure and capability solutions

Estates & Assets
Operational estate and infrastructure performance

Supply Chain
SMEs, resilience and industrial capability

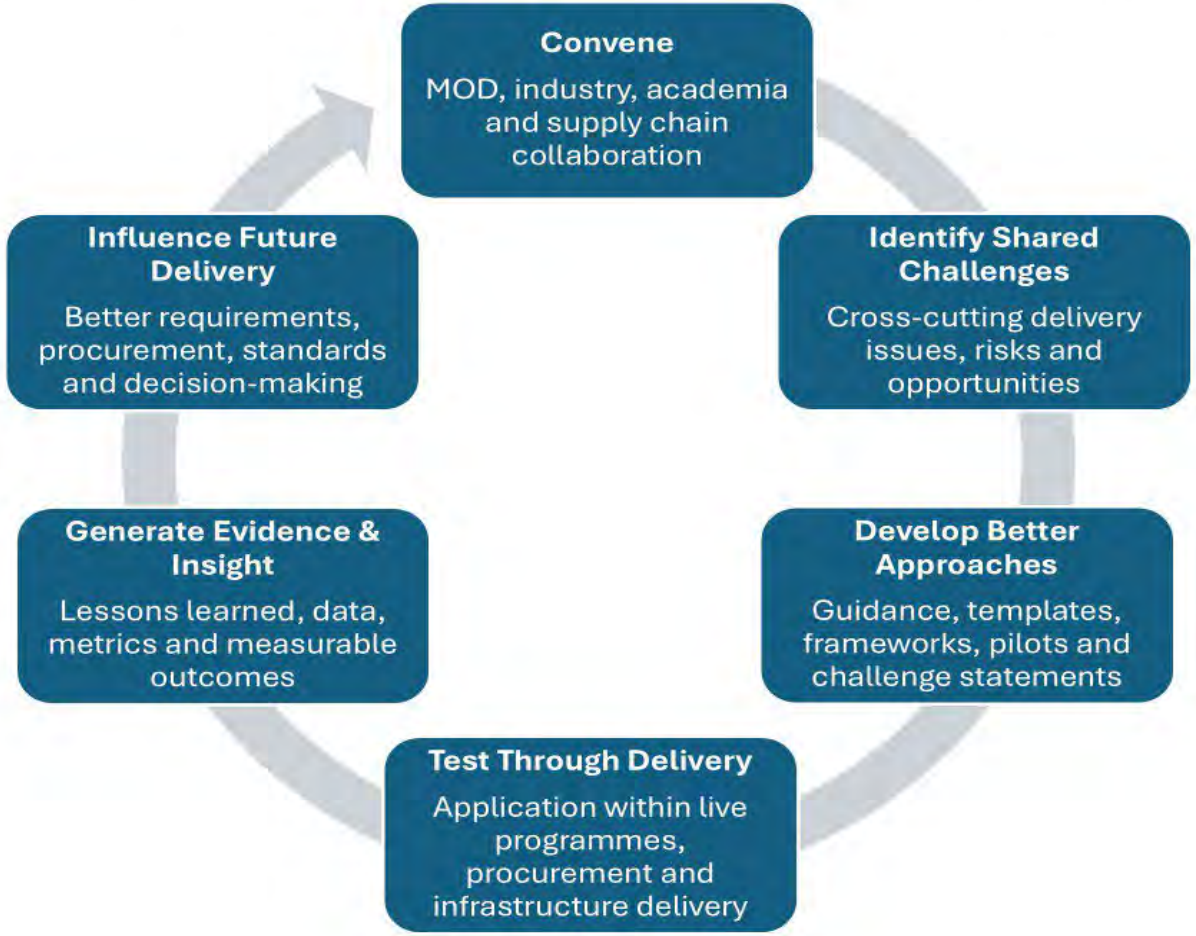
Outputs:

- Case study library
- Pilot programme roadmap
- Scaling strategy

NC&I COP Delivery Model Framework (6)

Engagement Objectives

Accelerating more resilient, sustainable and value-driven Defence infrastructure delivery



NC&I COP Delivery Model Framework (7)

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Case Studies/LFE

We need Case Studies / LFE from the COP to help develop the networks and understanding of the below themes. The idea being we focus items and presentations within these 'themes' to build our business case for action.

- **Drivers (legal and other)** – for action on natural capital across the MOD estate:
    - Corporate compliance / supply chain – legal and authoritative (regulatory bodies)
    - Project
    - Customer/Shareholder value (e.g. MOD)
- **Insights** – existing case studies and LFE
- **Development (the how):**
    - Infrastructure ideas and concepts.
    - Engineering solutions,
    - Examples of natural capital projects e.g. circular economy solutions, recycling, nature based solutions et al.
    - Data development and Tools
- **Outcome/Benefits to the customer** – what does the customer want to see/ key levers:
    - Resilience
    - Operational value
    - Risk reductions
    - Capability enablement
    - Natural capital accounting

Natural Capital & Infrastructure Community of Practice

2019 – 2026 Mega Trends – Andrew Slaney (Low Carbon Estates)

Low Carbon Estates®

TEAM DEFENCE

Regulated by RICS®

Mega Trends

The narrative is changing just like climate…

10th June 2026

ARMED FORCES COVENANT

EMPLOYER RECOGNITION SCHEME

SILVER AWARD

Shifting Narratives

Pre-2018	2018–2022	2023 – 2024	2024 – 2025	2025 – present
Just a part of sustainability*	Public onboard	We can't afford this	Let's go for it	Keep the lights on!

**small matter of building a cleaner grid, no more coal!*

Five framings. One underlying fact…

Low Carbon Estates®

Mega Trends 2019

Urbanization

More people living in cities

Lower Birth Rate

Aging Population

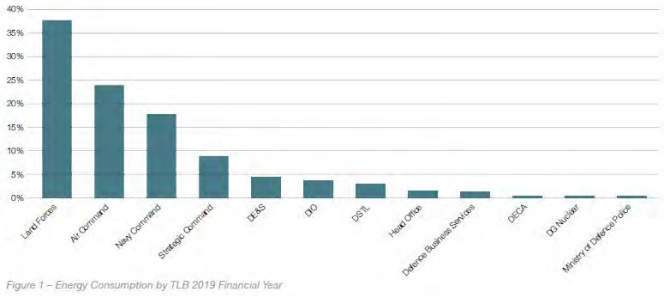

Figure 1 – Energy Consumption by TLB 2019 Financial Year

Digitization

The internet is getting everywhere

We started measuring everything, understanding and control was optional..

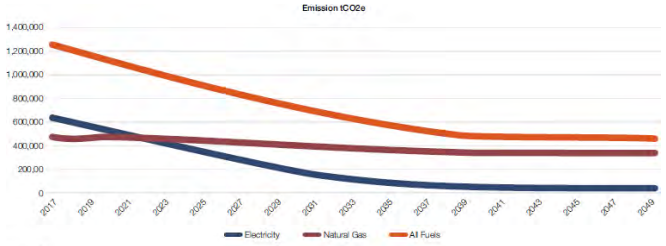

Figure 5a

Electrification

Everything needs electricity

Decarbonisation was the goal, energy bills were a wake-up call

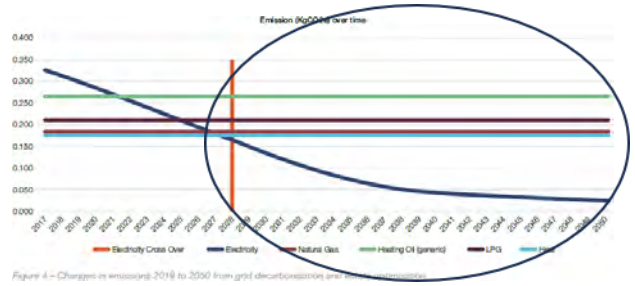

Figure 4 – Changes in emissions 2019 to 2050 from grid decarbonisation and fuel substitution

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What has and hasn't changed?

Climate Science

Public support

Safe, compliant estates

Long-term consequences of today's decisions

Budget pressure across Defence

Net zero commitments

A sovereign nation

Climate impacts are already here - heat, flooding, food and energy stress

- Energy is now a strategic vulnerability
- AI is becoming operational
- Data quality is the new bottleneck
- Resilience matters as much as efficiency and more than cost?

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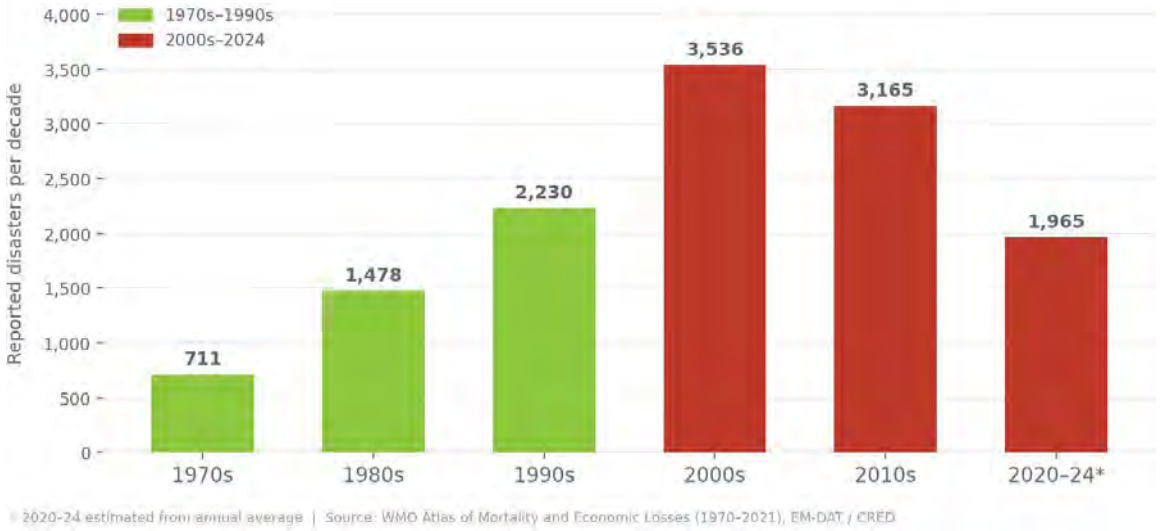
The normalisation curve



Sinking cities:
Jakarta, Bangkok, Venice, cities that waited are now spending billions in emergency engineering or moving entire governments.

Los Angeles, January 2025; fires destroyed neighbourhoods that had never burned.

Disasters 1970s **711**	Disasters 2000s (peak) **3,536***
Increase since 1970s **5×**	Economic cost per day (2010s) **$383m**

*Part of the increase is better reporting

*The question for the UK isn't whether sh*t happens. It's whether we plan for it or react to it.*

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OFFICIAL

Mega Trends 2026

Resilience

Can an organisation continue to function when things go wrong?

Single points of failure = Strategic liabilities

Continuity is a design requirement

Low/No Growth

CDEL – still constrained

RDEL – still constrained

NZC – not affordable

Need to rethink fabric first

Need to innovate

Carbon

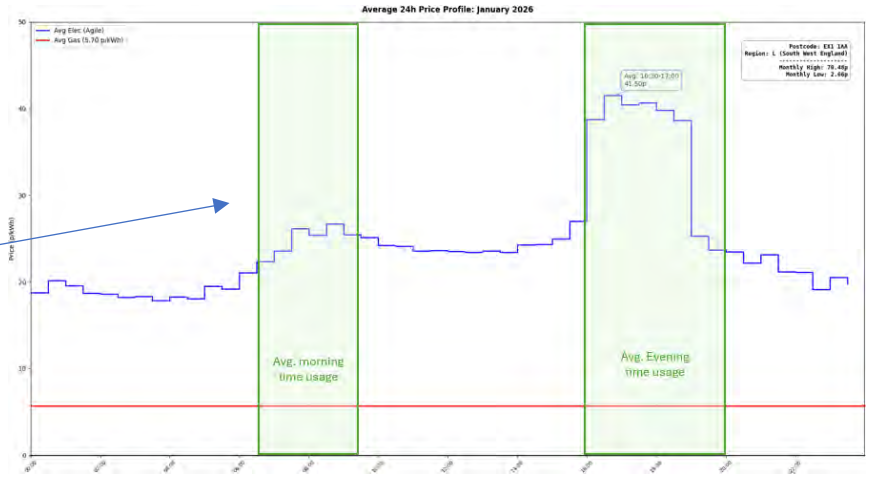
Message received and understood! Electrify everything

New Buildings – not a problem

Refurbs – could be a problem

Grid – will be a problem

Need to innovate



EPOCH 1– 2021 -25 (putting the essential building blocks in place to enable deeper transformation in later phases)

1. Deliver a step change in existing programmes
2. Establish a robust emissions baseline and data system
3. Engage and influence the supply chain
4. Build skills and expertise
5. Disaggregate targets across Defence

EPOCH 2 – 2026 -35 (scaling delivery and embedding change across Defence)

1. Drive down emissions
2. Embed sustainability into capability and procurement
3. Adopt and integrate mature green technologies
4. Enhance operational resilience to climate change
5. Transform infrastructure and the Defence estate
6. Align the whole enterprise (including supply chain)

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Helping build a better world

We help organisations and suppliers deliver against their carbon reduction commitments and sustainability objectives.

We help them understand their property portfolios and in doing so move to a low carbon future.

We aim to do this without compromising on design or functional performance.

ROYAL AIR FORCE
Climate Change and Sustainability

Air Climate Change & Sustainability (CC&S)

FERA Science Collaboration – RAF Coningsby

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From Wildflowers to F35s……..

FERA Science Project – RAF Coningsby

ROYAL AIR FORCE
Climate Change and Sustainability

LAND360 - QUICK REMINDER

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- Measures, monitors, and assesses habitats and resources to identify tangible natural capital and biodiversity opportunities.
- Combining data and science, LAND360 provides landowners/ stewards with a view of the trade-offs between different uses.

✣ Building a **Natural Capital Baseline**
✣ Make data led **informative decisions** about your estate
✣ Achieving **net zero targets**, through nature-based solutions.
✣ Contributes towards **nature recovery**
✣ Contribute to **Defence Aviation Net Zero Strategy**
✣ Tap into **nature-based markets** such as BNG and Carbon.

LAND360

UNDERPINNED BY **R&D** | POWERED BY **TECHNOLOGY** | DRIVEN BY **DATA** | INFORMED BY **SCIENCE**

LAND360 - RAF PROJECT JOURNEY

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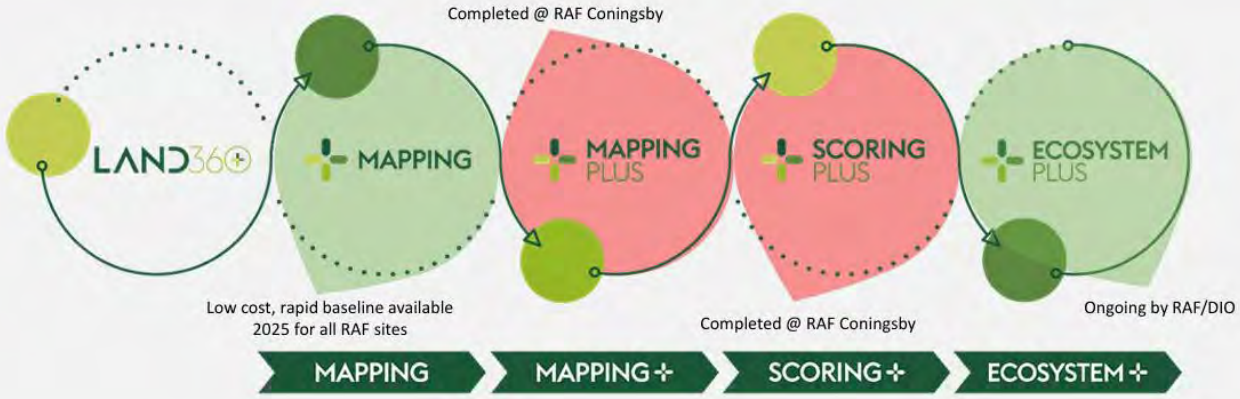

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FERA Science Project – RAF Coningsby

ROYAL AIR FORCE
Climate Change and Sustainability

LAND360 - RAF CONINGSBY SITE

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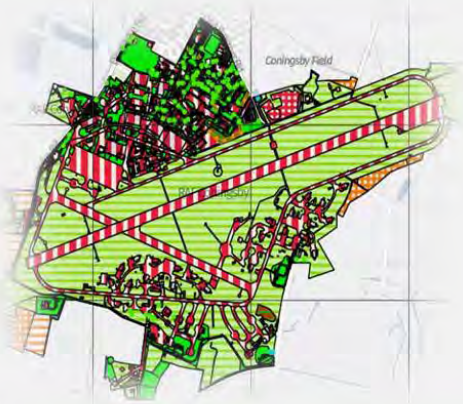
Headline Statistics

- Total study area - **384 ha**
- Other neutral grassland - **180.76 ha (47.05% of land)**
- Developed land; sealed surface - **115.33 ha**
- Lowland mixed deciduous woodland - **1.12 ha (0.29% of land)**
- Biodiversity value - **989.98 units** (Defra BNG Metric 4.0)
- Carbon storage estimate - **19,180.04 tC**
- Annual carbon sequestration - **36.95 tCO2e/yr**
- Lowland mixed deciduous woodland sequesters **44.09%** of all habitats
- Grassland habitats store **56.72%** of total carbon
- Potential for improved sequestration via tree planting & wetlands



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LAND360 - KEY FINDINGS

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Carbon Storage & Sequestration

- RAF Coningsby stores **~19,180 tonnes of carbon (tC)**.
- Annual carbon sequestration is **+36.95 tCO2e/yr**.
- If scaled across RAF sites, **potential carbon storage** could reach **~520,209 tC**, with **an annual offset of ~1,002 tCO2e/yr**.

Biodiversity

- **Biodiversity value** at Coningsby: **~990 units** (Defra BNG Metric 4.0).
- **Extrapolated across all RAF sites = ~26,851 biodiversity units**, making RAF a large natural capital asset holder which could do more to improve the low grade habits and create value in the improvement?
- **Other neutral grassland** dominates (**47% of land area**), contributing **79% of biodiversity units & 57% of carbon storage.**
- **Lowland mixed deciduous woodland** (0.29% of land) sequesters the highest CO2 per hectare annually (**44% of total**).

Opportunities for Improvement

- **Grassland Management:** Enhance native grass species to improve soil health and carbon sequestration while maintaining operational safety (e.g., bird strike risk management).
- **Tree Planting & Hedgerows:** Targeted planting in non-flight risk zones could increase biodiversity & carbon storage.
- **Wetlands & Waterways:** Potential for enhanced carbon capture & flood resilience.
- **Stakeholder Collaboration:** Engagement with National Trust, local landowners, and conservation groups could unlock funding and biodiversity corridors

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Questions

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