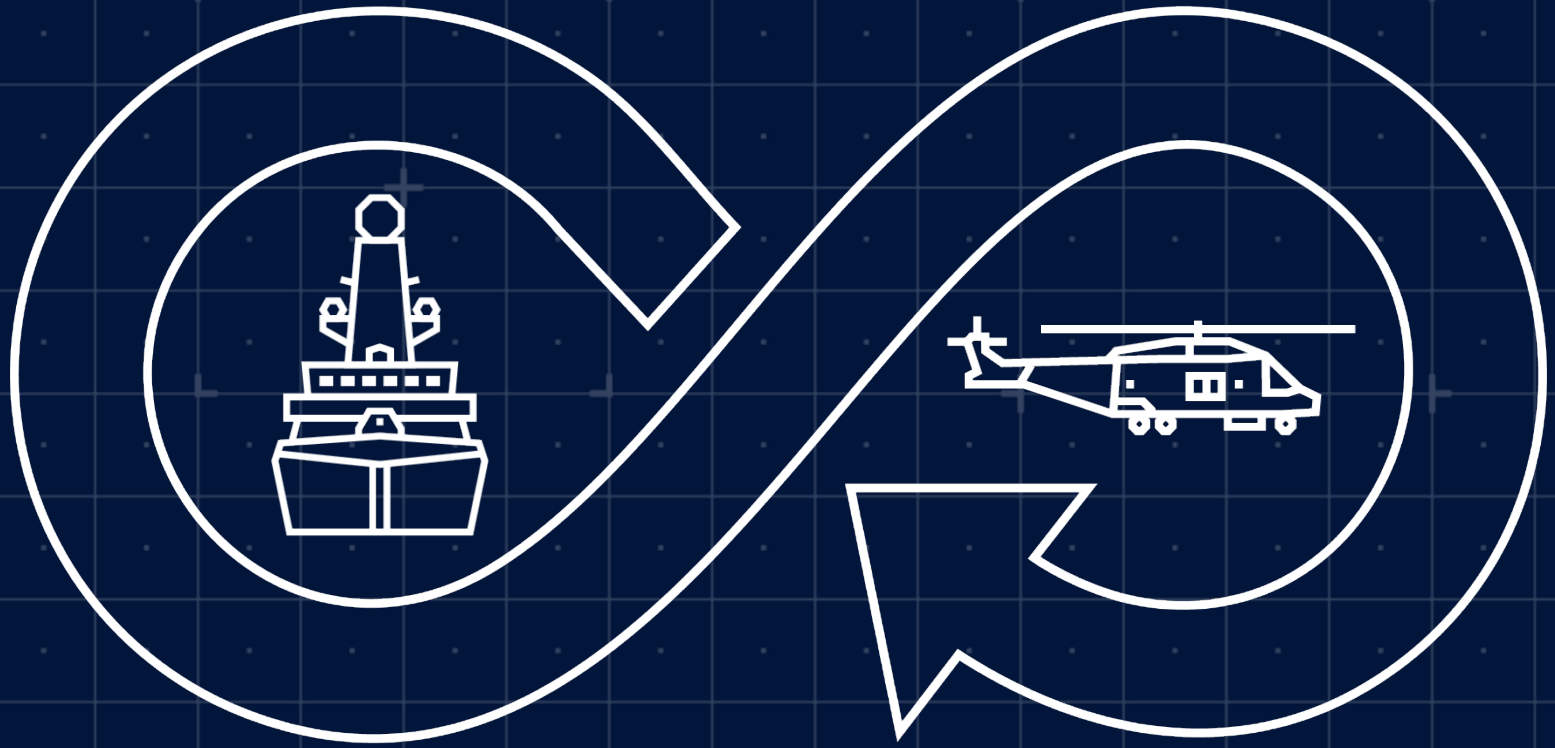
Natural Capital & Infrastructure Community of Practice 25/9/2025 – Agenda 13.00 -16.00

TEAM DEFENCE INFORMATION
www.teamdefence.info

#	Agenda Item	mins
	Welcome and introductions from participants – Eion Bailey (TD-Info)	5
	Update and latest news – New Industry Co-Chair: Will Masters (Amentum), David Starley (Babcock)	15
	A Circularity Economy for the RN – Warrant Officer Lee Reeves (RN)	20
	Break	15
	Circularity in Energy Materials: The Potential of Recovered Graphite – Amy Neild (Newcastle University)	20
	Social Value – How do we interpret SV and how is it done better (PPN 001/2) – General discussion	20
	AOB Road map of contacts TD-Info survey/consultation on requirements for next year Critical Raw Materials for Defence: snack series session 3: 30th Sep 3.00 to 4.00 pm Critical Raw Materials for Defence: Online Snack Series – Session 3 | Team Defence Information	

Round again coxswain!

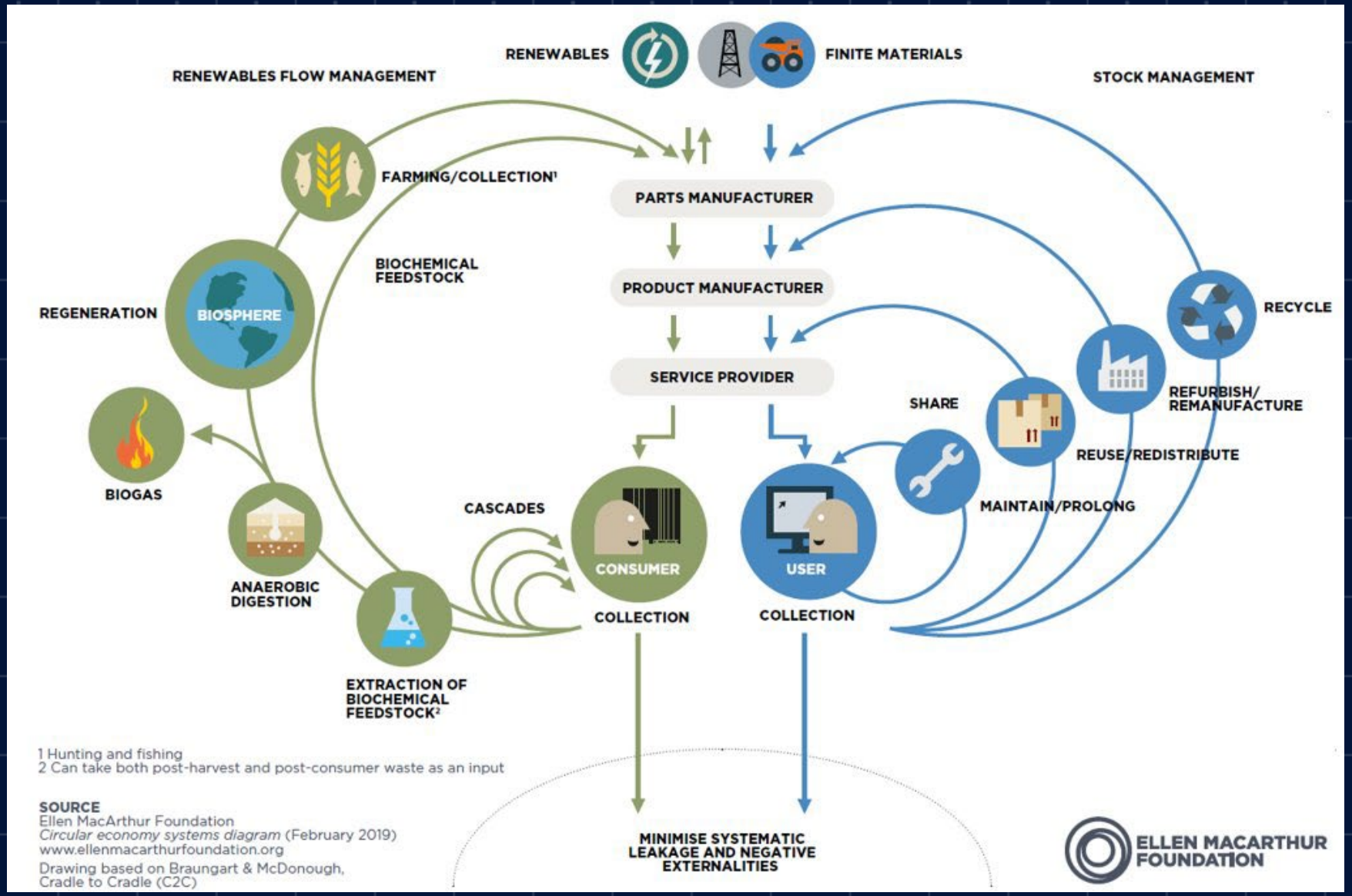
A circular economy for the Royal Navy



WO1 George Reeves

RN Climate Resilience & Environmental Management

Circularity



The 9 R model

Think differently about the need for/design of the ‘product’

R Strategy	SHORT LOOPS
R0 Refuse	Prevent the use of products and raw materials in the creation of goods, processes, and services
R1 Rethink	Reconsider ownership, use, and maintainence of products
R2 Reduce	Decrease the use of raw materials in products and services

The 9 R model

Maximise and prolong value from the ‘product’

R Strategy	MEDIUM LOOPS
R3 Reuse	Secondary use of products by another owner for the same intended purpose
R4 Repair	Maintain and repair existing products for extended use
R5 Refurbish	Restore and improve products to a satisfactory condition for extended use
R6 Remanufacture	Make more products with the same purpose with discarded products or parts
R7 Repurpose	Make new products with a different purpose with discarded products or parts

The 9 R model

Recover value from the ‘product’ at end of life

R Strategy	LONG LOOPS
 **R8 Recycle**	Process waste into new products or materials that can be used for new products
 **R9 Recover**	Process waste to recover energy

Why does it matter to the Royal Navy?

RN initiatives

- Life rafts
- Repairable equipment stocks

Life Rafts

- Scrap life rafts
- Supplied to the Royal Navy & Royal Marines Charity
- Manufacture saleable goods


RNRMC X
PABLO THE SAILMAKER
UPCYCLED FROM
ROYAL NAVY LIFERAFTS
+ LIFE JACKETS
LIMITED EDITION
+ UNIQUE + HANDMADE
ROYAL NAVY &
ROYAL MARINES
CHARITY

Benefits

- Avoided 4.5 metric tonnes of landfill
- Saved £3,800 per year disposal costs
- Upskilling the workforce
- Income generation - c£15,000 to date
- Reputational

Repairable equipment stocks

84,000+ repairable assets (£206M) are laying dormant on the MOD shelf in HM Naval Base Portsmouth with no recovery plan in place.

97% of warehouse storage capacity is already in use, and at current rates it will be at full capacity within one year.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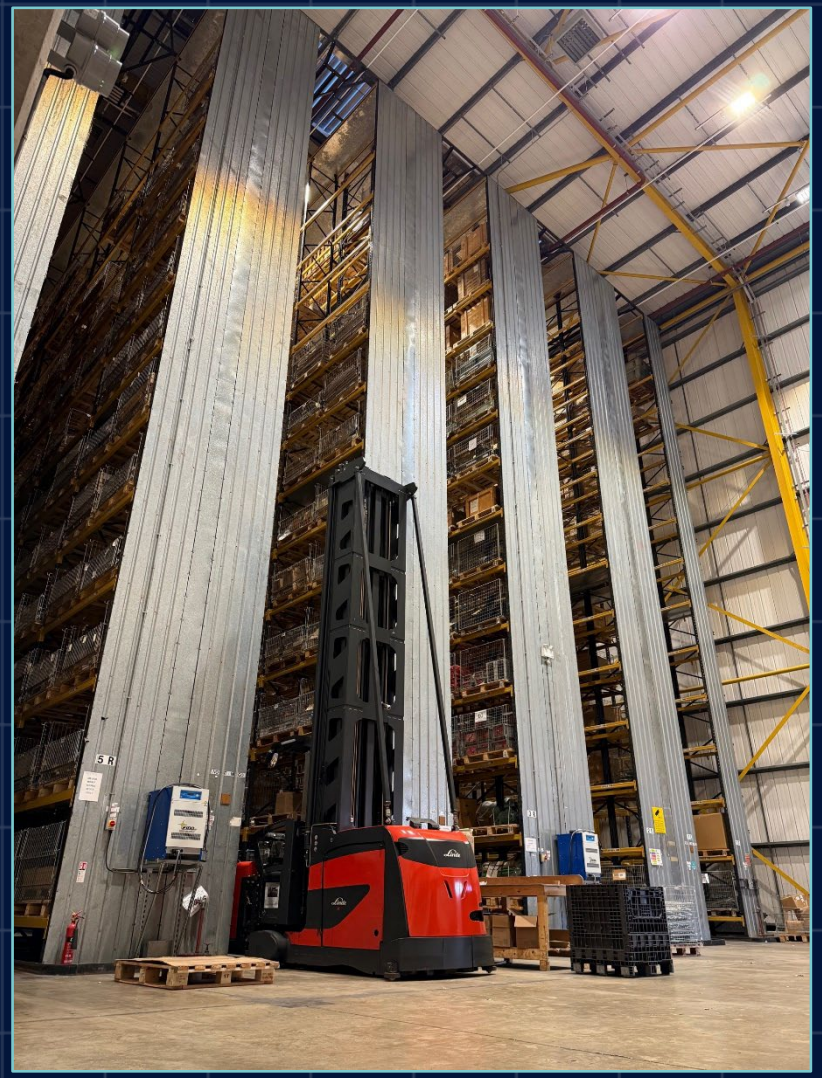
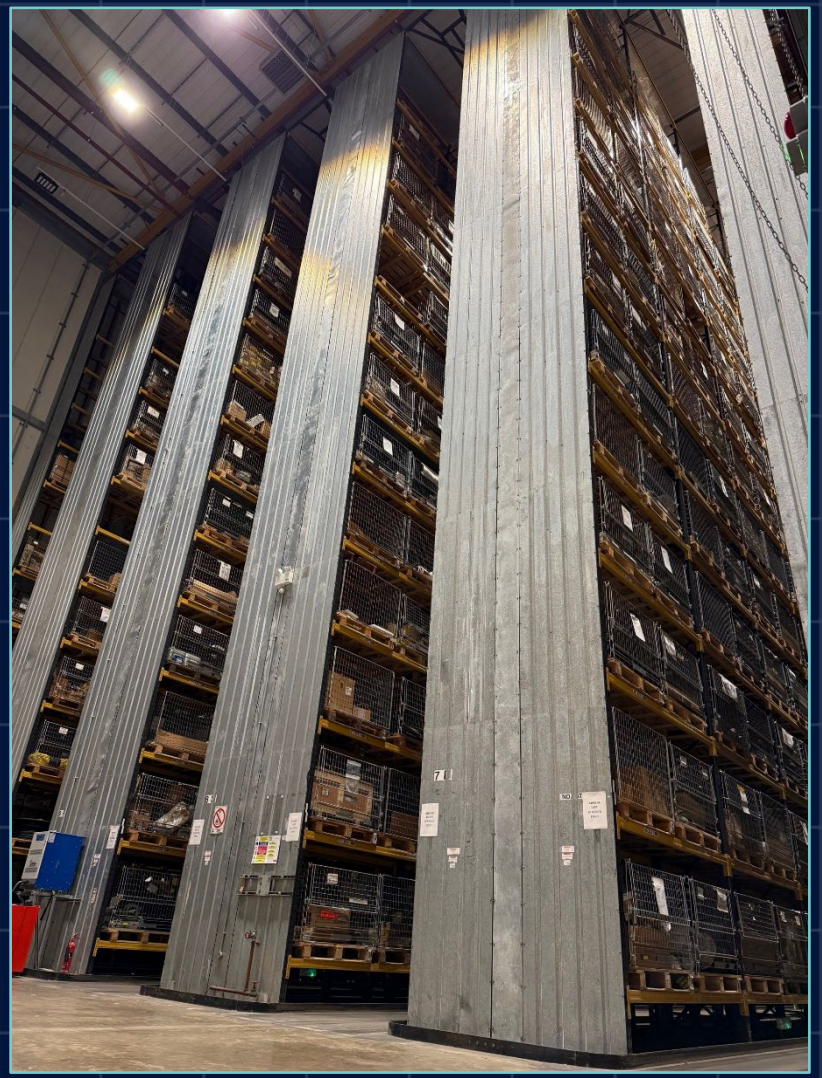
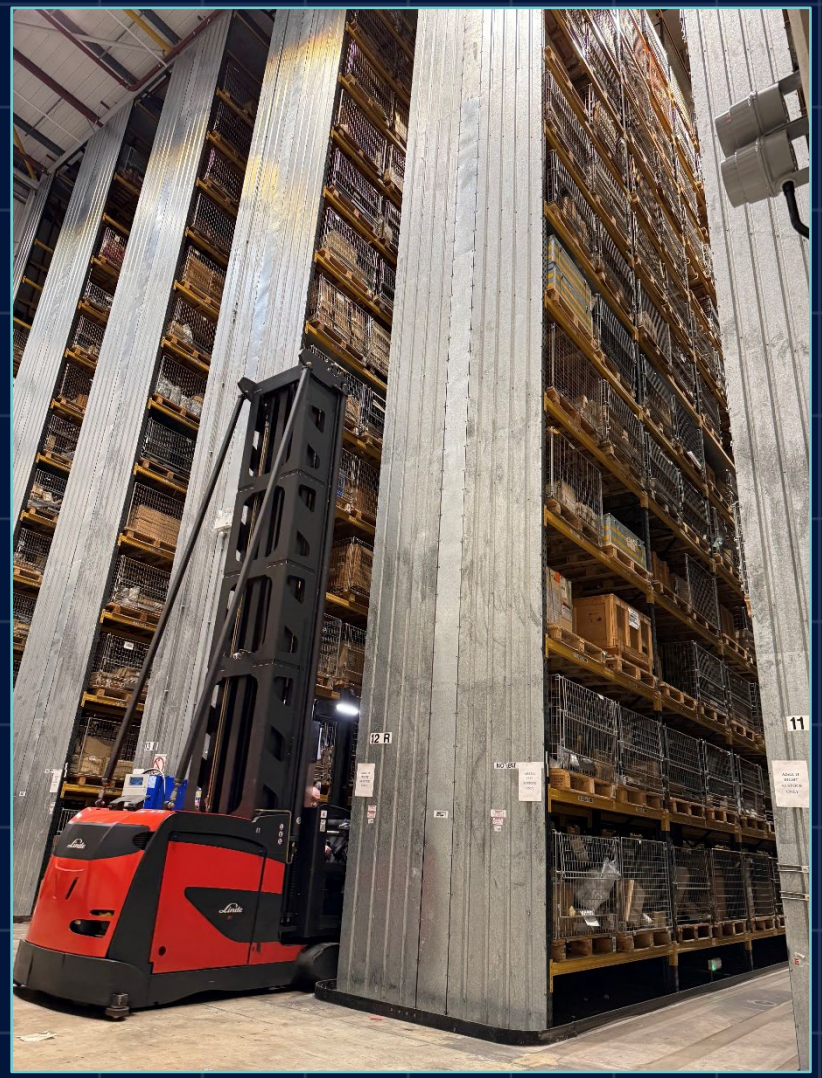

5 R




12 R
11

Why is it there?

- Categorised as unserviceable (E0)
- Deemed repairable

Repair process

Selected for repair by Equipment Owner

Despatched to repair agent (at cost)

Returned to MOD shelf for use (A1)

Disposal process

Selected for disposal

Processed via the Defence Recycling and Disposal Team (DRDT)

Disposed of via contractor (at cost)

So why do we have 84,000+ assets on the shelf...

for decades?

- Obsolete equipment and/or system
- No repair contract
- Held for cannibalisation (spares)
- Exact status unknown (lack of data)
- Lack of funds for repair or disposal
- Free storage for Equipment Owners

Acquisition lifecycle

Concept
Assessment
Demonstration
Manufacture
In-service
Disposal

How can we mitigate?

- RN workshop facilities
- RN workforce
- Survey assets and provide options
- Pre-disposal processing
- Process repairs (Operational Defects)

Forward Support Unit (Brunel) (FSU(B))

In-house process

Asset surveyed by FSU(B)

Options provided:

Scrap

FSU(B) pre-disposal Process (new income)

Spares

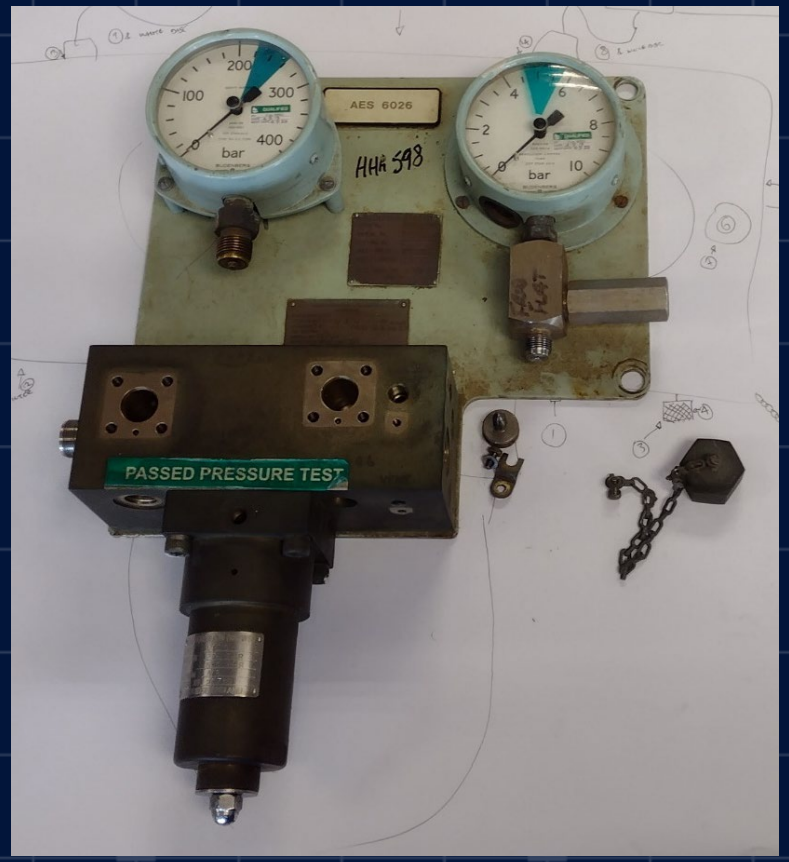
FSU(B) strip - Assets available for use

Repair

FSU(B) repair - Asset available for use

First pilot

Random item – Reducing Station



- Reduce air pressure from 276bar to 8bar
- Deployed on Type 23 frigates, 7 per ship
- Fitted to fuel and emergency systems

Existing support

New item - £9,696
Lead time – 13 mths

OEM repair – £4,361
Repair time – 9 mths

Existing support

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In-house support

FSU repair - £138
Repair time – 2 mths
(6 hrs workshop time)
Certification – £500

Pilot benefits

Asset availability

61% faster (94% actual)

Financial

86% cheaper

Logistics footprint

Wider benefits

Operational

- **Operational Defect (OPDEF) rectification**
- **Maintain sovereign capability**
- **Improved supply chain resilience:**
  - Critical Raw Materials(12)/Rare Earth Elements(17)
  - Conflict Minerals (4)

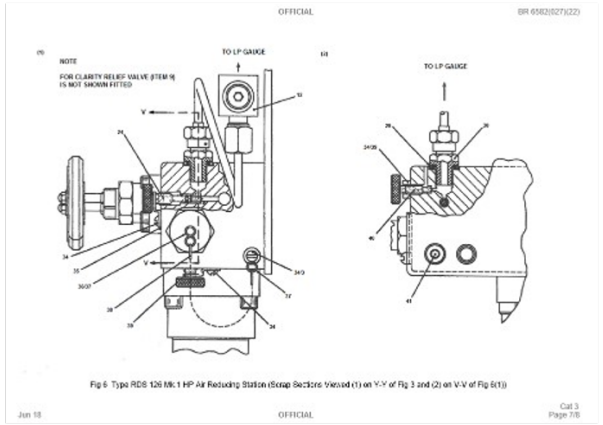
Wider benefits

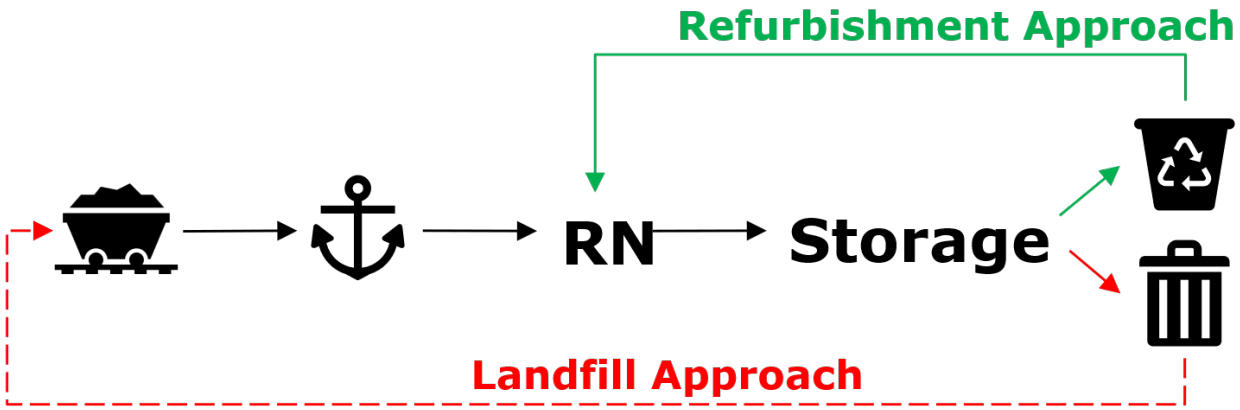
Environmental

- Reduced waste/less landfill
- Emissions avoidance (pilot = 0.2046 tCO2e)

Environmental impact (estimating method developed by EcoAct; subject to caveats)

Project ambition: ***reduce emissions and disposals resulting from equipment repair loops***





Step	Process
1	Classify each item into a high -level category. This is so, if a similar item needs assessing, the calculation can be performed automatically
2	Multiply the weight of the item by bespoke *production* and *market* emission factors.
3	Multiply the weight of the item by the method of disposal (e.g. landfill or closed -loop recycling)
4	Calculate the emissions 'avoided': *(Market emissions + Landfill emissions) – Refurbishment emissions = Emissions avoided*

Item	Reducing Station RDS126MK1
Classification	Reducing Station
Weight (kg)	22
Production Emissions (tCO2e)	0.1496
Market Emissions (tCO2e)	0.1587
Landfill Emissions (tCO2e)	0.1954
Emissions Avoided (tCO2e)	0.2046*

*This is the equivalent of driving a medium petrol car **1,150km (London To Munich)**

PROJECT one QINETIQ ecoact

Wider benefits

Personnel

- Training
- Experience
- Morale – retention

Scale

- **Expand throughout RN/Defence:**
  - Operating bases
  - Training establishments
- **Other Government Departments:**
  - Royal Mint
  - Ministry of Justice
- **Defence partners**

Challenges

- **Capacity – FSU(B) vs 84,000 assets**
- **Materiel accounting – protect public purse**
- **Certification - repairs**
- **Legislation – waste permits and licencing**
- **Money talks - put a price on:**
  - Operational capability
  - Training, experience and morale
  - Sovereign capability
  - Supply chain resilience

Circular economy concepts

- **Life rafts**
  - Low volume
  - Low financial value
  - Non-operational
  - High social value impact

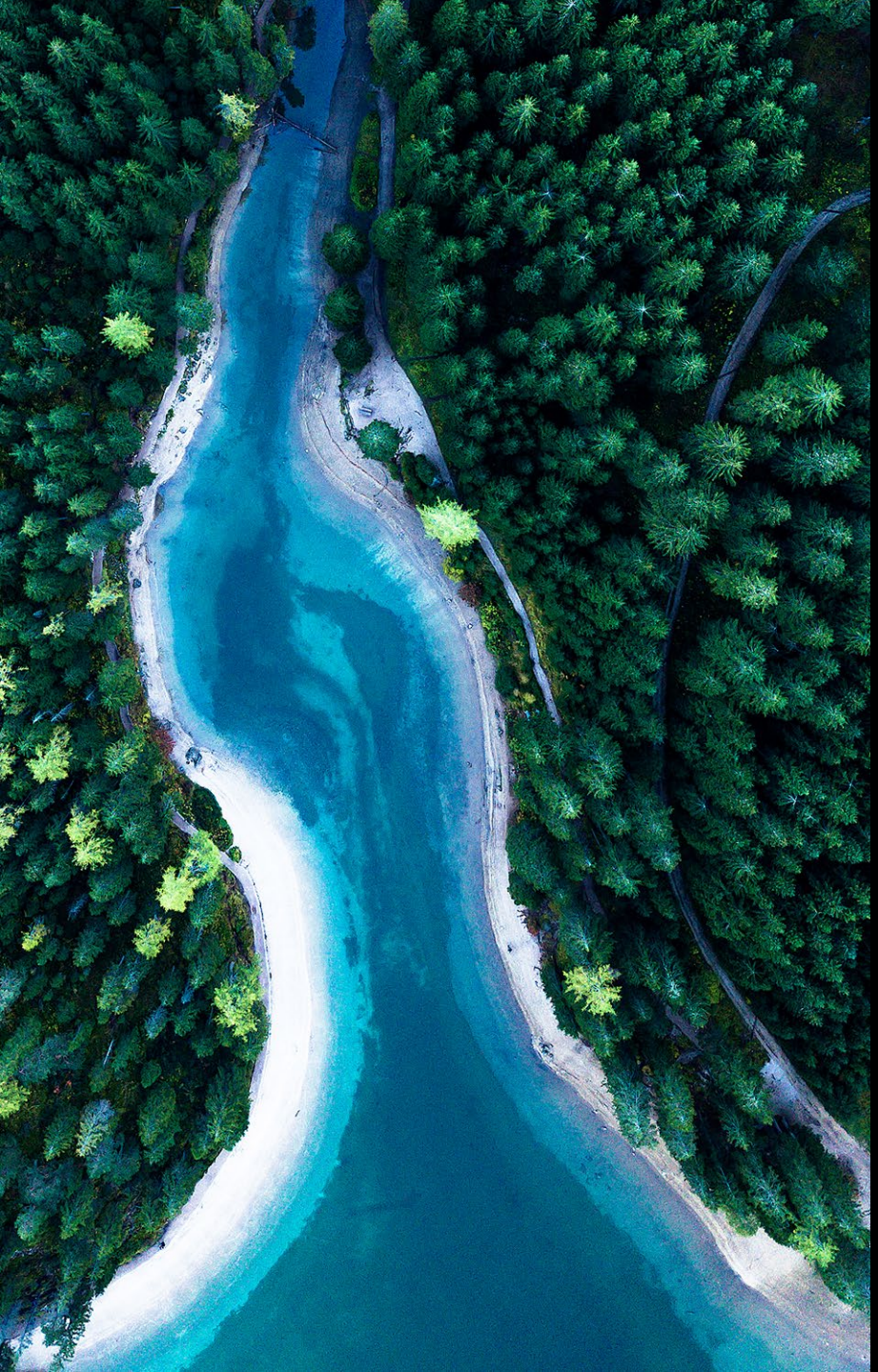
- **Repairable equipment**
  - High volume
  - High financial value
  - High impact to availability and operational capability

Links

StratCom strategy and concept notes:

- Sustainable Support Strategy
- Towards Self Sufficiency of Operations for Defence
- Sustainable Circular Economics (CE) for Defence

Questions?



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Sustainability & Social Value in DIS 2025

Information Sharing Report

Will Masters

Agenda

- Where DIS covers sustainability & social value
- Where DIS differs from the PPNs
- How industry will need to respond to the DIS – Bidding
- How industry will need to respond to the DIS – Contracts
- How industry will need to respond to the DIS – Delivery

Where DIS covers sustainability & social value

- **Net Zero & Clean Energy -** The DIS links defence growth to *"the government's clean energy mission and to Net Zero 2050",* noting work on climate and environmental degradation as part of being *"fit for the future".*
- **Reform of SV for Defence -** DIS says the current application isn't optimised for defence (driving compliance behaviours rather than growth), and commits to *"a new approach to applying social value"* with delivery "*in the UK to the greatest extent possible"*, to be completed by end of 2025 for use from FY26/27.
- **Supply Chain & Critical Materials -** DIS elevates resilience (data, category management, inventory, critical raw materials, recycling) and explicitly states social value will prioritise resilience and growth.
- **Skills, SMEs, and Regional Growth -** Dedicated actions on regional industrial clusters, skills pipelines (including nuclear), SME access and measurement, and crowding-in private finance are central *"engine for growth"* levers.
- **Procurement Act -** The Strategy leans on Defence specific flexibilities and the central digital platform to lower barriers for SMEs and speed competition.

Where DIS differs from the PPNs

Dimension	DIS (2025)	PPN 001 (2025)	PPN 002 (2025)	PPN 06/20 (2020)
Applies to D&S contracts?	Yes — designed for MoD and the Defence industrial base.	Yes, for central govt bodies, but not at contract level. It is not an award-criteria model.	It depends – exemption for 'D&S contract, but this is only specific contracts and teams must check if it applies.	Generally central government, including D&S, but superseded by PPN 001/002.
Social value approach	Reforms SV for defence to prioritise growth & supply-chain resilience; UK delivery *"to the greatest extent possible."*	Focuses on SME/VCSE direct spend targets and reporting.	Menu-based Social Value Model; minimum 10% weighting (or equivalent) for in-scope; excludes MoD defence/security.	Menu-based model; minimum 10% weighting under PCR 2015.
Geographic emphasis	Expectation to deliver SV in the UK by supporting regional growth and sovereignty.	N/A (target-setting).	No UK-specific delivery requirement.	No UK-specific delivery requirement.
Priority outcomes	Defence specific: resilient supply chains, skills/apprentices, UK content/sovereignty, growth/exports.	SME/VCSE spend growth and publication.	Central missions delivered via the Social Value menu and standard criteria.	Earlier central themes (climate, equal opportunity, SME participation).
Timing / go-live	Defence SV approach complete by end 2025, will be used from FY26/27.	Published 13 Feb 2025; ongoing target-setting.	Applies to new procurements commenced on/after 1 Oct 2025 (Procurement Act 2023). Note all existing contracts remain as is.	Effective for new procurements from 1 Jan 2021 (PCR 2015).
Implication for bidders	Frame SV around UK delivery, resilience, and long-term partnerships. Need to evidence critical inputs plans & regional skills.	Track & report direct SME/VCSE spend vs targets.	For non-Defence central gov. Includes ≥10% SV via the model.	Legacy model during transition; ≥10% SV where applicable.

How industry will need to respond to the DIS - Bidding

- **5-year Plan:** Acquisition Pipeline forecast (demand signal for investment, teaming, facilities).
- **Align narratives to priorities:** UK growth & industrial resilience, innovation and MOD partnership.
- **Frame social value the "defence way":** show how SV will drive UK growth, long-term partnerships, and resilience, deliver in the UK to the greatest extent possible.
- **Evidence exportability:** design to interoperable standards, include an export potential assessment in major bids, and reference how the Office of Defence Exports/G2G model supports scale.
- **Target regional impact:** in priority clusters and map bid SV to Defence Growth Deals where relevant.
- **Show SME pathways and growth effects:** (supply-chain lots, mentoring, finance routes), recognising MOD focus on SME access, SME spend targets, and measuring SME growth.
- **Price and siting assumptions:** consider UK cost levers such as energy.
- **Reference resilience:** including critical inputs (inventory, dual-sourcing, obsolescence planning) and circularity for critical raw materials (recovery/recycling of REEs etc.).
- **Be flexible**… new policies and processes can take time to roll-out – likely to see a mixture of approaches while new guidance is cascaded.

How industry will need to respond to the DIS - Contracts

- Use the Procurement Act 2023 environment effectively: prepare for the central digital platform (supplier registration, opportunity visibility) and transparency requirements.
- Understand Defence specific flexibilities in the Act (e.g., direct award where necessary, contract modifications for innovation) and propose contract change mechanisms accordingly.
- Bake in the DIS social-value model: structure SV schedules to UK delivery, long-term partnerships, supply-chain development, and growth outcomes. Be ready for the 2026/27 application timeline.
- Enable SME access & reporting (SME routes where appropriate, data capture for spend/growth).
- Include exportability obligations (design choices, modularity, support to MoD export campaigns led by the National Armaments Director/Office of Defence Exports).
- Reflect regional initiatives (Defence Growth Deals) in KPIs/milestones where site presence or local skills delivery is material.

How industry will need to respond to the DIS - Delivery

- Create and report on supply-chain resilience plans (stress-tests, surge capacity, alternatives).
- Implement circular-economy actions for critical materials (CADMIR).
- Deliver UK based social value activities that build skills, apprenticeships, and regional growth, and show long-term partner outcomes (not one-off outputs).
- Integrate with the innovation system (UK Defence Innovation; testing/TE access; regulatory solutions hub) to shorten cycles from trials to fielding.
- Use the MOD digital procurement/contract transparency tooling to maintain lifecycle data quality.
- Track and evidence contribution to Net Zero & clean-energy mission.
- Engage early and continuously with clients on pipeline changes.

Thank you.

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