



Ministry
of Defence

JEREMY QUIN MP
MINISTER OF STATE FOR DEFENCE PROCUREMENT

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MSU/4/8/1/2/ap

25 August 2021

Dear Tobias,

Thank you for your letter following our response to your report on Armoured Fighting Vehicles. I am sorry you felt that the response did not provide you with the reassurance you and the Committee were seeking, but I hope the answers to your specific follow up questions below will assist.

How will you address the gap in Air Defence and Tube Artillery capability pending successful execution of the programmes mentioned in your response?

Air Defence. The Army is modifying tactics, techniques and procedures (TTPs) to address the shortfall in Short-Range Air Defence (SHORAD) mass and layering. For example, using Stormer Self-Propelled High Velocity Missile (HVM) vehicle offensively, playing a significant part in overall mission success.

Sky Sabre, in service in the Falkland Islands (FI) from August 2021, will provide an enduring, all weather, Air Defence capability scaled and specifically procured for deployment in the FI. It represents a significant growth in Defence's Ground Based Air Defence capability. It has been developed for future threats and not just for those specific to the FI. It is capable of engaging and defeating multiple targets (including guided munitions), through 360 degrees in complex operational terrain, introducing an unprecedented ability to defend deployed troops and assets. Although procured for the FI, it will form the baseline for the future Medium Range Air Defence (MRAD) capability being developed by the Army as part of the Land GBAD Programme; hence, the FI deployment provides a useful opportunity to conduct trials and develop MRAD TTPs.

The SHORAD Lightweight Multi-Role Missile is expected in to service in 2022. This missile is complementary to HVM and is better optimised to defeat a significant proportion of the UAS threat.

Finally, Project Vikare, an Urgent Capability Requirement deployed on operations, provides a Counter-small UAS solution currently, and is likely to endure until a permanent solution is introduced.

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Artillery. The 1st Artillery Brigade has also adapted its TTPs in order to increase the lethality and survivability of artillery assets. Looking ahead, the Tactical Guided Munition Indirect will be qualified on the AS90, allowing the accurate prosecution of targets to 30km from 2027, reducing the capability gap before MFP comes into service. Furthermore, AS90 has a number of projects on contract now which will increase its availability and reliability. Improvements to close the capability gaps, such as fitting with composite rubber tracks and a 52-calibre long barrel are also being considered.

The MLRS M270 recapitalisation project is now agreed with the US DoD. The project will run in tranches from 2021, with all launchers having been returned to service by Q4 2026. The modernisation of the M270 Fleet will extend its service to 2050 and be the foundation for the subsequent elements of the Land Deep Fires Programme.

The signing of a US/UK Partnering Agreement in March 2021 has formalised the development with the US of GMLRS-ER, the stockpile purchase should take place from 2024.

Watchkeeper. A rigorous audit of the Army's ISTAR Tactical Uncrewed Air System (Watchkeeper) has comprehensively validated its criticality, both in support of layered ISR for the divisional deep battle but more widely across the 'Protect, Engage and Constrain' framework. A commitment has been made to retain and upgrade this capability and to assure it out to 2030 through the mid-life extension. This will progress within the ambitious Land ISTAR Programme which will provide the platform/capability ingest intelligence feeds from the broad array of sensors, support rapid fusion and analytics, support the tasking of ISR assets and support the cueing of lethal and non-lethal weapons systems/effectors.

Concurrently, Defence and the Army within it are developing a wider UAS strategy, supporting the export agenda (through WKPR-X) and also scoping Electronic Warfare and Signals Intelligence payloads for WKPR.

Land Electronic Warfare Signals Intelligence (EWSI). Across the 'Engage, Constrain and Fight' pillars of the Integrated Operating Concept (IOpC) framework, it has been identified that there is a significant requirement to retain, upgrade and upscale Defence's EWSI capability, providing assurance out to 2031 to deliver a modern, networked and integrated EWSI eco-system. This investment will continually evolve at pace with technological developments and the adversarial threat; enabling electromagnetic activities to be planned and executed as part of the layered ISR system-of-systems, ensuring the protection for deployed forces, enabling offensive effects through RF access, and providing high quality data contribution to the national intelligence enterprise.

Fundamental to the success of Land EWSI is the ability of the programme to ingest and export data from and into partner nations and sister-services, in order to deliver data driven intelligence to the point of decision making. This will be achieved by the integration of capabilities with an MOD-owned common system architecture with open standards. Development and coherence of EWSI is inextricably linked to the Land ISTAR Programme as it seeks to develop EWSI payloads for Watchkeeper.

What are the key risks in the MIV, CR3 and LETacCIS programmes and how are they being addressed with the relevant contractors?

Boxer. The Army is procuring an Off-the-Shelf Mechanised Infantry Vehicle (MIV) which is already proven in-service so lowers the delivery risk. Managing the complex delivery schedule including the integration of UK systems and dependency on related programmes such as LETacCIS will be an ongoing factor. The Army seeks to accelerate the delivery of the BOXER which is on track to achieve initial operating capability by 2025 as the Warrior Infantry Fighting Vehicle (IFV) is retired from service; it is also seeking to add a number of vehicles beyond the 508 currently in the contract.

The acceleration and expansion of BOXER's role is part of Defence's response to the outcome of the Integrated Review, which began to shift the emphasis from human-focussed close combat employing armoured infantry with its direct fire cannon, towards embracing new battlefield technology to defeat the enemy at greater reach than before, thereby reducing the risk to troops in close combat. The programme risk is in being able to deliver the required numbers and types of MIV platforms with networked access to off platform lethality as part of new Heavy Brigade Combat Teams to ensure there is no gap between their arrival and the conventional armoured infantry capability going out of service. Industry and DE&S are collaboratively assessing the options to manage this challenge.

Challenger 3 (CR3) Programme. As a key part of the £1.3 billion investment in CR3 the Defence Secretary announced an £800 million contract award for Rheinmetall BAE Systems Land (RBSL) to deliver a fleet of CR3 Main Battle Tanks (MBT) to the British Army. The CR3 programme will upgrade 148 of our existing CR2 MBTs with a digitalised turret, a more capable 120mm smoothbore gun with enhanced munitions, upgraded sights and enhanced survivability based upgraded armour and other survivability enhancements.

The main technical risks surround the integration of the lethality and survivability enhancements into platform. These will be addressed through a series of increasingly demanding technical reviews involving all the relevant contractors supported by extensive systems engineering modelling, digital twinning and a series of physical de-risking trials. The integration of these enhancements will also draw upon the experience of contractors in delivering these enhancements onto the MBTs of some of our key allies. These technical reviews have already begun, and the first de-risking trials are planned for Autumn 2021. These will allow the Army and DE&S to make the most informed choices and critical design decisions later in the programme.

LETacCIS. LETacCIS is a capability and business change programme that will deliver the Land Domain's deployed contribution to the Defence digital backbone through the sustainment, evolution or replacement of CIS and associated applications to underpin the transition to a Single Information Environment (SIE) and enable Information Advantage over our adversaries. The programme consists of two sub-programmes, MORPHEUS and Networks, and is supported by a business transformation Steering Group that will enable the programme to adopt an Evolutionary Capability Delivery (ECD) approach and move to a LETacCIS Operating Model based on a vendor independent and open architecture with multiple suppliers instead of a prime contractor. It has notable dependencies with the other Defence Information Communication Services (ICS) programmes and most Land platforms.

The programme continues to make headway and deliver, with the achievement of BCIP 5.6 Full Operating Capability in Dec 20, IAC and HMT approvals for TRINITY and Dismounted Situational Awareness projects in February 2021 and the letting of a new pan-programme Logistics Support Contract with Babcock in March 2021. However, the MORPHEUS Evolve to Open (EvO) Transition Partner (TP) contract is being renegotiated with General Dynamics Mission Systems (UK) (GDMS(UK)), as a result of delivery shortfalls. An SRO-directed Independent Commercial Review was commissioned in autumn 2020 to agree a baseline of what has been delivered and what further needs completing by all parties. We have extended the existing contract to September 2021 to facilitate ongoing negotiations with GDMS (UK) on delivery timing and milestones.

Will the WCSP/IFV capability be fulfilled by an alternative? If so when will that be defined?

Defence is not seeking to procure another IFV at this stage. The effect will be achieved in a different way as part of a shift in emphasis in fighting from the close battle to the deep battle. The effect achieved by conventional Armoured Infantry, mounted in Warrior IFVs in close combat, will be achieved by a new system combining new Challenger 3 tanks, Ajax Armoured Reconnaissance Vehicles and new Boxer Mechanised Infantry Vehicles, supported by upgraded Apache helicopters, new long range precision fires and other systems. These technologies reduce conventional, higher-risk, tactical emphasis on humans directly assaulting heavily defended enemy objectives, backed up by the organic heavy cannon firepower of their parent vehicles.

The Mechanised Infantry Vehicle is an Armoured Personnel Carrier and does not replace the IFV. The MIV will instead enable strategic and operational mobility for infantry capability which will be part of networked Heavy Brigade Combat Teams (BCTs). The Heavy BCTs will access an unprecedented range of new autonomous and semi-autonomous precision lethality options, both on and off the platform. These options significantly reduce the conventional tactical emphasis on humans being used to assault enemy strongholds at the front end of the break-in battle. The concept of operations is expected to develop and refine over coming years, informed by the Army's new programme of technology development and experimentation as it fields these new capabilities.

Finally, turning to your request for updates on Challenger 3; LETacCIS; MIV; Close Support Fires Programme; Land deep Fires Programmes; GBAD and the Land Industrial Strategy, we will always be willing to provide updates on requests to the Committee on hitting relevant milestones subject to applicable commercial restrictions.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Jeremy Quin', written in a cursive style.

JEREMY QUIN MP



Defence Committee

Chair, Rt Hon Tobias Ellwood MP

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21 May 2021

Dear Minister,

Thank you for your Department's response to our report on procurement of Armoured Fighting Vehicles, which we are publishing today, together with this letter.

I have to say that the Committee is not entirely reassured by the response. We have particular concerns in the following areas:

- The apparent lack of urgency in closing current capability gaps in areas such as Air Defence and Tube Artillery;
- The effectiveness of Challenger 2;
- The potential risks in the Challenger 3 programme;
- The dependence of the UK's capability in the land domain on Digital Spine and the successful implementation of LETacCIS;
- The decision taken, as part of the Integrated Review, to cancel the Warrior Capability Sustainment Programme (WCSP) without a fully costed programme to provide an effective Infantry Fighting Vehicle (IFV); and
- The timely delivery of the Mechanised Infantry Vehicle (MIV)/ Boxer programme.

We would therefore be grateful for answers to the following questions:

1. How will you address the gap in Air Defence and Tube Artillery capability pending the successful execution of the programmes mentioned in your response?
2. What are the key risks in the MIV, Challenger 3 and LETacCIS programmes and how are they being addressed with the relevant contractors?
3. Will the WCSP / IFV capability be fulfilled by an alternative? If so, when will that alternative be defined?

We would also be grateful for briefing notes, and six-monthly updates thereafter, on:

- Challenger 3;
- LETacCIS;
- Mechanised Infantry Vehicle;
- The Close Support Fires Programme, and the Land Deep Fires Programme (LDFFP);

- Land Ground Based Air Defence (GBAD); and
- Implementation of the Land Industrial Strategy.

Yours sincerely,

PP M. Ellwood

Rt Hon. Tobias Ellwood MP
Chair of the Defence Committee