



Ministry  
of Defence

ALEX CHALK KC MP  
MINISTER OF STATE FOR DEFENCE PROCUREMENT



4.8.1.2

6 January 2023

Dear Tobias,

Further to the update issued to you by my predecessor in June, I am pleased to provide a further update on the major Army led programmes, as requested in the Committee's letter of 21 May 2021.

### **Challenger 3**

The Challenger 3 (CR3) programme will upgrade 148 of the Army's existing Challenger 2 Main Battle Tanks (MBTs) to become Challenger 3s. Challenger 3 will be able to meet current and emerging threats until at least 2040. These upgrades include a new turret with modern day / night independent sighting systems and the latest 120mm smoothbore gun firing the most advanced munitions available. Survivability will be enhanced through a novel armour solution developed by Dstl. The integration of an Active Protection System (APS) is also being examined; the assessment phase is concluding, and the Army will be seeking approval for the demonstration, manufacture, and in-service phases in late 2023. Mobility is being addressed through upgraded engine and suspension systems under the Heavy Armour Automotive Improvement Project.

Those elements of Challenger 3 that are on contract with Rheinmetall BAE Systems Land (RBSL) are currently on schedule, with the Critical Design Review (CDR) taking place in Dec 22. On completion, RBSL will begin manufacturing the 'Pre-Series' Challenger 3s, which will be used for trials ahead of manufacturing the final vehicles. The programme is on track to seek Active Protection System approval in late 2023; Active Protection System trials on a representative Challenger 3 rig took place in Nov

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22. We are also seeking the purchase of Long Lead Items (LLIs) for Active Protection System qualification which will save c.11 months of schedule time. The lethality component (the gun, the ammunition, and the associated systems) of the programme is also progressing well.

The Approved Budgetary Limit for the Demonstration, Manufacture, and In-service phases for CR3 is £1.422Bn, with a further £16M approved for the Active Protection System Concept and Assessment phases. Approval to increase this will be sought in 2023 to enable us to move into the Demonstration, Manufacture, and In-service phases of the Active Protection System.

### **Mechanised Infantry Programme [Boxer]**

The Mechanised Infantry Programme continues to make good progress in its delivery – production is underway in Germany and manufacture transfer into the UK is ramping up. Training, support, infrastructure, and acceptance work also continues at pace. The impact of global supply chain pressures from the war in Ukraine continues to add risk, but whilst there have been some delays to the contracted baseline, the programme remains on track to deliver vehicles from 2023 onwards and reach Initial Operating Capability (IOC) in 2025.

Within the last three months, the first UK built Boxer Drive Module hull has been completed at WFEL in Stockport – a significant milestone for UK Boxer Armoured Vehicle manufacturing. The first fully completed UK prototypes are almost complete and should roll off production lines by Spring 2023 to go into trials. With support from Allies, our first UK operators from the Combat Manoeuvre Centre, Bovington have completed training with our Dutch colleagues and UK course design started with German loan vehicles to de-risk acceptance trials and training.

Support planning is underway and Boxer infrastructure planning and building has commenced.

Planning for potential further enhancements, uplifts and new variants to deliver the Army's new Brigade Combat Teams through the Boxer Strategic Pipeline continues. Approval has been received from HM Treasury to formally engage the market to scope delivery and to inform future decisions. This work is in parallel with exploring other options; and has now started on a without commitment basis.

### **Land Ground Based Air Defence (GBAD)**

Following declaration of Sky Sabre Initial Operating Capability last year, Commander 7th Air Defence Group and 16th Regiment Royal Artillery continue to mature the system towards Full Operational Capability, assisted by the deployment to bolster Polish air defences. We also continue to receive positive feedback on the operational use of dismounted and mounted Short Range Air Defence capability (High Velocity Missile and Lightweight Multi-role Missile) donated to Ukraine.

As to the Land Ground Based Air Defence programme more broadly, we are planning substantial investment in scaling, extending, and integrating our future capability - building on what is currently in service with the British Army. Concept phase activity is currently underway to help inform, de-risk and optimise our thinking, with a first business case for demonstration and manufacture activity planned for 2023.

### **Land Deep Fires Programme (LDFP)**

Recapitalisation of the M270 Multi Launch Rocket System (MLRS) fleet is now underway with the first launchers delivered to the US production facility for recapitalisation at the start of November 2022. Opportunities to accelerate this work and increase the fleet numbers in line with Integrated Review 2021 direction have been identified. The impact of donating deep fires capability to Ukraine is being mitigated by this rapid replenishment activity.

Alongside the platform recapitalisation work, the programme team is working on several project streams that will deliver the vision of a *'One Launcher, Many Payloads'* capability. The programme is scheduled to seek approval during Summer 2023 for the purchase of Extended Range Guided Multiple Launch Rocket System (ER-GMLRS) missiles for delivery in 2025. Concurrently, the programme will seek approval in Spring 2023 to sign into the Precision Strike Missile (PrSM) collaborative programme with the US and Australia via a Memorandum of Understanding (MoU) ahead of seeking approval to purchase an initial PrSM stockpile for delivery in 2026. This work is planned to facilitate collaboration opportunities, including potential exploitation of the UK's technical demonstrator projects as part of future PrSM and ER-GMLRS missile variants. The UK's two technology demonstrator projects (Area Effects and Sensor Dispenser) are proceeding well, in collaboration with Dstl and UK industry (Lockheed Martin UK and Thales UK). Additionally, the concept phase of the Land Precision Strike (LPS) Project continues to mature with MBDA.

### **Close Support Fires Programme**

The Integrated Review and Defence Command Paper 2021 outlined significant structural enhancements to the Army and confirmed its continued commitment to the delivery of the Mobile Fires Platform (MFP); a next generation self-propelled 155mm 52 calibre gun. The Mobile Fires Platform's increased range will be complemented by more accurate and longer-range artillery ammunition (known as the Tactical Guided Munition Indirect, or TGMI). The Mobile Fires Platform remains a critical element of the close battle and will contribute to the Army's pivot towards the deep battle.

Other projects within the Close Support Fires Programme seek to modernise the Close Support artillery system-of-systems, from surveillance and target acquisition, through digital interoperable networked fires, to ammunition. The programme vision is to 'deliver a greater weight of fire further, faster, more accurately and with more lethality than ever before'.

## **Land Environment Tactical Communications and Information Systems (LE TacCIS)**

The LETacCIS Programme consists of the following Major Capability Projects:

1. **DSA (Dismounted Situational Awareness)** aims to provide Dismounted Close Combat users with significantly enhanced voice and data services that will enable more effective situational awareness at the lower tactical levels.
2. **TRINITY** will provide a deployable Wide Area Network (WAN) with significantly increased bandwidth compared with current systems.
3. **Bowman 5.7** is an update to the in-service Bowman 5.6 tactical Communications and Information System.
4. **NIOBE** is a CIS node or 'Hotspot' integrating multiple systems into a tactical vehicle platform to enable dispersed operations and providing high-capacity services further forwards into the tactical battle space.
5. **MORPHEUS** will provide a modern tactical CIS system used in forward HQs, vehicles and on the soldier.

Within the Programme, there are also a number of smaller Other Projects:

1. The Joint Common Remote Viewing Terminal (JCRVT) project - In service Intelligence Surveillance & Reconnaissance radio transceiver.
2. The Multi-Mode Radio project - providing options for Air-Land integration, interoperability and cross-domain comms.
3. Land Deployable Gateway version 2 - Interop gateways both internationally and between Tactical Communications and Information Systems and Operational Communications and Information Systems.
4. Tactical Communications and Information Systems Support Project – Future support solutions for UK Land Tactical Communications and Information Systems.
5. BCIP 5.6 – In service, Tactical Communications and Information System.
6. Falcon – In service, high bandwidth Wide Area Networking.

The following projects within the Programme are progressing well:

1. The Multi-Mode Radio (MMR) project is now on contract - a £90M contract with L3Harris Communications Systems to upgrade its land-based radio capabilities with advanced new radio.

2. TRINITY, the Wide Area Networking 'Battlespace Broadband' capability has continued with the formal competition and is expected to achieve Full Business Case approval in March 2023.
3. The Joint Common Remote Viewing Terminal (JCRVT) project reached Full Operating Capability in October 2022, with delivery of Phase 2 Tactical Network Rover Encrypted.
4. The Bowman 5.7 project has been established and activity is underway to commence the necessary update work to maintain Bowman in service.

## **MORPHEUS**

MORPHEUS is focused on delivering an evolution of the in-service Bowman system. At the core of MORPHEUS is a contract with General Dynamics Mission Systems UK (GDMS(UK)) to deliver a lab-tested baseline system, which will employ open architectures and will set the conditions for the wider MORPHEUS project to be vendor independent.

This is called the Evolve to Open Transition Partner (EvO TP). The EvO TP contract has fallen short and the situation with this contract (and by extension the future of MORPHEUS) continues to be under review by the Investment Appraisals Committee (IAC). The MOD and GDMS(UK) entered into a series of Contract amendments with a number of aims, including permitting the parties to explore the reasons for the delayed delivery. The last of these amendments expired on 21 December 2021 and discussions surrounding the entry into a possible further Contract amendment did not result in a further agreement being entered into. Accordingly, GDMS(UK) remain obliged to deliver against the original Contract terms.

In the meantime, with support and guidance of the IAC, the MOD is having constructive conversations with GDMS(UK) to get this project back on track and delivering for the benefit of the whole of Defence. No further information can be provided for reasons of commercial confidentiality. A legal investigation into the Department's position is underway and will be incorporated into the next update to the IAC.

## **Ajax**

The Ajax firm price contract with General Dynamics Land Systems UK will deliver 589 tracked and fully digitised armoured vehicles, in six different variants primarily focused on forward reconnaissance. The programme remains central to the Army's *Future Soldier* strategy and it will deliver a step change in lethality, protection, multi-domain integration, and situational awareness. Substantial progress has been made since the summer and we continue to work closely with General Dynamics to recover the Ajax programme.

User Validation Trials were conducted successfully with military crews in October as additional bespoke trials. These aimed to help establish the effectiveness of the proposed Ajax modifications to address the noise and vibration problems and thereby

deliver a safe system of work under which to conduct Reliability Growth Trials. The comprehensive User Validation Trials saw the vehicles tested across 1530km with military crews across mixed terrain of road, gravel and cross-country at speeds up to 60km/h. Following a period of analysis, we have been able to confirm the modifications resolve the noise and vibration issues previously experienced by Ajax crews and consistently ensured that crew exposure to noise and vibration levels remains within legislative requirements. This therefore enables us to move to commence Reliability Growth Trials in early 2023. These planned trials aim to test the vehicle's durability and reliability more thoroughly over an extended period, effectively to stress test the platform and systems through simulated battlefield missions. They will identify any issues beyond noise and vibration that need to be addressed before the Department can be confident that the vehicle meets the Army's contractual performance requirements. Identifying and resolving a range of such issues is a normal part of the acquisition process for military equipment of this nature.

A Performance Assurance Review by the IPA carried out in November 2022 has upgraded the programme's rating to Amber from Red. This means that, whilst there are still some issues for resolution, the programme is now assessed as having a feasible route to delivery. Work is underway to reset the programme, upon which a new timetable will be agreed for the introduction of Ajax vehicles into operational service with the Army.

## **Land Industrial Strategy (LIS)**

Since the publication of the Land Industrial Strategy in May 22, progress has been made on several fronts:

- a. The first Land Enterprise Working Group (LEWG) has been scheduled for 20 Jan 23. This is the first strategic engagement forum (facilitated by ADS Group) with senior representatives from Defence, Academia, and Industry.
- b. The Army has strengthened its portfolio leadership. 19 dedicated senior responsible owners are now in place to manage the Army's 32 programmes. The headquarters has also established new teams to lead through life capability management planning, category approaches to cross cutting technologies, and rapid acquisition.
- c. The Land Integrated Operating Services (LIOS) programme's strategic outline case (SOC) was endorsed in April 2022 and the first rounds of formal industry engagement have been held. This is a crucial step in establishing the industrial partnerships necessary to upkeep, update and upgrade the Army's equipment through life. Currently, the programme is exploring early concepts of how our ambition to upgrade fleets, sustain our industrial base and improve availability can be met; and is working on the presumption that rationalisation of current contracts (65 contracts covering more than 30,000 vehicles of more than 30 types) and a move towards fewer, longer-term output based contracts will meet this need and deliver best value. As a result, the assumed timeline to outline business case (OBC) set out in the strategic outline case – which noted that the

risk of programme complexity could impact that timeline - will not now be met. The team is working to establish and agree a credible schedule to outline business case in Q1 2023.

- d. The Land Capability Campaigns Office (LCCO) is now actively pursuing four live export campaigns valued at c£6Bn. It is also developing international collaboration and export opportunities identified in a much larger UK addressable market, directly aligned to the Army's portfolio.

Over the next six months the Army HQ will continue to embed the Land Industrial Strategy objectives into its programmes, work with industry to identify key technology sectors and assess the resilience of our industrial base, and further develop the MERCURY concept. MERCURY seeks to form industrial partnerships to allow the co-development of next generation capabilities and improve the pull through of technologies.

I hope this is helpful and I look forward to meeting with you at the upcoming Evidence Session on Army Land Equipment.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Alex Chalk', with a large, stylized initial 'A'.

**ALEX CHALK KC MP**