

Research Briefing

31 March 2023

By Louisa Brooke-Holland

Ajax: The British Army's troubled armoured vehicle programme



Summary

- 1 What is Ajax?
- 2 Ajax's role in the Army
- 3 Cost of Ajax programme
- 4 When will Ajax enter service?
- 5 Why the programme has been delayed
- 6 Timeline of changes to in-service dates

Image Credits

AJAX armoured vehicle by Ministry of Defence Imagery / image cropped.
Licensed under OGL (Open Government License) .

Disclaimer

The Commons Library does not intend the information in our research publications and briefings to address the specific circumstances of any particular individual. We have published it to support the work of MPs. You should not rely upon it as legal or professional advice, or as a substitute for it. We do not accept any liability whatsoever for any errors, omissions or misstatements contained herein. You should consult a suitably qualified professional if you require specific advice or information. Read our briefing [‘Legal help: where to go and how to pay’](#) for further information about sources of legal advice and help. This information is provided subject to the conditions of the Open Parliament Licence.

Sources and subscriptions for MPs and staff

We try to use sources in our research that everyone can access, but sometimes only information that exists behind a paywall or via a subscription is available. We provide access to many online subscriptions to MPs and parliamentary staff, please contact hoclibraryonline@parliament.uk or visit commonslibrary.parliament.uk/resources for more information.

Feedback

Every effort is made to ensure that the information contained in these publicly available briefings is correct at the time of publication. Readers should be aware however that briefings are not necessarily updated to reflect subsequent changes.

If you have any comments on our briefings please email papers@parliament.uk. Please note that authors are not always able to engage in discussions with members of the public who express opinions about the content of our research, although we will carefully consider and correct any factual errors.

You can read our feedback and complaints policy and our editorial policy at commonslibrary.parliament.uk. If you have general questions about the work of the House of Commons email hcenquiries@parliament.uk.

Contents

Summary	4
1 What is Ajax?	7
2 Ajax's role in the Army	11
2.1 Future Soldier and Ajax	11
2.2 Ajax and 3 rd (UK) Division	12
3 Cost of Ajax programme	14
3.1 Contract awards	14
3.2 Pausing payments to General Dynamics	16
4 When will Ajax enter service?	18
4.1 Defining IOC and FOC for Ajax	19
4.2 Warrior will fill the service gap	19
5 Why the programme has been delayed	20
5.1 Historical issues in the procurement of armoured vehicles	20
5.2 Overall management of the programme	22
5.3 Complex requirements	23
5.4 Issues with the cannon and turret	24
5.5 Noise and vibration issues	25
5.6 Ajax Lessons learnt review	27
6 Timeline of changes to in-service dates	29

Summary

“The programme has been running for 12 years but has not delivered a single deployable vehicle to the Army.”

Public Accounts Committee,

June 2022

Ajax is the Army's new armoured fighting vehicle programme. Costing £5.5 billion, it is the biggest single order for a UK armoured vehicle in more than 20 years and will replace the Army's ageing fleet of tracked reconnaissance vehicles. The vehicles are assembled at prime contractor General Dynamics's facility in Merthyr Tydfil in Wales.

However, the vehicle's entry into service has been repeatedly delayed and the Ministry of Defence's (MOD) management of the programme criticised by the National Audit Office, the Defence select committee and the Public Accounts committee. In March 2023, the Minister for Defence Procurement announced a new in-service date of 2025, with full operating capability expected between late 2028 and 2029.

The [Defence Secretary has described the programme as “troubled”](#) and has commissioned an independent Lessons Learned Review, led by a QC. The review is continuing and [the MOD says it will publish it “with all expedition”](#) once received, accompanied by a statement to the House.

What is Ajax?

Ajax is the name given to the Army's armoured cavalry programme. This is for a family of six variants of tracked vehicles based on one common platform. The Army says [it will be its first fully digitalised platform](#), with advanced sensors and communications systems to gather and share information in real-time with other units. The Army is buying 589 vehicles across all six variants, which include reconnaissance (Ajax), personnel carrier (Ares), command and control (Athena), engineer reconnaissance (Argus), and recovery and repair vehicles (Atlas and Apollo).

This paper uses Ajax to refer to the whole programme, unless explicitly referring to the Ajax reconnaissance vehicle variant.

What is its role in the Army?

The Army's [Future Soldier](#) plan envisages Ajax as a core component of the Army's future modernised warfighting division. This warfighting division will be built around a “digitally networked combination” of Ajax, Boxer infantry vehicles, Challenger 3 tanks, AH64E Apache helicopters, long range precision fires and un-crewed aerial systems (such as drones).

Ajax will replace the current fleet of tracked reconnaissance vehicles. These are over 40 years old and the Ministry of Defence [admits they suffer capability and obsolescence issues](#). Their out of service date was originally 2014 but has [since been extended to 2023](#).

The Army intends to use the [Warrior tracked infantry vehicle](#) until Ajax comes into service.

How much is Ajax costing?

The Ajax programme is costing £5.5 billion for 589 armoured vehicles.

The MOD has [a firm price contract of £5.5 billion with GDLS-UK](#) (General Dynamics Land Systems) to deliver 589 vehicles, though the MOD's Equipment Plan 2022-32 gives an [estimated forecast cost to completion of £5.4 billion](#).

The MOD [paused payments to GDLS-UK in December 2020](#) after issues with noise and vibration emerged. The MOD resumed payments in March 2023.

When will Ajax be in service?

Delays to the programme include issues with noise and vibration.

On 20 March 2023 Alex Chalk, the Minister for Defence Procurement, set a [new timeline for Ajax's entry into service](#):

- Initial operating capability: Between July and December 2025
- Full operating capability: Between October 2028 and September 2029

The first vehicles are now expected to enter service in the latter half of 2025.

When the programme began in 2010 the initial expectation was for it to enter service around 2017. This had shifted to 2020 when the manufacturing contract was awarded in 2014.

The emergence of noise and vibration issues meant that for 18 months, from September 2021 until March 2023, the MOD did not commit to an in-service date for Ajax.

Delays to the programme

The programme has encountered several significant issues which has delayed Ajax's entry into service. This includes issues with the management of the programme and the emergence of excessive noise and vibration leading to concerns for the health of personnel operating the vehicles.

Both the National Audit Office (NAO) and parliamentary committees have been critical of the procurement. In 2021, the Commons Defence Committee

described the [history of the Army's armoured fighting vehicle capability as "deplorable"](#). In 2022, the Public Accounts Committee judged that the MOD's management of the Ajax programme was "[flawed from the outset](#)", and the NAO said the MOD had "[not managed the programme effectively](#)" warning that the programme "faces significant challenges".

Ajax lessons learnt review

In May 2022 [the MOD appointed Clive Sheldon QC](#) to conduct a lessons learnt review of the Ajax programme. The MOD received an initial draft at the end of January 2023. Alex Chalk said the delivery of the final report is up to the Sheldon review. The Minister [committed to publishing it "with all expedition" once received](#), accompanied by a statement to the House.

1 What are armoured vehicles?

Armoured vehicles describe a [range of military vehicles](#) that are, as the name suggests, armoured to provide protection against a range of threats.

They comprise a range of platforms with different roles, including the heavy firepower of Challenger tanks, to Warrior infantry fighting vehicles, as well as reconnaissance, personnel carrier, engineer and ambulance vehicles.

The British Army is in the process of modernising its fleet of armoured vehicles, with [new Ajax \(armoured cavalry\)](#) and [Boxer \(mechanised infantry\) vehicles](#), and a life extension programme to upgrade its in-service [Challenger main battle tank](#).

1

What is Ajax?

The Ajax programme is a family of armoured vehicles.

Six variants based on a common platform

The Ministry of Defence (MOD) has ordered 589 vehicles. Each of the variants has a specific role:

- **Ajax** is the fighting and reconnaissance variant, equipped with a turret fitted with a 40mm cannon, and can fire on the move at speed. As well as providing firepower, it is intended to gather intelligence and reconnaissance information to share with other units. The Army is procuring 245 Ajax vehicles.
- **Ares** is the troop-carrying armoured personnel reconnaissance vehicle. The Army is procuring 93 Ares vehicles.
- **Athena** is the command and control variant. The Army is procuring 112 vehicles.
- There are two equipment and support variants. **Atlas** and **Apollo** can recover, tow and repair damaged vehicles. Apollo is equipped with a crane to lift heavy parts, for example, to replace the vehicle's power pack. The Army is procuring 50 Apollo and 38 Atlas vehicles.
- The 51 **Argus** engineering reconnaissance vehicles will allow engineers to gather information on the environment.¹

Tracked, not wheeled

All of the six variants move on tracks rather than wheels.

Tracked vehicles can carry heavier payloads, such as heavy armour, and travel across a wider variety of terrain (i.e. off road) than wheeled vehicles. Their heavy armour provides better protection for personnel and increases

¹ [Army website](#), accessed 24 March 2023; National Audit Office, [The Ajax programme](#), 11 March 2022, HC 1142 2021-22, figure 1; Ajax uncovered: Detailing the British Army's latest combat vehicle family, Janes International Defence Review, 11 November 2016; [General Dynamics Ajax: The next generation of British Army vehicle power](#), Army Technology, 23 December 2019

survivability on the battlefield. However, heavy armour adds weight, which may limit transport options.²

Air transport options

In 2021, Jeremy Quin, then Defence Procurement Minister, said Ajax can be transported by [C-17](#) and [A400M](#) aircraft:

A single turreted, fully-armoured AJAX vehicle can be flown in a C-17 with minimal preparation. Two Ajax variant vehicles can be transported in a C-17, after further suitable preparation.

It is intended that all Ajax variants will be capable of air transportation in an A400M aircraft with some level of strip. Stripped items would be transported separately. Four stripped-down Ajax variant vehicles would be transported in four A400M aircraft and the stripped items in a further two A400M aircraft.³

Weaponry

The Ajax variant is equipped with a turret with an integrated 40mm cannon, the 40mm Cased Telescoped Armament System (CTAS). It can fire on the move at speed.

The Army website says all the non-turreted variants will have a remote weapon station which can mount a general purpose, heavy or grenade machine gun.⁴

Ammunition

There are four different types of ammunition for the cannon:

- armour piercing rounds, for armoured targets such as tanks
- airburst rounds for multiple light targets (such as soldiers and vehicles)
- point detonating rounds, for hardened targets, and
- aerial airburst rounds, for drones, helicopters and light aircraft.⁵

² For more discussion of the differences between tracked and wheeled vehicles, see Army Technology, [Armoured fighting vehicles: which is better, tracks or wheels?](#), 8 October 2019; Rand Corporation, [Assessing Tracked and Wheeled Vehicles for Australian Mounted Close Combat Operations](#), 2017

³ [PQ32309 \[Ajax vehicles\]](#), 13 July 2021

⁴ British Army, [Combat vehicles: Ajax](#), accessed 24 March 2023

⁵ BAE Systems, [Cased Telescoped Cannon](#), accessed 20 March 2023

Communications and sensors

Ajax's new "formidable" sensors and communications systems are a core part of the Army's plans to build a modernised warfighting division (see below, section 2.1).⁶ The Army envisages this division to be built around a "digitally networked combination of Ajax, Boxer, Challenger 3 tanks, AH64E [Apache helicopters], long range precision fires and un-crewed aerial systems [such as drones]".⁷

In March 2023, Alex Chalk, the Minister for Defence Procurement, said the range and capabilities of the sensors on Ajax will "deliver a step-change in the surveillance capability of the Army."⁸ The Minister has also said that its open digital architecture means Ajax can integrate new systems "and evolve to meet emerging threats".⁹

Initially Ajax will be equipped with the latest version of the Army's existing Bowman tactical communications system.

Once in service, Ajax will be upgraded with the new Morpheus system.

The MOD says Morpheus will be a "computing and information system" for use in the land environment by users from all three Services. The MOD says it will provide new applications and software, new computers, and new radios to link networks together. It will form the core of MOD's future Tactical Communication and Information Systems (TacCIS) capability.¹⁰

A needed capability: replacing ageing combat vehicles

Ajax will replace the current fleet of ageing tracked reconnaissance vehicles operated by the Army.¹¹ These vehicles are known as CVR(T) – combat vehicle reconnaissance (tracked) – and [current vehicles](#) include the Scimitar reconnaissance vehicle and the Spartan armoured personnel carrier. Other variants include an ambulance, armoured command vehicle and armoured recovery vehicle.

⁶ British Army, [Future Soldier](#), 25 November 2021

⁷ British Army, [Future Soldier](#), 25 November 2021

⁸ [HCWS692](#), 20 March 2023

⁹ [PQ172970 \[Ajax vehicles\]](#), 29 March 2023

¹⁰ Ministry of Defence, [Defence Equipment Plan 2022-2032](#), 29 November 2022, p31

¹¹ Then Defence Secretary, Bob Ainsworth, [described the CVR\(T\) vehicles as "ageing" in a written statement](#) in March 2010.

The existing fleet of CVR(T) is over four decades old and the Ministry of Defence admits the vehicles suffer capability and obsolescence issues.¹²

Plans to replace the fleet with new vehicles date back to the 1980s.¹³ The MOD's approach to procuring armoured vehicles for the Army has been recently criticised by the National Audit Office, Public Accounts Committee and the Defence Committee. These criticisms are explored in section 5.

¹² Ministry of Defence, [Ajax noise and vibration review](#), 15 December 2021

¹³ This includes FLAV/FLLAV; Tracer, FRES and FRES Scout. A timeline is available in appendix 3 of National Audit Office, ["The cost-effective delivery of an armoured vehicle capability"](#), HC 1029 2010-12, 20 May 2011

2 Ajax's role in the Army

How the Army intends to use Ajax has evolved since the programme began in 2010.

The October 2010 Strategic Defence and Security Review set out plans for a future Army structured around 5 "multi-role brigades". These brigades would be equipped with reconnaissance vehicles, such as Scout, as well as tanks and infantry.¹⁴

The Government took another approach in the 2015 Strategic Defence and Security Review. This set out plans to create two new "Strike Brigades", equipped with Ajax and the [new Boxer mechanised infantry vehicle](#). The Strike Brigades were described as a "rapidly deployable protected force" sitting between the mobile and light forces of 16 Air Assault Brigade and the heavy forces of the armoured infantry.¹⁵ As part of [Army 2020 Refine](#), 3rd (UK) Division would be reorganised to form two armoured infantry and two strike brigades.

The Army revised its approach again following the 2021 Integrated Review and accompanying Defence Command Paper, [Defence in a Competitive Age](#), in March 2021. This set out plans for new "Brigade Combat Teams".¹⁶ These ideas were fleshed out in the Army's subsequent Future Soldier plan.

2.1 Future Soldier and Ajax

The MOD described the Future Soldier plan, published in November 2021, as "the most radical transformation to our Army in 20 years".¹⁷

The Army envisages Ajax to be a core part of a modernised warfighting division by 2030. This warfighting division will be built around what the Army describes as a "digitally networked combination" of Ajax, Boxer, Challenger 3, Apache helicopters (the AH64E), long range precision fires (such as multiple launched rocket systems) and uncrewed aerial systems such as drones.¹⁸

¹⁴ [Strategic Defence and Security Review](#), Cm 7948, 19 October 2010

¹⁵ Ministry of Defence, [SDSR 2015 defence factsheets](#), 15 January 2016

¹⁶ These were the [Integrated Review of security, defence, development and foreign policy](#), CP 403 and [Defence in a Competitive Age](#), CP 411.

¹⁷ British Army, [Future Soldier unveils radical transformation for the British Army](#), 25 November 2021

¹⁸ British Army, [Future Soldier](#), 25 November 2021

2 What is a warfighting division?

A division is defined by the Army as “a major administrative and tactical unit/formation which combines in itself the necessary arms and services required for sustained combat”. They are larger than a regiment/brigade and smaller than a corps (which contains several divisions).¹⁹

A warfighting division is expected to “conduct high tempo operations against a peer enemy”.²⁰

The Field Army has three divisions:

- 3rd (UK) Division is the “Iron Division” with the Army’s armoured forces
- 1st (UK) Division is home to the Army’s light forces
- 6th (UK) Division is home to the Army’s unconventional warfare capabilities, including cyber, electronic warfare and special operations.

2.2

Ajax and 3rd (UK) Division

Ajax will equip the two armoured brigade combat teams and the deep reconnaissance strike brigade combat team in 3rd (UK) Division.

The Army’s “current warfighting division” is [3rd \(UK\) Division](#) with Challenger 2 tanks and Warrior armoured vehicles “as its core capabilities.”²¹ It is also known as the “Iron Division” and currently numbers over 10,000 troops.²²

The Division has been reorganised under Future Soldier and consists of brigade combat teams, air defence and engineer groups, an operational sustainment brigade (logistics, transport and supplies), communications (signals) and military intelligence units (information manoeuvre).

What are Brigade Combat Teams?

Future Soldier is re-modelling deployable forces around Brigade Combat Teams. The Army says these will be “self-sufficient tactical formations”.²³

Ajax will equip the two armoured brigade combat teams and the deep reconce strike brigade combat teams in 3rd (UK) Division.

¹⁹ Ministry of Defence, [Joint Doctrine Publication 0-20 UK Land Power](#), 7 November 2022; The National Army Museum [provides a helpful explanation of the different formations within the Army](#).

²⁰ Defence Committee, [Obsolescent and outgunned: the British Army’s armoured vehicle capability](#), 14 March 2021 HC 659 2019-21, written evidence AVF0016

²¹ [PQ 127277 \[Army\]](#), 25 February 2022

²² [PQ148533 \[Army\]](#), 23 February 2023

²³ British Army, [Future Soldier](#) (PDF), 30 November 2021

Armoured brigade combat teams

The Armoured Brigade Combat Teams (BCTs) will be the “cornerstone of the warfighting division’s close combat capability,” according to the Future Soldier plan.²⁴ They will be equipped with Ajax, Challenger 3 tanks and Boxer mechanised infantry vehicles. The two armoured BCT’s are:

- [12th Armoured Brigade Combat Team](#)
- [20th Armoured Brigade Combat Team](#)

Deep reconnaissance strike brigade combat team

The [1st Deep Reconnaissance Strike Brigade Combat Team](#) will focus on the Army’s “deep fight” with deep fires (artillery) and reconnaissance capabilities. Ajax’s sensors will provide “long-range persistent surveillance” to help direct artillery.²⁵

Full details of the units in each team are available in [Future Soldier guide](#) (PDF) and on [3rd \(UK\) Division’s](#) website.

Possible future revisions and lessons of Ukraine

Following the [refresh of the Integrated Review](#) in March 2023, the Ministry of Defence is also refreshing its 2021 Defence Command Paper. This is not expected to be completed until June 2023.

The Integrated Review Refresh did not make any recommendations for changes to the armed forces. It did, however, make several observations which are likely to inform the update to the command paper. It explicitly said that the lessons learnt from the conflict in Ukraine will be “[essential to future plans for the armed forces, particularly in the land domain](#)”. In particular, Ukraine has “increased the urgency of modernising [the UK’s] land forces”.²⁶

In 2023, the Minister for Defence Procurement has said that while the MOD continues to study and learn lessons from the conflict in Ukraine “Ajax remains wholly relevant to future warfighting and forms a vital part of the Army system of systems that enables combined arms operations.”²⁷

²⁴ British Army, [Future Soldier](#) (PDF), 30 November 2021

²⁵ British Army, [Future Soldier](#) (PDF), 30 November 2021

²⁶ Cabinet Office, [Integrated Review Refresh 2023](#), 13 March 2023

²⁷ [PQ172970 \[Ajax vehicles\]](#), 29 March 2023

3 Cost of Ajax programme

“The biggest single order for a UK armoured vehicle in 30 years.”

Ministry of Defence
2017

The MOD estimates the total cost of the armoured cavalry programme to be £5.4 billion.²⁸ This is set out in the Ministry of Defence’s Equipment Plan 2022-32, which gives an estimated forecast cost to completion of £5.379 billion.²⁹

The MOD has spent £3.4 billion on the armoured cavalry programme, as of January 2023. Of this, £3.167 billion was paid to General Dynamics Land Systems. The MOD said the other payments cover Cannon Contracts with CTAI, Bowman Equipment Purchases/Connectivity Assurance Testing (General Dynamics Mission Systems) and infrastructure.³⁰

The MOD paused payments to GDLS-UK in December 2020, resuming them in March 2023.

3.1 Contract awards

General Dynamics Land Systems-UK

The main contract is with General Dynamics Land Systems-UK (GDLS-UK). The MOD says the project involves a total of 230 UK suppliers.³¹

The MOD awarded the initial contract in 2010, with the decision spanning the outgoing Labour Government and incoming Coalition Government.

The Labour Government selected General Dynamics as the preferred bidder for its specialist vehicle competition, beating rival bidder BAE Systems, in March 2010.³²

The Coalition Government took office after the general election in May 2010. In July, the MOD awarded the contract to General Dynamics.³³

²⁸ Ministry of Defence, [The Defence Equipment Plan 2022-2023](#), 9 December 2022 supplementary tables ‘Project performance summary table’

²⁹ Ministry of Defence, [The Defence Equipment Plan 2022-2023](#), 9 December 2022 supplementary tables ‘Project performance summary table’

³⁰ [PQ 120878 \[Ajax Vehicles\]](#), 19 January 2023

³¹ [DEP2021-0477](#), 14 June 2021

³² [HL Deb 22 March 2010 c93WS](#)

³³ [HC Deb 1 July 2010 c47WS](#)

This was for the “the prototyping and demonstration of a new armoured combat vehicle” to replace the existing tracked reconnaissance combat vehicle (CVR(T)), then known as Scout.³⁴

The MOD signed a manufacturing contract with GDLS-UK in September 2014 for £3.5 billion (excluding VAT) for Scout specialist vehicles.³⁵ Trevor Taylor, in a study of Ajax for RUSI, the defence think tank, explains that the difference between the original £3.5 billion contract price and the figure quoted in 2023 (£5.5 billion) is accounted for by some requirement changes and the addition of VAT.³⁶

The Government has described the contract as “the biggest single order for a UK armoured vehicle in 30 years”.³⁷ The programme was renamed Ajax in 2015.

Commenting in 2021 about noise and vibration issues delaying the programme (see below, section 5.5), the Defence Procurement Minister explained the firm price contract means General Dynamics are “required to provide the vehicles as set out in the contract for the agreed price of £5.5 billion.”³⁸

Originally all 589 vehicles were to be manufactured at General Dynamics European Land Systems’ facility in Seville, Spain. However, in 2015 the contract was amended so that only the first 100 vehicles were manufactured and assembled in Spain. For subsequent vehicles, the hulls are manufactured in Spain but then transferred to General Dynamics facility in Merthyr Tydfil for assembly.³⁹

Major subcontractors: Lockheed Martin and CTAI

GDLS-UK is subcontracting manufacturing of the turret to Lockheed Martin. The \$1 billion contract is for 245 turrets.⁴⁰ Lockheed Martin UK told Janes Defence Weekly in March 2023 that it had delivered 116 turrets to General Dynamics UK.⁴¹ The turret is manufactured at Lockheed Martin’s Ampt Hill facility in Bedfordshire.⁴²

The cannon is contracted separately by the MOD and provided to GDLS-UK as “Government Furnished Equipment.” This also includes electronic counter-measures systems, test ranges, communication systems and headsets. This includes the delayed Morpheus programme.

³⁴ [HC Deb 1 July 2010 c48WS](#)

³⁵ [HC Deb 3 September 2014 c20WS](#)

³⁶ Trevor Taylor, [Lessons from the Ajax programme](#), RUSI Emerging Insights, 13 May 2022

³⁷ Ministry of Defence, [“Ministers announce Ajax delivery milestone in Wales”](#), 18 September 2017

³⁸ [HCWS260, 6 September 2021](#)

³⁹ National Audit Office, [The Ajax programme](#), 11 March 2022, HC 1142 2021-22, figure 5

⁴⁰ [Lockheed Martin website](#), accessed 29 March 2023

⁴¹ Design changes put Ajax back on track, Janes Defence Weekly, 8 March 2023

⁴² [DEP2021-0477](#), 14 June 2021

The MOD awarded a contract for the cannon in 2015 with CTA International (CTAI), a joint venture between the UK's BAE Systems and French company Nexter. The Ministry of Defence ordered 515 cannon in a £150 million contract, which at the time it was also intending to fit onto the Warrior infantry fighting vehicle as part of the now cancelled upgrade programme.⁴³ CTAI also developed the cannon to equip the new Jaguar armoured vehicle for the French Army. CTAI completed delivery of all 515 cannon to the MOD in October 2021.⁴⁴

The contract with CTAI did not include the provision of ammunition.⁴⁵ BAE Systems is providing this.⁴⁶

The cannon's integration with the turret is managed through a separate contract between GDLS-UK and Lockheed Martin UK.

Thales Optronics is providing the sighting system.

Capability Drops

Following disputes between the MOD and GDLS-UK over the handling of technical design issues and schedule slippage, the MOD reset the contract in 2018. The MOD and GDLS-UK agreed that the company would deliver the vehicle in "capability drops".

As the NAO explains, each drop provides vehicles to the Army for training and experimentation, with new capabilities added through a retrofit programme. For example, Capability drop 3 vehicles will be fitted with the latest version of Bowman communication system (BCIP 5.6)⁴⁷. Drop 4 will be the final build standard after trials.

The NAO says that the introduction of four capability drops across six variants has made the programme schedule more complex, with vehicles from early capability drops having to be upgraded.⁴⁸

3.2

Pausing payments to General Dynamics

The MOD paused payments General Dynamics in December 2020 after issues with noise and vibration emerged (see below, section 5.5) Payments were

⁴³ The MOD cancelled the Warrior upgrade programme in the [Defence in a Competitive Age](#) Command Paper, CP 411, 22 March 2021

⁴⁴ Public Accounts Committee, Armoured Vehicles: the Ajax programme, 3 June 2022 HC 259 2022-23, [written evidence ARM002](#); Ministry of Defence, [£150 million cannon contract signed for UK armoured vehicles](#), 1 July 2015

⁴⁵ [PQ 46946 \[CTA International: Ammunition\]](#), 20 September 2021

⁴⁶ [PQ 41730 \[Ajax vehicles: ammunition\]](#), 8 September 2021

⁴⁷ National Audit Office, [The Ajax programme](#), 11 March 2022, HC 1142 2021-22

⁴⁸ National Audit Office, [The Ajax programme](#), 11 March 2022, HC 1142 2021-22

resumed in March 2023 after the MOD and General Dynamics developed a revised schedule for the delivery of the vehicles.⁴⁹

The MOD paid General Dynamics £480 million in March 2023, approximately half of what had been held back since 2020. The Defence Procurement Minister explained how future payments will be made:

Future payments will be made against the new schedule and its milestones, conditional on the delivery of compliant and deployable Ajax vehicles and continued progress of remaining trials activity. We have a robust firm price contract for the delivery of 589 vehicles, which will ensure that General Dynamics are incentivised to deliver against agreed outcomes. As such, the whole programme remains within its originally approved budget.⁵⁰

⁴⁹ [HCWS652 \[Ajax payments update\]](#), 20 March 2023

⁵⁰ [HCWS652 \[Ajax payments update\]](#), 20 March 2023

4

When will Ajax enter service?

On 20 March 2023 the Defence Procurement Minister Alex Chalk set a new timeline for Ajax's entry into service. It is now expected to begin to enter service in the latter half of 2025, with a full operating capability towards the end of 2029.⁵¹

In 2011, the MOD was still expecting what was then known as FRES-SV to enter service around 2017.⁵² However, by the time of contract award in 2014, this shifted to July 2020. The contract was reset in 2018. In September 2020 the MOD reset the initial operating capability (see box) to June 2021. Full operating capability was still expected to be achieved in 2025.⁵³

The emergence of noise and vibration issues (see following section) meant that for 18 months, from September 2021 until March 2023, the MOD did not commit to an in-service date for Ajax.

A timeline of changes to in-service dates can be found in section 6.

3 Meaning of initial and full operating capabilities

Defence equipment programmes often come with two dates: initial operating capability (IOC) and full operating capability (FOC). Exact definitions may vary depending on the programme, but broadly IOC is the minimum level at which the capability can be deployed. This point may also be referred to as the in-service date. FOC is when the full capability can be deployed, meaning all expected units have been accepted into service and personnel are fully trained and able to operate it.

⁵¹ [HCWS652](#), 20 March 2023. Jeremy Quin, then Minister for Defence Procurement, said "it is not possible to determine a realistic timescale for the introduction of Ajax vehicles into operational service with the Army."

⁵² In a press release issued in 2014, General Dynamics said the vehicles will be delivered between 2017 and 2024: [General Dynamics UK awarded £3.5 billion to deliver 589 Scout SV platforms to the British Army](#), 3 September 2014

⁵³ National Audit Office, [The Ajax programme](#), 11 March 2022, HC 1142 2021-22

4.1 Defining IOC and FOC for Ajax

In 2023, the Minister defined IOC as a “trained and deployable squadron”. This is scheduled to be achieved between July and December 2025.⁵⁴

In response to a written parliamentary question, Mr Chalk explained that a deployable combined arms squadron will consist of 27 Ajax vehicles, being a mix of all variants. This will require 50 vehicles to be delivered: 27 for the deployable squadron and 23 to train crews and maintainers. The Minister explained that IOC will be declared when a squadron “is trained, equipped and ready to deploy and be sustained for six months.”⁵⁵ The MOD expects around 115 trained, deployable personnel will be required at IOC as crew.⁵⁶

The Minister defined FOC as “when the Army has trained and converted forces to the Ajax platform to deliver Armoured Cavalry capability to the Deep Reconnaissance Strike Brigade and its two Armoured Brigade Combat Teams.” This is scheduled to be achieved between October 2028 and September 2029.⁵⁷

4.2 Warrior will fill the service gap

The Army intends to use the Warrior tracked infantry vehicle until Ajax comes into service.

The Army had been planning to upgrade Warrior to enable it to remain in service until 2040.⁵⁸ However, in 2021 the MOD scrapped the planned upgrade,⁵⁹ with a view to retiring Warrior from 2025. The new Boxer vehicle will replace Warrior as the Army’s primary mechanised infantry vehicle.⁶⁰

Lt General Nesmith, the deputy Chief of the General Staff, told the Defence Committee in January 2023 that the MOD decided to extend Warrior as a “surrogate platform” for Ajax.⁶¹

⁵⁴ [HCWS652](#), 20 March 2023

⁵⁵ [PQ169217 \[Ajax vehicles\]](#), 20 March 2023

⁵⁶ [PQ 172971 \[Ajax vehicles: Procurement\]](#), 29 March 2023

⁵⁷ [HCWS652](#), 20 March 2023

⁵⁸ [PQ24279 \[Warrior vehicles\]](#), 9 March 2020

⁵⁹ MOD, [Defence in a Competitive Age](#), 22 March 2021, Cm 411

⁶⁰ [PQ80800 \[Boxer vehicles and Warrior vehicles\]](#), 11 November 2022

⁶¹ Defence Committee, [Oral evidence: Land Acquisition](#), 11 January 2023, HC 978 2022-23, q44-47

5

Why the programme has been delayed

“The programme has been running for 12 years but has not delivered a single deployable vehicle to the Army.”

Public Accounts Committee, 2022

The programme has encountered several significant issues which has delayed Ajax’s entry into service. This includes issues with the management of the programme, the effect of excessive noise and vibration on operators, and the integration of the turret. Delays to the Morpheus communications system may also delay the Army’s ability to fully utilise Ajax’s digital capabilities. The MOD has commissioned a QC led independent report into lessons learnt, which is expected to be published in 2023.

The National Audit Office, Public Accounts Committee and Defence Committee have identified multiple causes of delays to the programme in their reports:

- Public Accounts Committee, [Armoured Vehicles: the Ajax programme](#), 3 June 2022
- National Audit Office, [The Ajax programme](#), 11 March 2022
- Defence Committee, [Obsolescent and outgunned: the British Army’s armoured vehicle capability](#), 14 March 2021

The MOD also commissioned and published a [review of noise and vibration](#) in December 2021. This section draws upon all of these reports.

5.1

Historical issues in the procurement of armoured vehicles

The Defence Committee has described the history of the Army’s armoured fighting vehicle capability as “deplorable”. In a report published in March 2021, the Committee expressed “astonishment” that between 1997 and late 2020 the MOD did not deliver a single new armoured vehicle from the core procurement programme.⁶²

The NAO similarly warned in 2011 that the suspension and cancellation of key armoured vehicle projects since 1998 had left the Armed Forces “facing

⁶² With the exception of a small number of armoured engineering and Viking protected mobility vehicles. Defence Committee, [Obsolescent and outgunned: the British Army’s armoured vehicle capability](#), 14 March 2021 HC 659 2019-21

a significant shortage in the principal armoured vehicles they require, until at least 2024-2025.”⁶³

The Defence Committee said its 2021 report “reveals a woeful story of bureaucratic procrastination, military indecision, financial mismanagement and general ineptitude, which have continually bedevilled attempts to properly re-equip the British Army over the last two decades.”⁶⁴

Trevor Taylor, Professorial Research Fellow in Defence Management at RUSI, said the plight of Ajax must be understood in the context of “over 15 years of British Army and Ministry of Defence (MoD) failure to follow through on armoured vehicle projects”, with a loss of expertise in both the industrial and governmental sectors. His analysis finds that all the stakeholders “have contributed to the programme’s shortcomings.”⁶⁵

4 From FRES to Ajax

In 2001 the Ministry of Defence established the Future Rapid Effect System (FRES). This troubled programme replaced two previous programmes, Tracer and MRAV, to provide the army with a new fleet of medium weight armoured vehicles. At one stage estimated to cost £14 billion, it was intended to procure over 3,000 vehicles to replace the CVR(T) and FV 430 series (among others). However, the NAO says prolonged indecision about the exact requirements and a complex procurement strategy delayed progress.⁶⁶

Elements of the programme, the FRES utility vehicle, were suspended in 2008. The MOD pressed on with the FRES-SV (specialist vehicle) element, awarding an initial contract to General Dynamics in July 2010 to prototype “an improved reconnaissance variant called Scout”.⁶⁷ At the time of a 2011 NAO report, this programme was expected to enter service in 2017 with a planned procurement of around 1,300 vehicles.⁶⁸ In 2014 the MOD ordered 589 vehicles from GDLS-UK with a firm-priced contract. In 2015, the programme was renamed Ajax.⁶⁹

⁶³ NAO, “[The cost-effective delivery of an armoured vehicle capability](#)”, HC 1029 2010-12, 20 May 2011

⁶⁴ Defence Committee, [Obsolescent and outgunned: the British Army’s armoured vehicle capability](#), 14 March 2021 HC 659 2019-21

⁶⁵ Trevor Taylor, [Lessons from the Ajax programme](#), RUSI Emerging Insights, 13 May 2022

⁶⁶ NAO, “[The cost-effective delivery of an armoured vehicle capability](#)”, HC 1029 2010-12, 20 May 2011. The report contains a summary of the FRES. Progress of FRES can be tracked via historical annual Major Project Reports by the NAO, for example [Major Projects Report 2007 Project Summary Sheets](#), HC 98-II 2007-2008, 30 November 2007, p177

⁶⁷ [HC Deb 1 July 2010 c47WS](#)

⁶⁸ NAO, [The cost-effective delivery of an armoured vehicle capability](#), HC 1029 2010-12, 20 May 2011

⁶⁹ [PQ 40724 \[Ajax vehicles\]](#), 6 September 2021

Further history of the Army's procurement of armoured vehicles can be found in Commons Library paper [Modernising the Army's armoured vehicles](#), CBP 8186, 2018. The Defence Committee included a case study of the Ajax programme in its [2022 report on the Integrated Review](#) (PDF).⁷⁰

5.2 Overall management of the programme

Ajax is on an “end of life watch”.

John Healey,
Shadow Defence
Secretary,

September 2021

The Defence Committee has described Ajax as “yet another example of chronic mismanagement by the Ministry of Defence and its shaky procurement apparatus.”⁷¹

A report by the National Audit Office in March 2022 was highly critical of the MOD, saying it has “not managed the programme effectively”. The NAO found:

- The Department and GDLS-UK did not understand the scale of work or technical challenge, resulting in insufficient contingency in the programme schedule.
- The Department did not establish effective governance arrangements or the necessary resources to manage the programme.
- The Department and GDLS-UK reset the contract in 2018, but this did not resolve the programme's underlying problems.⁷²

The NAO concluded “the programme faces significant challenges, and it is not yet clear whether the issues are resolvable.”⁷³

The Commons Public Accounts Committee (PAC), drawing on the NAO's report, said in 2022 that the MOD has “once again main fundamental mistakes in its planning and management of a major equipment programme.” Echoing the concerns raised in the NAO report, the committee observed that “12 years after letting the design contract, the Department has no realistic target dates for introducing the Ajax capability.”⁷⁴

⁷⁰ Defence Committee, [The Integrated Review, Defence in a Competitive Age and the Defence and Security Industrial Strategy](#) (PDF), 28 July 2022, HC 180 2022-23

⁷¹ Defence Committee, [Obsolescent and outgunned: the British Army's armoured vehicle capability](#), 14 March 2021 HC 659 2019-21, para 51

⁷² NAO, [The Ajax programme](#), 11 March 2022, HC 1142 2021-22

⁷³ NAO, [The Ajax programme](#), 11 March 2022, HC 1142 2021-22

⁷⁴ Public Accounts Committee, [Armoured Vehicles: the Ajax programme](#), 3 June 2022, HC 259 2022-23

The chair of the committee, Dame Meg Hillier, described the programme as “deeply flawed from the outset” and called on the MOD to either “fix or fail” this programme.⁷⁵

In 2021, the shadow Defence Secretary, John Healey, described Ajax as being “on an end-of-life watch”.⁷⁶

5.3 Complex requirements

One of the causes of the difficulties identified by the NAO was that the MOD’s original requirements were highly specified, and that its management of design changes has led to disputes and delays. The NAO said the MOD and GDLS-UK “under-estimated the scale of work and technical complexity of the Ajax programme.”⁷⁷

In 2021, the Defence Committee criticised the Army complex requirements:

We note that difficulties with the Ajax programme have again arisen in part as a consequence of the Army’s desire to develop a bespoke vehicle capability (albeit one based on an existing but modified ASCOD 2 hull), with a plethora of complex requirements, and the need to integrate a novel weapon system technology.⁷⁸

Discussing Ajax with the Committee in January 2023, Lt General Nesmith, the Deputy Chief of the General Staff, acknowledged that the army “overcomplicated our requirement” for Ajax, with hundreds of key user requirements, some of which changed during the life of the project.⁷⁹

The NAO also found that the reset of the contract in 2018 “did not resolve the underlying problems”. The contract reset was prompted by disputes between the MOD and GDLS-UK over the handling of technical design issues and schedule slippage. While the rest led to some positive changes, the NAO said it also added complexity “with multiple build standards”. GDLS-UK missed its first 11 revised milestones.⁸⁰

In 2021, Jeremy Quin, then Minister for Defence Procurement, acknowledged that the “overlapping of Demonstration and Manufacturing phases added complexity, technical risk and safety risk into the programme”.⁸¹

⁷⁵ Public Accounts Committee, [MOD “failing to deliver the capability Army needs to better protect the nation and meet NATO commitments”](#), 3 June 2022

⁷⁶ [HC Deb 9 September 2021 c487](#)

⁷⁷ National Audit Office, [The Ajax programme](#), 11 March 2022, HC 1142 2021-22

⁷⁸ Defence Committee, [Obsolescent and outgunned: the British Army’s armoured vehicle capability](#), 14 March 2021 HC 659 2019-21, para 54

⁷⁹ Defence Committee, [Oral evidence: Land Acquisition](#), 11 January 2023, HC 978 2022-23,

⁸⁰ National Audit Office, [The Ajax programme](#), 11 March 2022, HC 1142 2021-22

⁸¹ [HCWS260](#), 6 September 2021

Lack of a full-time Senior Responsible Owner

The NAO noted the high turnover of senior personnel, with five senior responsible owners (SROs) in the MOD since November 2011, each serving for approximately two to three years.⁸² The SRO was initially allocated to the programme for 10% of their time, increasing to 30% in 2018.⁸³

In 2021, John Healey, the shadow Defence Secretary, has expressed astonishment at the lack of a full-time SRO:

So for over a decade this Ajax programme, the most costly defence procurement, second only to the deterrent, has had nobody senior responsible who has taken full-time charge. No wonder Ajax is the biggest procurement failure since the Nimrod, and this has happened entirely on this Government's watch. Ministers are failing British forces and failing British taxpayers.⁸⁴

The MOD's 2021 noise and vibration review (the King report) also found the capacity of key project management individuals an issue when it came to safety. The review notes that the SRO raised concerns about the complexity of his portfolio in 2019 whilst negotiating his formal letter of appointment. In 2020 the Army accepted the portfolio was too large and removed one major programme, but the SRO remained responsible for both the Armoured Cavalry (Ajax) and Armoured Infantry (Boxer) programmes.⁸⁵

The King report recommended that the MOD should review key post tenure and succession planning "to minimise the impact of churn on major programme safety case management". The report recommended retaining senior project leaders in post for "either the duration of the project, or a 5-year minimum tenure."⁸⁶

The SRO appointed in October 2021 was the first to be full-time on the programme.⁸⁷

5.4

Issues with the cannon and turret

The Defence Committee criticised the MOD for selecting a "technically unproven and immature 40mm cannon", noting that the cannon's development has "continued to cause technical problems". The Ajax

⁸² National Audit Office, [The Ajax programme](#), 11 March 2022, HC 1142 2021-22; Ministry of Defence, [Ajax noise and vibration review](#), 15 December 2021

⁸³ National Audit Office, [The Ajax programme](#), 11 March 2022, HC 1142 2021-22

⁸⁴ [HC Deb 9 September 2021 c487](#)

⁸⁵ Ministry of Defence, [Ajax noise and vibration review](#), 15 December 2021

⁸⁶ Ministry of Defence, [Ajax noise and vibration review](#), 15 December 2021

⁸⁷ National Audit Office, [The Ajax programme](#), 11 March 2022, HC 1142 2021-22

contractor told the Committee that delays in 2020 were in part caused by challenges integrating the cannon into the vehicle.⁸⁸

The NAO said that before the contract was recast in 2018, the integration immaturity of the 40mm cannon into the turret was an area of concern. However, by 2019 the development of the turret component had matured, and cannons were incorporated in line with the reset agreement.⁸⁹

The MOD intended the 40mm cannon to be the main armament for Ajax and the now cancelled Warrior Capability Sustainment Programme. The NAO noted the cancellation of the Warrior upgrade has removed opportunities for the MOD to share costs of the cannon between the two programmes.⁹⁰

5.5 Noise and vibration issues

Concerns about injuries to soldiers caused by excessive vibration and noise levels were raised within the Army in late 2019, but the NAO found they were not brought to the attention of the Minister for Defence Procurement until November 2020, after he had given [evidence to the Defence select committee](#) the previous month.⁹¹

310 individuals have been exposed to noise and vibration from Ajax vehicles.⁹²

The NAO criticised the MOD's management of health and safety, saying that it "did not create effective mechanisms or incentives to resolve safety issues".⁹³ The Public Accounts Committee said the failures to escalate and address the noise and vibration issues shows that the MOD must "simplify its over-complex safety processes and change behaviours."⁹⁴

The review of noise and vibration by the MOD's Director of Health and Safety was also critical of programme management. In 2021, the Defence Secretary commissioned a safety review. Led by David King, the MOD's Director of Health, Safety and Environmental Protection, the [Ajax Noise and Vibration Review](#) was published on 15 December 2021.

The review contains a detailed account of the project timeline, the emergence and reporting of these issues, and analysis of root causes.

⁸⁸ Defence Committee, [The Integrated Review, Defence in a Competitive Age and the Defence and Security Industrial Strategy](#) (PDF), 28 July 2022, HC 180 2022-23

⁸⁹ NAO, [The Ajax programme](#), 11 March 2022, HC 1142 2021-22

⁹⁰ NAO, [The Ajax programme](#), 11 March 2022, HC 1142 2021-22, figure 11

⁹¹ NAO, [The Ajax programme](#), 11 March 2022, HC 1142 2021-22

⁹² MOD, [Ajax noise and vibration review](#), 15 December 2021

⁹³ NAO, [The Ajax programme](#), 11 March 2022, HC 1142 2021-22, appendix 3

⁹⁴ Public Accounts Committee, [Armoured Vehicles: the Ajax programme](#), 3 June 2022

Cause of noise and vibration

The King review found that noise and vibration issues in the Ajax family of vehicles have both electrical and mechanical origins. These include originating from track, suspension and running gear; the engine and its mounting into the vehicle; quality issues associated with inconsistent routing of cabling, lack of bonding and weld quality; headset performance and integration.⁹⁵

Critical of programme management

The King report is highly critical of the programme management and the MOD's approach to safety. The report concludes that the root cause of causing potential harm to personnel was not a failure of a single individual, but a "a complex combination of the Armed Forces' relationship to harm and weaknesses in MOD's acquisition system."⁹⁶

The report found the "safety is not viewed as an equal partner to cost, schedule and military capability" within the acquisition system, and called for a culture change to ensure the safety is considered within strategic decision-making.⁹⁷

Injuries to personnel

As of 9 December 2021, the MOD had identified 310 individuals who had been exposed to noise and vibration from Ajax vehicles. Of these:

- 238 have returned to duty with no health impact
- 17 remain under specialist outpatient care, some of whom are expected to return to duty with no health impact
- 4 individuals have been discharged, some of whom were for reasons related to hearing loss
- 11 individuals have been recommended for long term restrictions on noise exposure, potentially requiring a limitation in their military duties. 7 of these individuals had pre-existing problems with their hearing before working on Ajax. 4 individuals developed hearing problems whilst working on Ajax.
- 40 declined assessment or had so far been unable to attend.⁹⁸

The Ajax noise and vibration review also notes that while a causal link has not yet been established "it is possible that Ajax may have contributed to the

⁹⁵ MOD, [Ajax noise and vibration review](#), 15 December 2021

⁹⁶ MOD, [Ajax noise and vibration review](#), 15 December 2021

⁹⁷ Ministry of Defence, [Ajax noise and vibration review](#), 15 December 2021

⁹⁸ Ministry of Defence, [Ajax noise and vibration review](#), 15 December 2021

current hearing loss". The report also says none of the individuals exposed to Ajax have had a change in medical grading or have been medically discharged due to vibration.⁹⁹

Providing an update via a written statement in May 2022, then Minister Jeremy Quin said that 13 of the 310 individuals identified as working with Ajax have had long term restrictions on noise exposure recommended "potentially requiring a limitation in their military duties." A further five individuals are under specialist outpatient care for hearing and other Ear, nose and throat (ENT) issues.¹⁰⁰

Future risks: Morpheus

Morpheus is the intended "computing and information system for Ajax. The Morpheus programme has been delayed by at least three years and has had significant cost increases.¹⁰¹ The NAO says this delay means "Ajax's full digital capability will not be available as early as originally anticipated" because the ability to exchange information will be limited until new radios are delivered under the programme.¹⁰²

The PAC has expressed similar concern. The Committee said delays to the Morpheus programme means it will be longer before Ajax has the "enhanced digital and communication systems which are so important to the way in which the Army plans to use the vehicles."¹⁰³

Alex Chalk says Morpheus is not a requirement for Ajax to achieve Full Operating Capability. In December 2022 the Minister said "AJAX will be integrated with the latest version of Bowman and will be upgraded to MORPHEUS alongside other in-service platforms."¹⁰⁴

5.6

Ajax Lessons learnt review

In May 2022 the MOD appointed Clive Sheldon QC to conduct a lessons learnt review of the Ajax programme.¹⁰⁵ The [terms of reference](#) are available online, with the stated aim of the review to "identify lessons and make

⁹⁹ Ministry of Defence, [Ajax noise and vibration review](#), 15 December 2021

¹⁰⁰ [HCWS42](#), 19 May 2022

¹⁰¹ National Audit Office, [The Ajax programme](#), 11 March 2022, HC 1142 2021-22

¹⁰² National Audit Office, [The Ajax programme](#), 11 March 2022, HC 1142 2021-22

¹⁰³ Public Accounts Committee, [Armoured Vehicles: the Ajax programme](#), 3 June 2022

¹⁰⁴ [PQ 98708 \[Ajax vehicles: Le TacCIS programme\]](#), 6 December 2022

¹⁰⁵ Ministry of Defence, [The Ajax lessons learnt review – lead appointed](#), 23 May 2022

recommendations to help Ministry of Defence (MOD) deliver major programmes more effectively in future”.

The terms of reference explicitly states there should be a “particular focus on how MOD shares and elevates issues across the Department and the commands.”¹⁰⁶

The MOD received an initial draft at the end of January 2023. Alex Chalk said the delivery of the final report is up to the Sheldon review. He committed to publishing it “with all expedition” once received, accompanied by a statement to the House.¹⁰⁷

Further reading

- Public Accounts Committee, [Armoured Vehicles: the Ajax programme](#), 3 June 2022
- Trevor Taylor, [Lessons from the Ajax programme](#), RUSI, 13 May 2022
- National Audit Office, [The Ajax programme](#), 11 March 2022
- Defence Committee, [Obsolescent and outgunned: the British Army's armoured vehicle capability](#), 14 March 2021
- Commons Library paper [Modernising the Army's armoured vehicles](#), CBP 8186
- National Audit Office, [The cost-effective delivery of an armoured vehicle capability](#), HC 1029 2010-12, 20 May 2011

¹⁰⁶ Ministry of Defence, [The Ajax lessons learned review – terms of reference](#), 23 May 2022

¹⁰⁷ [HC Deb 13 March 2023 c533](#)

6 Timeline of changes to in-service dates

Defence Ministers have made regular statements to Parliament on the effect of noise and vibration on personnel and trials. This section includes the main written and oral statements.

March 2010

The Labour Government selects General Dynamics as the preferred bidder for its specialist vehicle competition, beating rival bidder BAE Systems.¹⁰⁸ The company later says the vehicles will be delivered to the Army between 2017 and 2024.¹⁰⁹

July 2010

The Coalition Government awards demonstration contract to GDLS-UK for a new armoured combat vehicle to replace the existing CVR(T) vehicles.¹¹⁰ According to the NAO, at the time the MOD expected the in-service date to be 2017.¹¹¹

The demonstration phase contract was for GDLS-UK to develop a common base platform for the six variants and training for the initial operating capability. It is distinct from the manufacture phase contract.

September 2014

The MOD awards a manufacturing contract to GDLS-UK worth £3.5 billion (excluding VAT) for 589 Scout specialist vehicles. Michael Fallon, then Defence Secretary, says a brigade will be ready to deploy from the end of 2020.¹¹²

January 2015

The MOD gives a planned initial operating capability date of July 2020, with the first brigade fully equipped with Scout vehicles from the end of 2020. The full operating capability is expected in 2025 with the three brigades equipped with the vehicles.¹¹³

¹⁰⁸ [HL Deb 22 March 2010 c93WS](#)

¹⁰⁹ General Dynamics, [General Dynamics UK awarded £3.5 billion to deliver 589 Scout SV platforms to the British Army](#), 3 September 2014

¹¹⁰ [HC Deb 1 July 2010 c47WS](#)

¹¹¹ National Audit Office, [The Ajax programme](#), 11 March 2022, HC 1142 2021-22. This date is also given in Ministry of Defence, [Ajax noise and vibration review](#), 15 December 2021

¹¹² [HC Deb 3 September 2014 c20WS](#)

¹¹³ [PQ 220066 \[Armoured Fighting Vehicles\]](#), 12 January 2015

June 2016

General Sir Nicholas Carter, then Chief of the General Staff, tells the Defence Committee he expects to have an initial operating capability around 2021 with full operating capability “towards 2025.”¹¹⁴

December 2016

The Defence Secretary outlines proposed changes to the Army, with the creation of two Strike Brigades equipped with Ajax vehicles. A new Strike Experimentation Group in Warminster will be launched in 2017 to “ensure that the first new Strike Brigade will be formed by the end of the decade.”¹¹⁵

December 2018 and May 2019

Negotiations with the prime contractor to reset the contract were held. The forecast initial operating capability was delayed by a year to 30 June 2021 (at 50% confidence), with 90% confidence for September 2021.¹¹⁶

November 2020

The Minister for Defence Procurement is made aware of concerns about noise and vibration.¹¹⁷

December 2020

MOD pauses payments to GDLS-UK.¹¹⁸

June 2021

Jeremy Quin, then Minister for Defence Procurement, responds to an urgent question from the shadow Defence Secretary, John Healey. The Minister says “by the end of next week, we will have received the requisite number of vehicles to meet IOC.” However, discussing noise and vibration concerns, the Minister said “we will not take anything into IOC until we are satisfied that we are getting the kit that we require.”¹¹⁹

In a written answer to a parliamentary question, the Minister says all Ajax mobility trials and training are paused on 25 June “as a precautionary measure due to noise and vibration concerns.”¹²⁰

September 2021

In a written statement, Jeremy Quin informs the House that a report is underway by the MOD’s Director of Health and Safety into the health and

¹¹⁴ Defence Committee, [SDSR 2015 and the Army](#), 19 April 2017, HC 108 2016-17, [oral evidence 14 June 2016](#), q63-70.

¹¹⁵ [HCWS367](#), 15 December 2016

¹¹⁶ [HC Deb 8 June 2021 c821](#)

¹¹⁷ National Audit Office, [The Ajax programme](#), 11 March 2022, HC 1142 2021-22

¹¹⁸ [HCWS652](#), 20 March 2023

¹¹⁹ [HC Deb 8 June 2021 c821](#)

¹²⁰ [PQ 28978 \[Ajax vehicles: testing\]](#), 12 July 2021

safety aspects of the noise and vibration concerns. He identified the likely key themes of the report, and provided information on personnel affected. He said all dynamic testing and training remains paused. The Minister also indicates the MOD is not able to set a revised in-service date:

I have made clear that no declaration of Initial Operating Capability will be made until solutions have been determined for the long-term resolution of the noise and vibration concerns.

[...]

Until a suitable suite of design modifications has been identified, tested and demonstrated, it is not possible to determine a realistic timescale for the introduction of Ajax vehicles into operational service with the Army. We will not accept a vehicle that is not fit for purpose.¹²¹

The Minister gives an oral statement on the programme on 9 September. He reaffirms that the MOD had a “robust, firm price contract with General Dynamics under which it is required to provide the vehicles as set out in the contract for the agreed price of £5.5 billion.”¹²²

October 2021

In a written statement the Minister provided further information on the review and the number of personnel affected.¹²³

December 2021

Publication of noise and vibration review from the MOD’s Director of Health, Safety and Environmental Protection.

March 2022

In a written statement, Jeremy Quin provides an update on implementation of the recommendations of the report and personnel and noise exposure. He also announced that Clive Sheldon QC will lead an independent follow-on lessons learned review. He says it remains not possible “to determine a realistic timescale for the introduction of Ajax vehicles into operational service with the Army.”¹²⁴

May 2022

A written statement provides updates on User Validation Trials and number of personnel affected.¹²⁵

¹²¹ [HCWS260](#), 6 September 2021

¹²² [HC Deb 9 September 2021 c485](#)

¹²³ [HCWS322](#), 18 October 2021

¹²⁴ [HCWS739](#), 29 March 2022

¹²⁵ [HCWS42](#), 19 May 2022

October 2022

A written statement provides updates on the resumption of User Validation Trials.¹²⁶

March 2023

David Williams, the MOD's Permanent Secretary, tells the Defence Committee that the MOD is in the "final stages of cross-government agreement for the reset of the IOC and FOC dates", and expects to have them by Easter recess (March/April 2023).¹²⁷

On 20 March 2023, Alex Chalk, the Minister for Defence Procurement, [announces in a written statement](#) that the MOD had agreed a revised schedule for delivery with General Dynamics and had resumed payments. Initial operating capability will be in the latter half of 2025, with full operating capability towards the end of the decade, between October 2028 and September 2029.¹²⁸

Further timelines are available in the Ajax Noise and Vibration Review and the NAO's [Ajax programme](#) report.

¹²⁶ [HCWS332](#), 20 October 2022

¹²⁷ Defence Committee, [Oral evidence: MOD Annual Report and Accounts](#), 21 February 2023, HC 1119 2022-23, q127-128

¹²⁸ [HCWS652](#), 20 March 2023

The House of Commons Library is a research and information service based in the UK Parliament. Our impartial analysis, statistical research and resources help MPs and their staff scrutinise legislation, develop policy, and support constituents.

Our published material is available to everyone on commonslibrary.parliament.uk.

Get our latest research delivered straight to your inbox. Subscribe at commonslibrary.parliament.uk/subscribe or scan the code below:



 commonslibrary.parliament.uk

 [@commonslibrary](https://twitter.com/commonslibrary)