

# The United Kingdom's Military Capability 2020

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**The United Kingdom remains a potent military power in Europe, and inter-state military conflict is recognised as a top threat.<sup>1</sup> The latest security and defence reviews have emphasised gearing the UK's armed forces towards great power competition, with Russia considered as the most immediate military concern. Compared to the Cold War, Britain's armed forces are much diminished, and under significant budget pressure, but the country retains a wide range of high-end capabilities that would become available in a conflict in Northern Europe.**

## Security and defence policy

The UK has endured political instability in recent years, but since the clear 2019 Conservative party election victory the country has a government with a strong mandate. The Covid-19 pandemic's economic toll was heavy in 2020, but little suggests the government will change as a result. However, Brexit divides the kingdom and the full consequences will only be apparent in some years. Security and defence policy has drifted into the background, with a lack of public debate, but is also less directly affected by Brexit than many other areas. There has been widespread disagreement, in the wake of the campaigns in Iraq and Afghanistan, regarding the interventionist policies pursued by governments since 2001. However, the support for an important UK role in European defence is generally intact.<sup>2</sup>

The UK has long tried to maintain a degree of global presence, but decreased financial means have made this challenging. With the promotion of the 'Global Britain' concept, the government re-established some naval presence 'East of Suez', but the naval support facility in Bahrain, for example, is largely symbolic.<sup>3</sup>

Defence reviews in recent years have emphasised the return of great power competition, with Russia and China

considered to be antagonistic actors. In coming years, this focus will likely continue. Terrorism remains an important threat consideration, but as such now appears to be receding in the shadow of inter-state conflicts.

To maintain its great power status, the UK follows two guiding principles in its security policy: preserve the special relationship with the United States, and maintain the country's prominent position in NATO. The UK-US relationship has been strained in recent years, with some observers citing a lack of "common projects" between the countries as evidence of uncertainty in the relationship, especially for the future.<sup>4</sup> Other observers have argued that the UK should have military capabilities that allow it to act more autonomously, but given the UK's dependency on the US, this would require significant investment.<sup>5</sup> The main reason NATO is so important for Britain is the understanding that the country cannot go it alone, and that solidarity within the Alliance is of paramount importance.<sup>6</sup> The UK therefore remains an active NATO member and promotes reform within the Alliance.

The UK also cooperates with the EU, on for example the Common Security and Defence Policy (CSDP) and the European Defence Fund (EDF).<sup>7</sup> The country maintains significant defence relationships with France and Germany,

1 The UK has three levels of threats, where tier one (top) refers to the most dangerous threats.

2 See also Rossbach, Niklas and Engvall, Johan, *Säkerhetspolitiska konsekvenser av Brexit*, FOI Memo 6560 (Stockholm: Swedish Defence Research Agency – FOI, 2018).

3 Only one frigate is continually deployed there.

4 Freedman, Lawrence, 'RUSI Conference "Britain in a changing world"', RUSI, 10 February 2020.

5 Freedman, 'RUSI Conference'; Chalmers, Malcolm, *Taking control: Rediscovering the centrality of national interest in UK foreign and security policy*, Whitehall Report 1-20 (London: Royal United Services Institute–RUSI, 2020), p. 9; 'The special relationship: A weaker post-Brexit Britain looks to America', *Economist*, 30 January 2020; Barrie, Douglas, *UK defence review: Repent at leisure*, IISS, 31 January 2020, p. 2.

6 Ben Wallace, Ben, 'RUSI-held pre-election debate on defence, 28 November 2019'; HM Government, *National Security Capability Review* (London: Cabinet Office, 2018), p. 8.

7 Mills, Claire, *Brexit and UK defence: An explainer*, House of Commons, 2 June 2020, p. 6.

and the 'Five Eyes' intelligence community remains important, alongside the country's Commonwealth ties.<sup>8</sup>

The 2015 Strategic Defence and Security Review (SDSR) adjusted the UK's security policy towards deterrence of and defence against state adversaries.<sup>9</sup> An important target was Joint Force 2025 – aiming the armed forces at being able to deploy an expeditionary force of 50,000 sailors and soldiers by 2025. Depending on the mission, this force would consist of a maritime task group centred on one of the new aircraft carriers with F-35B aircraft on board; one land division of three brigades; an air group of combat, transport and surveillance aircraft; and a special forces group.<sup>10</sup> An interim defence review was published in 2018; its priorities were to improve current force readiness, and invest in new high-tech equipment.<sup>11</sup>

New security and defence strategies were published in March 2021.<sup>12</sup> They continued the last reviews' focus on state vs. state competition, and the armed forces' move away from counter-insurgency and peacekeeping operations. They also introduced an Indo-Pacific tilt, at least diplomatically, to reflect that region's increased importance. The armed forces were instructed to reduce mass, in favour of a significant technology focus, but also to maintain their prioritisation of Europe. The documents' impact on the UK will however not become readily apparent until in a few years' time. The armed forces are still in the midst of procuring several expensive new platforms, among them combat aircraft (F-35) and armoured vehicles, which strain the defence budget and will continue to do so in coming years.

## MILITARY EXPENDITURES

The UK is in the top ten of defence spenders in the world, but because of a mismatch between ambitions and funds, the MoD has been hard-pressed for many years. Since the early 2000s, military expenditures have mirrored the UK's involvement in Afghanistan and Iraq, so that with the downscaling of these wars, expenditures decreased. The financial crisis of 2008, and the government's austerity budgets, also took a heavy toll, with the result that the defence budget was close to falling under the NATO

guideline of spending two percent of GDP. However, as a result of Russia's war in Ukraine, and an improved UK economy, military expenditures have increased modestly again from 2015. Before the Covid-19 pandemic, the government stated it would continue to meet the NATO guideline of spending two percent of GDP on defence, and the budget round of 2019 indicated a 2.6 percent real term increase annually.<sup>13</sup> It is an open question, however, whether such a high rate of increase will be reached and sustained during coming years.

The projection for 2021, below, is based on British defence budget data. With the decline in the UK's GDP caused by the pandemic and worsened by Brexit, expenditure as share of GDP will increase to higher levels in 2020–2021. The projections for the following years are therefore based on the assumption that military expenditure as a percentage of GDP will gradually decline, though remaining far higher than 2 per cent, during 2022–2025, and lie at a level that is comparable to the allocations made to defence before the outbreak of the corona virus. In November 2020, the government announced further increases of the defence budget by GBP 16.5 billion up until 2024. Together with a previous pledge, the latest announcement means the budget will rise about 10–15 percent in the coming years, and according to the government reach around 2.2 percent of GDP.<sup>14</sup> The spending of two percent of GDP on defence is considered important for the UK's international standing, especially regarding its relationship with the US, but also with the EU. The UK also meets the NATO guideline of spending at least 20 percent of the defence budget on equipment.

Nevertheless, the UK's political leadership has long been accused of harbouring strategic ambitions that are not matched by its willingness to adequately fund them. These ambitions require, for example, expensive assets for interventions overseas and nuclear deterrence, which consume a considerable share of the defence budget, particularly when they need to be modernised. Systemic underfunding has also been exacerbated by the MoD's arduous procurement process, which is often slow and inefficient. An "affordability gap" has steadily developed in recent years, much

8 See Lancaster House Treaties of 2010 for more on UK-France defence relationship, HM Government, 'Ten years of the Lancaster House Treaties'.

9 HM Government, *National Security Strategy and Strategic Defence and Security Review: A Secure and Prosperous United Kingdom* (London: The Stationary Office, 2015); Chalmers, Malcolm and Jesset, Will, *Defence and the Integrated Review: A Testing Time*, Whitehall Report 2-20 (London: RUSI, 2).

10 HM Government, *National Security Strategy*, p. 28–30.

11 Ministry of Defence, *Mobilising, modernising & transforming defence: A report on the Modernising Defence Programme*, 2018, 12.

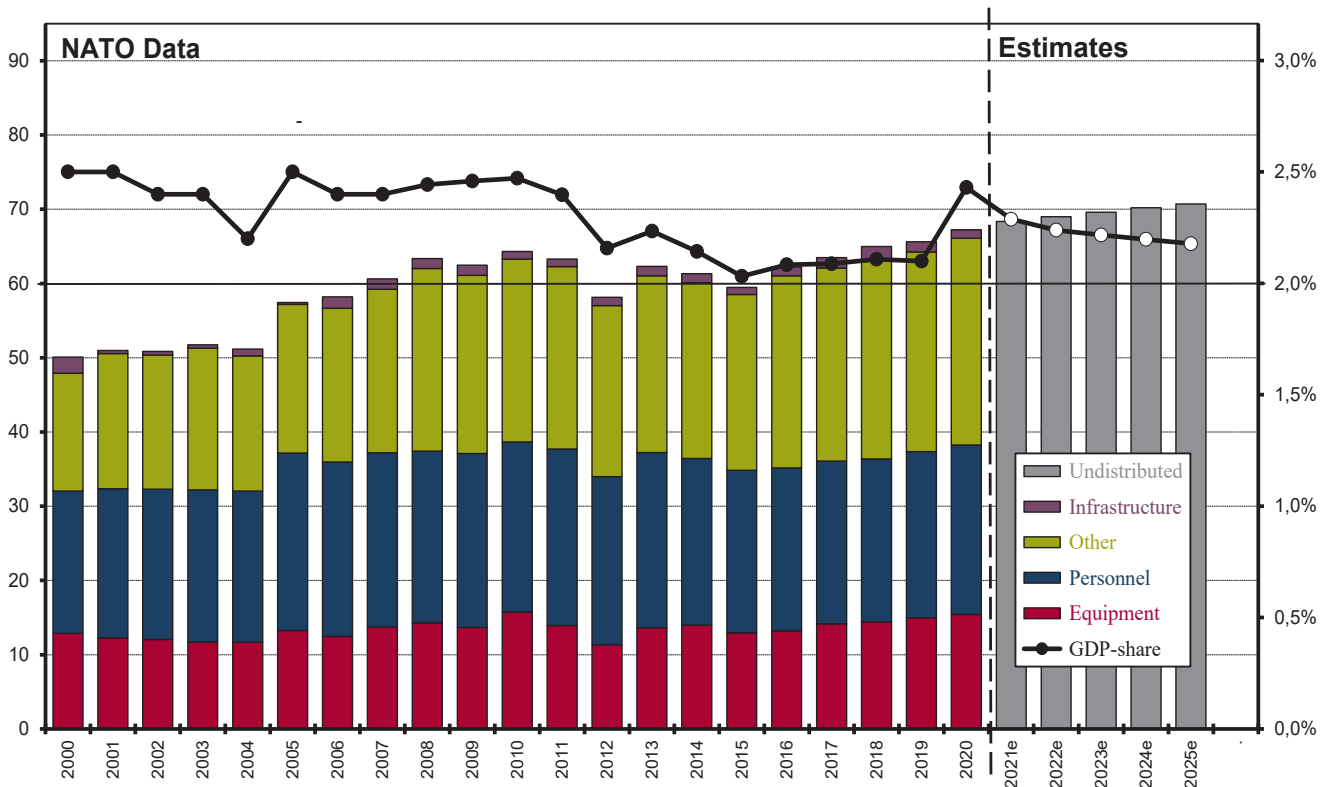
12 HM Government, *Global Britain in a Competitive Age: The Integrated Review of Security, Defence, Development and Foreign Policy* (London: The Stationary Office, 2021); HM Government, *Defence in a competitive age* (London: The Stationary Office, 2021).

13 HM Treasury, *Spending Round 2019*, p. 13.

14 HM Government, 'PM statement to the House on the Integrated Review', 19 November 2020; Chuter, Andrew, 'UK to boost defense budget by \$21.9 billion. Here's who benefits – and loses out', *Defence News*, 19 November 2020.

Billions of US dollars

Share (%) of GDP



**Figure:** The military expenditures of the United Kingdom 2000-2025: Billions of US Dollars/2015 prices (columns) and as share (%) of GDP (curved line).

**Source:** Bergstrand, Bengt-Göran, *NATO military expenditures*, Working Document (Stockholm: Swedish Defence Research Agency - FOI, October 2020).

**NB:** Estimates based on budget data for 2021 and on the assumption that the UK will spend around 2.2% of GDP on defence in 2022-2025.

worsened due to several ongoing large equipment acquisitions, planning for equipment updates, and exchange rate fluctuations.<sup>15</sup> The economic fallout from the 2020 Covid-19 pandemic seems likely to further widen the gap between ambitions and funding.<sup>16</sup> The government's November 2020 announcement has assuaged some of the fear of ending up underfunded. However, it is still uncertain how the new funding will affect force readiness and the availability of newer equipment and platforms, and to what extent the advertised reforms will be realisable.

## ARMED FORCES

The armed forces' most important missions are to defend the UK and Overseas Territories, provide the nuclear deterrent, and reinforce international security and the capacity of allies, partners and multilateral institutions.<sup>17</sup>

The armed forces employ 132,000 regular personnel, spread across the country and a few overseas bases, and has 84,000 reserve personnel. The armed forces' professional head is the Chief of the Defence staff (CDS), who serves as the government's main military advisor, and head of operations. The main joint command is Strategic Command (StratCom), located in Northwood, outside

15 National Audit Office, Comptroller and Auditor General, *The equipment plan 2018–2028*, HC 1621 Session 2017–2019, 5 November 2018 (London: National Audit Office, 2018); National Audit Office, Comptroller and Auditor General, *The equipment plan 2019–2029*, HC 111 Session 2019–2020, 27 February 2020 (London: National Audit Office, 2020).

16 Ripley, Tim and Shipman, Tim, 'Coronavirus: Financial crash could blow £4 bn in defence budget', *The Times*, 31 May 2020.

17 HM Government, *National Security Strategy*, p. 28–30.

London, with both operational and enabling responsibilities, including the Permanent Joint Headquarters (PJHQ), Standing Joint Force Headquarters (SJFHQ), Directorate of Special Forces, Defence Intelligence, Defence Medical Services, and Joint Force Development, as well as a number of other support functions. The PJHQ commands joint military operations and provides policy-aware military advice to the MoD. In a contingency however, the SJFHQ, that provides operational level deployable command and control capability, would likely play a key role in the initial planning and deployment of forces.<sup>18</sup>

## Army

The British Army employs approximately 73,000 soldiers, which is around 10 per cent below the 2015 personnel target.<sup>19</sup> The Army's HQ is located in Andover, in England's southwest. The Army is divided into the Field Army and Home Command, with the Field Army responsible for deployments and operations, while Home Command serves as an enabler to the field army, mainly through recruitment and training.<sup>20</sup>

The Army currently consists of three divisions: the 1st Division with light infantry, the 3rd Division with mechanised units, and the 6th Division with combat support. Outside the division structure, the 16th Air Assault brigade is the Army's rapid response force.

The 1st Division, headquartered in York, consists of six infantry brigades, one logistics brigade, and one specialised infantry group, spread out across the UK.<sup>21</sup> The division is made up of approximately 50 per cent regulars and 50 per cent reserves, and is not designed to be the first responding unit in a contingency. Only one brigade in the division is maintained at readiness.<sup>22</sup> The other brigades require mobilisation and extensive preparations before deployment.<sup>23</sup>

The 3rd Division, headquartered in Wiltshire, is the only UK division at continual operational readiness, with

all brigades manned and equipped, in contrast to the 1st Division. The 3rd is made up of three mechanised brigades, one logistics brigade, and support units for artillery, logistics and air defence.<sup>24</sup>

The 6th Division, also headquartered in Wiltshire, provides combat support through its Intelligence Surveillance and Reconnaissance (ISR), Electronic Warfare (EW), and cyber warfare capabilities.<sup>25</sup> The division consists of two signal brigades, one ISR brigade, one brigade for psychological operations, and one specialised infantry group.<sup>26</sup> Within the division, one signal regiment supports the Army's high readiness units, such as the PJHQ's deployable Joint Forces HQ and the air assault task force.<sup>27</sup> Other units in the division that are comprised of regular soldiers, such as the artillery regiments and the military intelligence battalions, also likely have high readiness.<sup>28</sup>

The 16th Air Assault Brigade is the Army's airborne rapid reaction force, with light infantry, and its HQ in Colchester. The brigade's main responsibility is to deliver a high-readiness battle group for worldwide deployment, and includes the 2nd and 3rd Parachute Battalions.<sup>29</sup>

Additionally, the Joint Helicopter Command (JHC) answers to the Commander Field Army. The JHC brings together the battlefield helicopters from the Army Air Corps, the Navy and the RAF, and is responsible for supporting the joint force with lift, reconnaissance, and attack capabilities.<sup>30</sup>

The Army's main materiel is comprised of the Challenger 2 Main Battle Tank (MBT), the Scimitar, Warrior and Mastiff Armoured Personnel Carriers (APC), and the AS90 155mm self-propelled artillery.

However, the Army faces an equipment modernisation challenge – currently procuring large numbers of platforms, and also updating legacy systems. The Army has ordered, for example, 508 Boxer MRAV (Multi-Role Armoured Vehicle) and 589 Ajax AFV (Armoured Fighting Vehicle). Initial operating capability with the Boxer

18 See Ministry of Defence, 'Strategic Command: About us', 2020; Strategic Command was previously called Joint Forces Command.

19 FTTTS (Full-time trade trained strength). Ministry of Defence, 'UK Armed Forces: Quarterly Service Personnel Statistics', 1 October 2019.

20 British Army, 'Command Structure'.

21 The specialised infantry group works closely with partner countries' forces. See British Army, 'Specialised Infantry Group'.

22 British Army, '1st (United Kingdom) Division'.

23 Defence Suppliers Directory, '1st (United Kingdom) division'.

24 British Army, '1st (United Kingdom) Division'.

25 British Army, '6th (United Kingdom) Division'.

26 The specialised infantry group works closely with partner countries' forces. See British Army, 'Specialised Infantry Group'.

27 British Army, '6th Division: 1st Signal Brigade'; British Army, '30 Signal Regiment'.

28 British Army, '6th Division: ISR Brigade'.

29 British Army, '16th Air Assault brigade'.

30 British Army, 'Joint Helicopter Command'.



vehicles is expected 2023, and with the Ajax vehicles in 2020, with delivery of the vehicles expected to finish in 2024.<sup>31</sup> The Army also plans to upgrade 380 of the Warrior IFVs, and probably 148 of the Challenger 2s.<sup>32</sup> The Challenger has not received a major upgrade since 1998, whilst comparable forces' MBTs have gone through several, and the upgrade aims to ensure use until 2035.<sup>33</sup> The government's November 2020 budget announcement indicated that some of the older platforms might be reduced in quantity, and the upgrades to the armoured vehicles appear likely to be affected by this.

The Joint Helicopter Command operates the AH-64D Apache attack helicopter, and various support helicopters. Fifty new Apache AH-64Es will enter service from 2022. The Army has short-range air defence in the form of the aging Starstreak and Rapier, but the new medium-range air defence system called Sky Sabre is planned to enter service in the early 2020s.<sup>34</sup> Sky Sabre will be operated by the 7th Air Defence Group, within the 3rd Division.<sup>35</sup>

In the 1990s and 2000s, the Army adjusted towards lighter expeditionary operations, and significantly downgraded many capabilities for high-intensity conflict, for example by reduced quantities of heavy materiel. Thus, as shown in Table 2 below, these platforms exist in modest numbers. Especially artillery is insufficient.<sup>36</sup> The Army was also extensively deployed in Africa and the Middle East, and additional funding did not match the extent of these commitments.

Since 2015, the Army has made a concerted effort at readjusting towards great power competition. Although it is likely the Army would be able to fill up selected units for a contingency, lower personnel numbers and less equipment suggest the army would be hard-pressed to sustain any operations at scale for any longer duration of time, especially against a peer competitor. The equipment mo-

dernisation process is also having a negative effect on the Army's overall capability. The new and updated platforms will be more capable than previous versions, but the lower numbers reveal the issue of insufficient mass for a high-intensity fight.

The Army's main challenge, now and in coming years, is to maintain and, if possible, increase force strength, and equip the forces with contemporary materiel. As the new fighting vehicles, Ajax and Boxer, start being delivered, some steps will be taken towards the envisaged 'strike brigades'.<sup>37</sup> However, as indicated above, the Army's modernisation challenge is significant, and even with the extra funding in 2020, it will most likely continue to just muddle through, rather than achieve any significant forward strides. Indicatively, in October 2020 the MoD revealed that the 2025 target of being able to deploy one full warfighting division has been delayed until the early 2030s.<sup>38</sup>

## Navy

The Royal Navy employs approximately 29,000 sailors, of which 6000 are Royal Marines. The Navy's HQ is located at naval base Portsmouth, which is home to the fleet battle staff. The Navy is divided into the Surface Fleet, Submarine Service, Fleet Air Arm, Royal Marines (RM), and the Royal Fleet Auxiliary (RFA).

The Navy has three bases: Portsmouth, Devonport, and Clyde (Faslane). Portsmouth is the largest and most important base, with two-thirds of the Surface Fleet based there, including the two aircraft carriers, the *HMS Queen Elizabeth* and *HMS Prince of Wales*. The rest of the Surface Fleet is based at Devonport, and the submarine fleet at Clyde, in Scotland.<sup>39</sup> One frigate is also continually deployed to naval support facility Mina Salman, in Bahrain. The Fleet Air Arm supports the Navy, mainly through helicopters, and is located at two air stations at Culdrose and

31 Ministry of Defence, 'New high-tech Army reconnaissance vehicles built in Merthyr Tydfil', 28 August 2019; Coupe, Georgina, 'All the gen on the Ajax Military Vehicle', *Forces.net*, 21 October 2019; Ripley, Tim, 'Ajax deliveries to British Army delayed', *Jane's Defence Weekly*, 16 January 2020; HM Government, '£2.8bn armoured vehicle contract secured for British Army', 5 November 2019.

32 Watling, Jack, 'Britain's declining tank numbers highlight a wider problem', RUSI, 2019.

33 Chuter, Andrew, 'Will the stars finally align to upgrade Britain's "obsolete" tanks?', *Defense News*, 5 June 2019.

34 Ministry of Defence, 'British Army's new air defence missile blasts airborne target by Baltic Sea'.

35 It is unknown how many units the UK will finally procure.

36 Watling, Jack, *The Future of Fires: Maximising the UK's Tactical and Operational Firepower* (London: RUSI, 2019).

37 The 2015 defence review envisaged establishing these new brigades to increase the UK's ability to deploy over long distances, but the delay in vehicle delivery has diverted focus from them. HM Government, *National Security Strategy*, p. 31; Chuter, Andrew, 'British Army admits more delays in fielding enough combat forces', *Defense News*, October 12 2020.

38 Chuter, 'British Army admits'. In the 2015 strategy (SDSR), the readiness of this warfighting division is not mentioned.

39 Both the sub-surface nuclear attack (SSN) and the sub-surface ballistic nuclear (SSBN) submarines are based at Clyde.

Yeovilton, both in southwest England.<sup>40</sup> The RFA is the civilian branch of the Navy, and provides logistics and operational support.<sup>41</sup>

The Royal Marines (RM) are the Navy's elite amphibious unit and consist of the 3rd Commando Brigade, with three battalions spread across the UK, and the RM's Special Forces unit, the Special Boat Service (SBS).<sup>42</sup> The battalions are kept at high readiness, and two out of three battalions are commonly deployed overseas, while one is on home soil.

Similar to the Army, the Navy is undergoing a large and expensive platform modernisation that pressures the defence budget. In the surface fleet, the current workhorses include the 13 Type-23 frigates, and the six comparatively new Daring-class destroyers, with service entry in 2013. The Type-23 frigates entered service primarily in the 1990s, and will retire in the early 2020s. The government has confirmed it will replace them with 8 Type-26 frigates, and 5 Type-31 frigates.<sup>43</sup>

The Navy has six attack submarines (SSN) and four ballistic missile submarines (SSBN), all of them nuclear-powered and the latter responsible for UK's nuclear deterrence. The Navy is replacing the old Trafalgar SSNs with the new Astute class, of which seven are planned to be built. The current Vanguard SSBNs are planned to be replaced by the Dreadnought class, but not until the 2030s.

The Navy plans to declare initial operating capability of the first of the new aircraft carriers, the *HMS Queen Elizabeth*, in late 2020. Her first operational deployment is planned for 2021 and she is then expected to carry one squadron of UK F-35Bs, and one squadron of US Marine Corps F-35Bs.<sup>44</sup> Full operating capability is expected in 2023, with two UK squadrons on board. The second carrier, the *HMS Prince of Wales*, is expected to reach initial operating capability in 2023. The Navy also has two amphibious assault ships, the Albion class, primarily for use by the Marines.

Regarding transport, The Royal Fleet Auxiliary (RFA), the civilian support fleet owned by the MoD, has several

relevant vessels. Most important are the three Bay-class amphibious ships that each can transport 24 Challenger 2 tanks and 350 ground troops.

Similar to the Army, the Navy has been heavily affected by the defence reviews of recent decades. Even in 2010, there were 71 surface vessels, but now only 60. The procurement process, too, has had an outsized effect on the service's health. Especially noteworthy is the submarine programme, and particularly the nuclear deterrent submarine, which is and will continue to press the Navy's and the wider MoD's budgets in coming years.<sup>45</sup> When full operating capability of the new aircraft carriers is achieved, the Navy may also face a new capacity gap, as it needs to field enough ships to escort the carriers. Although there are indications that other countries may try to help to fill capacity gaps with their own ships accompanying the new carriers, this may prove insufficient.<sup>46</sup> Additional procurement, as announced by the government in November 2020, may eventually remedy the Royal Navy's situation, but in the short-term, the recent years of high rates of cannibalisation of ships for spare parts in the current platform stock makes the likelihood that the Navy will actually have enough working ships to meet all its commitments seem modest.<sup>47</sup>

#### Air Force

The RAF employs approximately 30,000 airmen, with its HQ in High Wycombe, northwest of London. The RAF has over 30 air stations across the UK, and in Cyprus and Gibraltar, but most of these are small. Across these air stations, the RAF has 5 frontline squadrons of Eurofighter Typhoons, and one squadron of F-35Bs, all with 12 fighter aircraft in each unit. Additionally, the RAF has ISR, electronic intelligence (ELINT), maritime patrol (MPA), airborne early warning and control systems (AWACS), search and rescue, and tanker and transport aircraft. Several multi-role helicopters also make up the aircraft fleet.<sup>48</sup>

The RAF's combat aircraft include 153 Eurofighter Typhoons, and 18 F-35Bs. The RAF retired its Tornado

40 In 2021, the Navy's 809 Air Squadron is planned to be the first naval squadron to operate the F-35B, which will serve on board the carriers. See Royal Navy, '809 Naval Air Squadron'.

41 Royal Navy, 'Royal Fleet Auxiliary'.

42 Royal Navy, 'Royal Marines'.

43 See HM Government, 'PM statement to the House'. The Type-26 frigate's main role is ASW and air defence, while the Type-31 is a general purpose frigate.

44 The UK has also announced that US Marine Corps F-35Bs might be aboard the UK carrier on its first deployment. Walker, Nigel et al., *Carrier strike strategy and its contribution to UK defence*, Debate Pack, CDP-0050 (2019), 25 February 2019 (London: House of Commons, 2019), p. 2–3.

45 Ministry of Defence, *Defence Equipment Plan 2018*; Bond, David and Pfeifer, Sylvia, 'Nuclear Submarines threaten to sink UK defence budget,' *Financial Times*, 2 January 2019.

46 'Dutch warship to join HMS Queen Elizabeth on first operational deployment,' *Navaltoday.com*, 24 October 2018.

47 It is unclear whether or how much this has improved since the report's launch in late 2017. See National Audit Office, *Investigation into Equipment Cannibalisation in the Royal Navy*, 11 January 2017, p. 3.

48 International Institute for Strategic Studies (IISS), 'Chapter Four: Europe', in *The military balance 2020*, p. 157–162.

jet fleet in 2018, and has received its final Typhoon jet.<sup>49</sup> The Tornado was a workhorse of the aircraft fleet, and its missions have now been transferred to the Typhoon and the F-35. The UK has announced it intends to buy a total of 138 F-35s, the first 48 being the B-variant.<sup>50</sup>

The transport aircraft fleet includes the A400M, the C-17, and C-130J. The A400M has experienced introduction and maintenance issues in recent years, and at one point, due to engine problems, only a few were airworthy.<sup>51</sup> Similar to the situation in Germany, however, it is likely that this has already improved.

The RAF supports the other services via its maritime surveillance P-8 Poseidon aircraft (2 in stock), and its ISR aircraft, of which 4 Sentinel and 5 Shadow.<sup>52</sup> ELINT is provided by 3 RC-135W aircraft, airborne early warning and control (AEW&C) by four E-3D Sentries. The RAF is procuring a total of nine P-8 for the MPA and anti-submarine warfare (ASW) role. The Sentinel is planned to be retired in 2021, due to budget savings, and it is unclear what will be able to replace it.<sup>53</sup> The E3-D is planned to be replaced by the E-7 Wedgetail, with first deliveries starting 2023.<sup>54</sup> The RAF also operates 9 Reaper unmanned aerial vehicles (UAV), which are planned to be replaced by the Protector UAV by 2024.<sup>55</sup>

The RAF shares many challenges with the other services. Since the early 1990s, the number of combat aircraft has been roughly halved, and its personnel reduced by around 60 per cent.<sup>56</sup> The operational demands on the service, however, have continually been high.<sup>57</sup> The combat aircraft now in the RAF's inventory, coupled with the precision-guided munitions (PGM) they carry, give the RAF a sharp end.<sup>58</sup> However, the RAF's small mass suggests it could probably not sustain itself for long, perhaps not even

for a limited conflict, against a great power. Additionally, it appears the service has insufficient stocks of ammunition, has suffered cannibalisation for parts on some aircraft, and has not trained enough for a high-intensity conflict.<sup>59</sup> The high operational tempo has also eroded its readiness, and if the tempo is maintained, will continue to do so.<sup>60</sup> The RAF is also facing significant costs in maintaining and upgrading its current platform stock, whilst also procuring new aircraft, especially the F-35.

Notwithstanding the above, the RAF appears to be in a better position than the other services. Its most significant challenge in coming years appears to be to receive, test and successfully integrate the new F-35, which although late, appears to be on track for delivery. Other challenges include pilot recruitment and retention issues, of which both may further strain the service's readiness.<sup>61</sup> The government's 2020 announcement that the RAF will house a new Space Command, which is to launch rockets from Scotland from 2022, might present an added organisational challenge, as the service has to allocate personnel and resources to it.<sup>62</sup>

### Personnel and materiel

The armed forces suffer issues related to personnel recruitment and retention, and consequently force readiness. All services are below their set targets for personnel strength. The Army has been affected the most, in October 2019 being 10 per cent under strength. The Navy and Marines are five per cent, and the RAF six per cent under strength.<sup>63</sup> As recruitment failed its targets, the figures have worsened every year since 2012. Retention is also proving difficult, as more people continuously leave than enter the armed forces.<sup>64</sup>

The armed forces also have vacancies in critical roles such as engineers, pilots, and intelligence analysts.

49 Jennings, Gareth, 'RAF receives final Eurofighter Typhoon,' *Jane's Defence Weekly*, 30 September 2019.

50 It is uncertain how many jets the UK will ultimately buy.

51 Nicholls, Dominic, 'RAF NATO row after "totally unacceptable" engine problems keep £2.6bn fleet on the ground,' *The Telegraph*, 10 July 2019.

52 The Sentinel is due for retirement in coming years but it is still unclear what will replace it. Bronk, Justin, 'A case for replacing the RAF's Sentinel R.1 Fleet with additional P-8A Poseidon aircraft,' RUSI, 2020.

53 Bronk, 'A Case for Replacing'.

54 Chuter, Andrew, Britain to buy Wedgetail aircraft in nearly \$2 billion deal, *Defense News*, 22 March 2019.

55 Chuter, Andrew and Stevenson, Beth, Britain chooses basing for Protector drone, even as acquisition details evolve, 13 July 2018.

56 Gunzinger, Mark et al., *Towards a tier one Royal Air Force*, Center for Strategic and Budgetary Assessments (CSBA), 2019, p. 25.

57 Gunzinger, *Towards a Tier One*, p. 25.

58 Ibid., p. 28.

59 Ibid, p. 44.

60 Ibid, p. 42.

61 Of 153 Typhoons, 104 are in service (in active fleet management). 49 aircraft are in sustainment. See Ministry of Defence, 'UK Armed Forces: Equipment and formations 2019', 8 August 2019, Table 7.

62 HM Government, 'PM statement'.

63 Ministry of Defence, 'UK Armed Forces: Quarterly service personnel statistics', 1 October 2019, p. 6.

64 National Audit Office, *Ensuring sufficient skilled military personnel*, 2018, p. 18–25.

**Table:** Personnel and materiel in the British Armed Forces

Personnel/Materiel	Numbers in 2020	Planned reforms towards 2025
<b>Personnel<sup>a</sup></b>		
Regular force	132,000 (144,000) <sup>b</sup>	
Reserves	84,000	
<b>Materiel<sup>c</sup></b>		
Main battle tanks	227 Challenger 2	Modernisation/update in coming years. Decision in 2021.
Armoured combat vehicles	1,339 (201 CVR Scimitar, 769 Warrior, 396 Mastiff <sup>d</sup> )	589 Ajax armoured infantry vehicles ordered, delivery by 2024. <sup>e</sup>
Heavy artillery pieces	89 AS90 155mm self-propelled gun 35 M270B1 MLRS	
Attack helicopters	50 AH-64D Apache	New AH-64Es will enter service from 2022. <sup>g</sup>
Surface combatants	22 (1 aircraft carrier, 2 amphibious assault ships, 6 destroyers, 13 frigates)	2nd aircraft carrier will be ready for operations by 2023. 8 new Type-26 frigates to enter service in mid-2020s. Type 31-frigates delayed to 2027.
Submarines	6 SSN (3 Astute, 3 Trafalgar), 4 SSBN (Vanguard)	4 Astute-class SSN being built, will enter service continually in 2020s.
Combat aircraft	171 (18 F-35B <sup>h</sup> , 153 Eurofighter Typhoon <sup>i</sup> )	UK has announced it intends to buy a total of 138 F-35s, the first 48 being the B-variant. <sup>j</sup>
Transport aircraft	Heavy: 28 (20 A400M, 8 C-17 Globemaster) Medium: 14 C-130J Hercules Light: 4 BAe-146 Air-to-air refuelling: 9 MRTT Voyager (Airbus A-330) <sup>k</sup>	
Air defence	74 (60 FV4333 w. Starstreak, 14 Rapier)	Sky Sabre – new SAM to enter service by early 2020s. <sup>f</sup>

**NB:** **a.** All personnel numbers from Ministry of Defence, 'UK Armed Forces: Quarterly Service Personnel Statistics', 1 October 2019. **b.** SDSR 2015 personnel targets in parentheses. **c.** Unless stated otherwise, figures from IISS, The military balance 2020, p. 157–162. **d.** Armament: 40mm grenade launcher. **e.** Coupe, Georgina, 'All the gen'. **f.** Ministry of Defence, 'British Army's new air defence missile'. **g.** Ministry of Defence, '£293 million deal for Apache fleet'. **h.** It's not certain how many of these are fully operational. **i.** Of 153 Typhoons, 104 are "in service", that is, in active fleet management. 49 aircraft are "in sustainment". Ministry of Defence, 'UK Armed Forces: Equipment and Formations 2019', Table 7 (Excel file). **j.** The number of jets the UK will ultimately buy is uncertain. **k.** The RAF can draw on five more Voyagers from the so-called "surge fleet", which are currently serving as civilian aircraft. See Royal Air Force, 'Voyager'.

Without improvement, these could prove damaging to the forces' ability to deploy and complete their missions in coming years. The 2020 Covid pandemic may add further difficulties in training and retention.<sup>65</sup>

The extensive equipment modernisation programmes that all three services are experiencing, as detailed above, will continue to put pressure on the defence budget. The 2020 budget announcement indicated a focus on emerging technology, including the need to remove some older platforms. This means some equipment programmes are in peril of being cancelled or cut in the coming years.

### ASSESSMENT OF MILITARY CAPABILITY

For several decades, the gaps between on one hand British security policy and military ambitions and on the other hand funding have widened. This has had significant effects on all three armed services. Nevertheless, Britain retains many war-fighting capabilities, but the current force may be described as hollow, with the services in possession of highly capable equipment, but too few platforms and personnel to operate at scale or the capacity to sustain itself for any longer period. Notwithstanding the above, what would the

65 Allison, George, 'British Army suspends basic training due to COVID-19', *UK Defence Journal*, 23 March 23 2020.



UK be able to muster in the event of a contingency in Northern Europe?

Despite global ambitions, the UK prioritises Europe – demonstrated by increased military presence in Northern Europe in recent years, through deployments and exercises. Consequently, in case of conflict in the area, the UK would most likely do its utmost to contribute forces in a substantial way.

For a short-notice contingency, the Army could draw forces from the 16th Air Assault Brigade rapid response force, the 3rd Mechanised Division, the UK's contribution to NATO's enhanced forward presence (eFP) in Estonia and Poland, and some support from the 6th Division. The brigade of the 1st Division that is held at readiness would not be able to respond at short notice. Within one week, the Army could likely contribute the following:

- From 16th Air Assault Brigade: 1–2 battalions light infantry, with 105mm artillery and logistics support.<sup>66</sup>
- From 3rd Division: 2–3 battalions mechanised infantry including support units from 6th Division.<sup>67</sup>
- From 1st Division: up to 1 light infantry battalion from brigade held at readiness.
- From 6th Division: 1 battalion of a signal regiment, and up to 1 battalion of an artillery regiment, with some logistical support.<sup>68</sup>
- From eFP: approximately 1 battalion of mechanised and light infantry units.<sup>69</sup>
- From the Joint Helicopter Command: 1–2 squadrons of attack helicopters.
- From 7th Air Defence Group: some short-range air defence, although this is uncertain.<sup>70</sup>

The UK-based mechanised infantry, due to its heavier equipment, would be more dependent on transport possibilities and thus slower to theatre than the other units. The heavy equipment would not be entirely dependent on sea or air transport, as exercises have been conducted to transport heavy tanks (MBTs) through the English Channel. However, the Army has few Heavy Equipment Transporters (HET), which would limit transportation abilities by land.<sup>71</sup>

The RAF prides itself on its ability to respond quickly to contingencies, and maintain, by international standards, a large number of aircraft available.<sup>72</sup> For example, out of 153 Typhoons, 104 are in active service, with the rest in sustainment (modernisation and long-term maintenance). The newly received F-35Bs have flown in Syria, and although they have not so far actively engaged targets, are deemed active for service. Within one week, The RAF could thus likely contribute:

- From the UK: 2–3 squadrons of Typhoon aircraft (24–36 aircraft) and possibly 1 squadron of F-35Bs (12 aircraft).<sup>73</sup>
- From the UK: 3–4 ISR aircraft, 2 AWACS aircraft, 4–5 tanker/transport aircraft, 9–14 transport aircraft (A400M, C-17).
- From NATO's Baltic Air Policing: Any available aircraft. In summer 2020, 4 Typhoons were stationed in Lithuania.

The Navy has suffered long maintenance delays, and cannibalisation on its current platform stock. Nevertheless, in a contingency, the service would likely aim to centre its contribution on its Joint Expeditionary Force Maritime (JEF M).<sup>74</sup> The JEF is usually composed of one command

66 The 16th air assault brigade is held at very high, or for some units, higher readiness. See Elite UK forces, '16 Air Assault Brigade'; British Army, '7 Royal Horse Artillery'.

67 At least in 2020, the 3rd Division maintains one brigade at high readiness. The 20th Armoured Brigade is held at high readiness, available to the UK and NATO from April 1, 2020, but the brigade 'origin' of the two battalions may vary in the future. See British Army, '20th Armoured Infantry Brigade'.

68 British Army, '30 Signal Regiment'; British Army, '5 Regiment Royal Artillery'.

69 In 2020, two mechanised regiments and one light infantry regiment are responsible for the eFP deployment, but all their units are not present simultaneously. British Army, 'Deployments Baltics: Enhanced Forward Presence'.

70 British Army, '3rd (UK) Division: 7th Air Defence Group'.

71 Watling, Jack, 'Britain's declining tank numbers'; Bunkall, Alistair 'Army moves tanks through Channel Tunnel on secret exercise', *Sky News*, 19 January 2017.

72 Woody, Christopher, 'The British Air Force just got new fighter jets, but there are doubts about whether its fleet is ready to fight', *Businessinsider.com*.

73 The squadron of F-35Bs have flown in Syria, and although they have not so far actively engaged targets, are deemed available for operations. See Ministry of Defence, 'UK Armed Forces: Equipment and Formations 2019', Table 7; Nicholls, Dominic, 'Britain's new F35 stealth jets used on operations for the first time', *The Telegraph*, 25 June 2019. The UK's recent announcement that two squadrons would be made available to the NATO Readiness Initiative further supports this assessment. Fiorenza, Nicholas, 'NATO improves its readiness', *Jane's Defence Weekly*, 12 April 2019.

74 HM Government, 'UK further commits to NATO and European security through JEF Readiness Declaration and deployment of Typhoons to Lithuania', 12 February 2020.

ship, one supporting surface vessel (amphibious assault ship, frigate or destroyer), and one or two logistics ships.<sup>75</sup> In the event of crisis, and a one-week notice, however, the Navy could probably put together:

- 1 command ship
- 1–2 destroyers
- 2–3 frigates
- 1–2 auxiliary ships
- 1–3 attack submarines (SSN)
- If needed, 1–2 SSBNs.
- From the Marines: 1 battalion from the 3rd Commando Brigade.<sup>76</sup>

In the Joint Force 2025 target (mentioned above), the Navy envisaged centring a maritime task force on the carrier *HMS Queen Elizabeth*. However, due to that ship's vulnerability to anti-ship missile strikes, it is unlikely the carrier would participate significantly in such a force.

Regarding command and control, the UK could perhaps contribute one national division HQ.<sup>77</sup> The Allied Rapid Reaction Corps (ARRC) is held at high readiness for NATO operations, but it would be unlikely to be able to deploy within one week.<sup>78</sup>

In a three-month perspective, there are significant uncertainties in estimating how much the armed forces could contribute, due to the sparse information available on force readiness, and the significant political

considerations that would enter. Notwithstanding the above, the Army could likely provide the following:

From 16th Air Assault Brigade: 2 more light infantry battalions, including support elements, such as more artillery that has not yet been deployed.<sup>79</sup>

- From 3rd Division: 1 mechanised brigade with support, and perhaps 3–4 mechanised battalions from the other brigades.<sup>80</sup>
- From 1st Division: 2–3 light infantry battalions from the brigade held in readiness.<sup>81</sup>
- Limited artillery and logistics support, although quantities are uncertain.

Moreover, the RAF could possibly contribute two more squadrons of fighter aircraft. The remaining functional squadrons would likely be saved for homeland defence. At this point, however, the RAF would also likely have significant issues with supply of ammunition.<sup>82</sup>

The Navy could bring back ships from global deployments, and possibly bring out a few ships from maintenance. In that case, four to six more surface ships could be available. The remaining submarines would perhaps be kept in reserve. The Marines could likely also contribute one more commando battalion.

In the coming years, the armed forces will continue to work towards the goals set in the 2015 defence review, especially regarding the ability to deploy an expeditionary force of around 50,000. The 2021 review might produce a new 2030 joint force target, but the extent to which that would be different is uncertain. ■

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<sup>75</sup> Assessment based on previous deployments and participation in exercises. The JEF M did its inaugural deployment in 2016, and has since also participated in exercises in the Baltic Sea.

<sup>76</sup> Royal Navy, 'Royal Marines'.

<sup>77</sup> Ministry of Defence, 'UK Armed Forces: Equipment and formations 2019', Table 6 (Excel file).

<sup>78</sup> The ARRC is a rapidly deployable land HQ available for NATO operations. A UK commander leads it, supported by mainly British forces. See NATO, 'Allied Rapid Reaction Corps: About us', 6 March 2020. The ARRC was also due to deploy to continental Europe as part of the exercise Defender Europe 2020. See British Army, 'Exercise Defender Europe 2020'.

<sup>79</sup> Elite UK Forces, '16 Air Assault Brigade'.

<sup>80</sup> British Army, '3rd (UK) Division'.

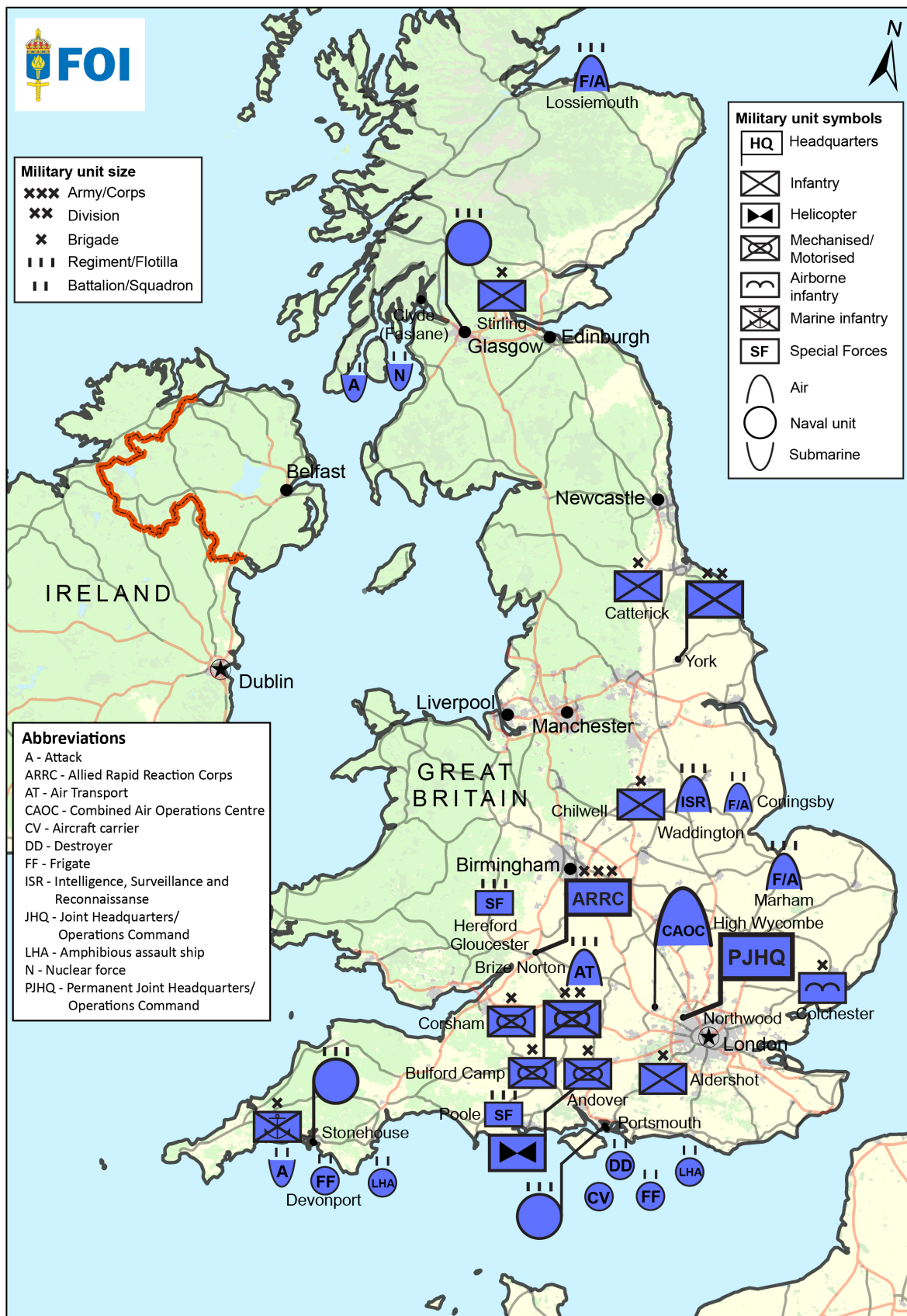
<sup>81</sup> As the 1st Division is not at continual operational readiness, it is unlikely it could provide more troops within three months, but larger parts could start mobilisation.

<sup>82</sup> Gunzinger, *Towards a Tier One*, p. 25.

**Table:** Force structure of the British Armed Forces

Organisation 2020		Planned reforms towards 2025	Assessment of forces available at short notice
Joint <sup>a</sup>	HQ Strategic Command (PJHQ) <sup>b</sup> Allied Rapid Reaction Corps (ARRC) – Land Space (Satellites 8: 1 NATO-4B; 3 Skynet-4; 4 Skynet-5) Joint Helicopter Command Army: 4 regiments, 1 regiment combat support Navy: 1 squadron attack, 1 squadron transport Air Force: 5 squadrons transport Special forces directorate (3 army regiments, 1 marine regiment, air and joint support units)	A Space Command, placed under the RAF, will be established. Army: 1–2 squadron attack helicopters	2–3 special forces companies
Army	1 infantry division (4 light infantry brigades, 2 logistics brigades, 1 air defence group) <sup>c</sup> 1 mechanised division (3 mechanised brigades, 1 artillery brigade, 1 logistics brigade) <sup>d</sup> 1 combat support division (2 signal brigades, 1 ISR brigade, 1 info ops brigade, 1 specialised infantry group) <sup>f</sup> 1 air assault brigade (2 parachute battalions, 1 air assault battalion) <sup>g</sup>	Joint Force 2025 target: 1 warfighting division.	Up to 1 battalion  3–4 battalions, including eFP in Estonia. <sup>e</sup>  1 signal battalion, half a battalion of artillery and logistical support. 1–2 battalions.
Navy	3 Naval bases (1 aircraft carrier, 6 destroyers, 13 frigates, 6 SSN and 4 SSBN submarines) Fleet Auxiliary (3 Landing Ship Docks, 6 tankers, 1 primary casualty ship) Naval Aviation (5 squadrons ASW) Marines (1 Commando brigade: 3 battalions) <sup>i</sup>	Joint Force 2025 target: 1 Maritime Task Group.	Total: 4–6 surface combatants, 3–5 submarines (1–3 SSN, 1–2 SSBN). <sup>h</sup> 1–2 auxiliary ships  1 battalion with support
Air Force	RAF Air Command <sup>j</sup> 7 fighter/FGA squadrons 1 squadron ASW/MPA (forming) 3 squadrons ISR 1 squadron AWACS 2 squadrons tanker/transport 5 squadrons transport 2 squadrons Combat/ISR UAV (Reaper)	Joint Force 2025 target: 1 Air Group from 2 F-35 sqn, 7 Typhoon sqn) 9 MPAs will be delivered by end of 2021. <sup>k</sup> Reaper UAVs to be replaced by Protector by 2024. <sup>l</sup>	3–4 squadrons (2–3 of Typhoons, up to 1 of F-35Bs.) 1 P-8 aircraft 3–4 aircraft (9 total) 2 E-3D <i>Sentry</i> aircraft 4–5 Voyager (A-330) 6–10 A400M, 3–4 C-17 aircraft

**NB:** a. IISS, *The military balance 2020*, Routledge, p. 157–162. b. Formerly Joint Forces Command (JFC). See Ministry of Defence, 'Inaugural Strategic Command', RUSI Conference, 18 February 2020. c. IISS, *The Military balance 2020*, p. 157; British Army, '1st (UK) Division'. d. British Army, '3rd (UK) Division'. e. 3rd Division is at "Continual operational readiness". 20th Armoured Infantry Brigade held at high readiness, available to both the UK and NATO from 1 April 2020. See British Army, '20th Armoured Infantry Brigade'. f. British Army, '6th (UK) Division'. g. British Army, '16th Air Assault Brigade'. h. For an example of a rapid deployment, see Allison, George, '9 British ships escort 7 Russian ships through the English Channel', *UK Defence Journal*, 26 March 2020. i. Royal Navy, 'Royal Marines'. j. The number of aircraft in each squadron varies depending on the type of aircraft. The fighter/FGA squadrons contain 12 aircraft, the transport squadrons, 6 aircraft. k. Vavasseur, Xavier, '2nd Poseidon MRA Mk1 MPA touched down in the UK', *Naval News*, 14 March 2020. l. 'MOD signs £100m Contract To Test RAF's Protector aircraft', *Forces.net*, 11 September 2019.



**Map:** Overview of British armed forces and their basing

**NB:** Design by Per Wikström. The map covers mainly operational headquarters and manoeuvre forces.



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