

Submission from Drone Wars UK to the Defence Select Committee Inquiry 'Towards the Next Defence and Security Review' on the use of armed Unmanned Aerial Vehicles (UAVs)

Executive Summary

The rise in the use of armed Unmanned Aerial Vehicles, commonly known as drones, over the past decade has been extraordinary. While there were a total of nine air strikes from UAVs between 2004 and 2007, figures released by the USAF and RAF recently show that there have been over 1,400 UAV airstrikes in Afghanistan over the past five years, with armed UAVs now carrying out a quarter of all air combat air sorties within Afghanistan.

The expansion in use of unmanned systems was anticipated in the 2010 Defence and Security Review and no doubt their continuing evolution will mean their development and use will be a significant part of the next Defence and Security Review. Drone Wars UK believes however that the use of armed UAVs and indeed, the concept of remote 'risk-free' warfare, is a perilous military escalation which endangers global peace and security.

In this submission we detail five particular legal and ethical concerns relating to current use of armed UAVs and two specific concerns about future developments. Concerns about current use include whether armed UAVs are lowering the political costs of military intervention, expanding the use of targeted killing and creating international instability rather than security. With regard to future use we detail concerns about moves to develop autonomous unmanned systems as well as arming smaller surveillance UAVs.

As well as making some specific recommendations in relation to these concerns, this submission makes a plea for greater transparency in relation to the use of armed UAVs by UK armed forces. Arising out of its five years of armed UAVs operations, the UK has a great deal of pertinent information and data that could go a long way to answering some of the serious ethical and legal questions surrounding their use. As one of only three countries that have used armed UAVs in combat, we believe the UK has a specific responsibility to address these concerns and to take the lead in helping the international community grapple with the rise in use of armed unmanned systems before they proliferate further.

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April 2013**

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About Drone Wars UK

Drone Wars UK is a small British NGO, founded in the Spring of 2010, to undertake research, education and campaigning on the use of Unmanned Aerial Vehicles and the wider issue of remote warfare. Drone Wars UK has become recognised internationally as a credible and reliable source of information on the use of drones and unmanned technology. The research and information produced by Drone Wars UK is used by journalists, NGOs, lawyers, human rights organisations, campaigners and the general public. Drone Wars UK has been one of the key voices publicly expressing serious concerns about the expansion of this new way to wage war.

Terminology

Various terms are used to describe the platforms discussed in this submission including Remotely Piloted Air Vehicles or Systems (RPAS), Unmanned Aerial Vehicles (UAVs) and drones. While we would normally use the commonly accepted term 'drone', to avoid prejudice and for the sake of clarity we will stick in this submission to the term Unmanned Aerial Vehicle (UAV).

A. Background

1. In early 2001, the United States Air Force (USAF) undertook the first successful firing of a missile from a remotely piloted Unmanned Aerial Vehicle (UAV) at Nellis Air Force Base in Nevada.¹ In the dozen years since, the use of armed UAVs has risen dramatically with the UK, Israel and, in particular, the US using UAVs to launch airstrikes. Recent figures released by the USAF and the RAF show that US and UK forces have launched over 1,400 weapons from UAVs in Afghanistan in the past five years.² Analysis of these figures by the Bureau of Investigative Journalism shows that more than a quarter of all armed Coalition air sorties in Afghanistan are now carried out by armed UAVs.³
2. The UK acquired its armed UAV capability after signing a contract with General Atomics for three Reaper UAVs under an urgent operational requirement in October 2006. Reaper UAV operations began in Afghanistan in October 2007 with the first kinetic operation believed to have taken place at the end of May 2008.⁴ Since then the UK has continuously operated armed UAVs over Afghanistan with a total of 365 weapons launched up until 31st January 2013.⁵
3. RAF 39 Squadron currently operates the UK's five Reaper MQ-9 UAVs from Creech Air Force base in Nevada. In October 2012, RAF 13 Squadron was 'stood up' at RAF Waddington to operate a further five Reaper MQ-9's ordered in December 2010 by David Cameron. It is not publicly known if Reaper operations have begun from RAF Waddington.
4. As well as the armed Reaper UAVs, UK forces also operate four other types of UAVs – all unarmed. These are the Black Hornet nano-drone; the T-Hawk, the Desert Hawk III and Hermes 450 (due to be replaced by the Watchkeeper UAV in 2013). Although we have some concerns about the use of military surveillance UAVs, for the sake of brevity this submission concentrates on the use of armed UAVs.

B. Concerns about the current use of armed UAVs

5. Drone Wars UK believes that the growing use of armed UAVs, or drones as they are commonly known, and the concept of remote, so called 'risk-free' warfare, is a perilous military escalation which endangers global peace and security. We would like to briefly highlight some of the legal and ethical issues associated with the growing use of armed UAVs.

Enabling military intervention

6. A primary concern is that the advent of armed unmanned systems has made the option to resort to the use of military force much easier. The risk to one's own forces and the potential of TV footage of grieving families awaiting returning coffins of young men and women sent to

¹ The test took place on 21st February 2001. See www.globalsecurity.org/intell/systems/armed-predator.htm

² Chris Woods and Alice K Ross, Revealed: US and Britain launched 1,200 drone strikes in recent wars, *The Bureau of Investigative Journalism*, 04.12.12; www.thebureauinvestigates.com/2012/12/04/revealed-us-and-britain-launched-1200-drone-strikes-in-recent-wars. Note some US strikes include use of multiple weapons.

³ Ibid.

⁴ Craig Hoyle, UK cheers the Reaper UAV, *Flight International*, 16.06.08
www.flightglobal.com/articles/2008/06/16/224622/uk-cheers-the-reaper-uav.html

⁵ FoI response from PJHQ to Chris Cole, Drone Wars UK dated 31 March 2013. Weapons launched have been broken down into 314 Hellfire missiles and 51 GBU-12's.

fight overseas is a real restraint on political leaders. Take away that potential political cost by using unmanned systems however, and it makes it much easier for political leaders to opt to use lethal military force as a 'quick fix' rather than engage in the difficult long-term task of trying to solve root causes. We believe that this is a real and significant danger to global peace and security.

7. While the UK has so far only used its armed drones in Afghanistan (although RAF aircrew flew US Predators during the Libyan conflict⁶), there were serious calls for the UK to deploy its armed drones to support French forces currently fighting in Mali.⁷ The deployment of UK armed UAVs to Mali appears only to have been prevented by the Secretary of State for Defence insisting that the UK's Reapers were needed in Afghanistan.⁸ Once the UK has acquired more armed UAVs it may be harder to resist the call to deploy these systems each time a crisis develops as there is no perceived cost to doing so.
8. The US and Israel are the only two other countries besides the UK known to have used armed drones. The US which has more than 240 armed UAVs in service has undertaken airstrikes using UAVs in at least six countries since 2007: Iraq, Afghanistan, Pakistan, Yemen, Somalia and Libya.⁹ There is also evidence that the US has also undertaken armed strikes using UAVs in the Philippines and Mali although this has not been confirmed.¹⁰ Israel has reportedly used armed UAVs to undertake air strikes in Egypt and Sudan as well as the occupied territories.¹¹ There are also regular reports of Israel flying UAVs over Lebanon.
9. It is suggested by proponents that armed UAVs are in effect, no different from other forms of long range strike capabilities such as cruise missiles. However a key difference is the ability of UAVs to loiter for long periods of time looking for targets rather than the 'one-off' shot of a cruise missile. It is the ability of armed unmanned systems to be persistent as well as operated remotely that makes them different from other capabilities. It is very difficult to imagine, for example, that the US would have undertaken the more than 360 air strikes it has launched from UAVs in Pakistan by using cruise missiles or manned strike aircraft.

Enabling the expansion of targeted killing

10. Perhaps the most controversial use of armed drones has been their use by the United States for targeted killing of suspected terrorists and insurgents outside of Afghanistan. Legal scholars define targeted killing as the deliberate, premeditated killing of selected individuals by a state who are not in their custody. Where International Humanitarian Law (IHL) applies, as is the situation currently in Afghanistan, the targeted killing of combatants may well be legal. Outside of IHL situations, International Human Rights Law applies and lethal force may

⁶ Nick Hopkins, British pilots flew armed US drones in Libya, MoD reveals, *The Guardian*, 26.07.12; www.guardian.co.uk/world/2012/jul/26/british-pilots-drones-libya

⁷ See Tom Coghlan, Jerome Starkey and Michael Evans, Drones and spy planes on standby to fight al-Qaeda in Mali, *The Times*, 14.01.13; www.thetimes.co.uk/tto/news/world/africa/article3656703.ece

⁸ *Hansard* 29 Jan 2013 : Column 794

⁹ For details of US UAV inventory see Jeremiah Gertler, *U.S. Unmanned Aerial Systems*, Congressional Research Service, 03.01.12; www.fas.org/sgp/crs/natsec/R42136.pdf. For details of US armed UAV use see 'Covert Drone War' website by Bureau of Investigative Journalism; www.thebureauinvestigates.com/category/projects/drones/

¹⁰ Chris Cole, Drone strikes widening? Mystery airstrikes reported in Mali and the Philippines, *Drone Wars UK*, 20.06.12. www.droneWarsuk.wordpress.com/2012/06/30/drone-strikes-widening-mystery-airstrikes-reported-in-mali-and-the-philippines

¹¹ See Gil Ronen, Israeli UAV Kills Jihadi in Sinai, *Israel National News*, 26.08.12, www.israelnationalnews.com/News/News.aspx/159294#.UWLEzGZwblU and *Gaza Airstrikes Violated Laws of War*, Human Rights Watch, 12.02.13; www.hrw.org/news/2013/02/12/israel-gaza-airstrikes-violated-laws-war

only be used when absolutely necessary to save human life that is in imminent danger. This does not appear to be the case for many of the US UAV airstrikes that have been carried out in Pakistan and Yemen.

11. The United States insists it has lawful authority for such strikes under the Authorization for Use of Military Force Act (AUMF) passed in the days after 9/11 as well as in the inherent right of self-defence under the UN Charter.¹² However many legal experts and scholars, not least the former and current UN special rapporteurs on extra-judicial killings, disagree strongly with the US position.¹³
12. While the United States' use of armed UAVs for targeted killing is highly controversial, the longer it continues, the more it becomes normalised and accepted. It is now possible, perhaps even likely, that other states will follow the US example and use UAVs to undertake their own targeted killing programme of 'suspected terrorists'.
13. There have been reports that UK intelligence agencies have supplied information to the US to help identify and locate drone targets in Pakistan.¹⁴ These allegations have already led to one High Court case as well as the independent reviewer of terrorism legislation, David Anderson QC, suggesting that the UK has facing "a wave" of compensation claims over the sharing of intelligence for such activity.¹⁵
14. Within Afghanistan, it appears that the UK may have used its Reaper UAVs to carry out targeted killings although due to the lack of transparency surrounding the use of British armed UAVs it has not been possible to confirm this. We know from published RAF operational updates that UK Reapers have tracked "high value" targets for many hours before finally launching weapons.¹⁶
15. Although the use of force in Afghanistan has been authorised by the UN and International Humanitarian Law therefore applies, insurgents in Afghanistan are not members of uniformed armed forces and their status as combatants under IHL remains unclear. As Noam Lubell writes

*"Generally speaking, it appears unlikely that individuals belonging to non-state actors... could be considered combatants as defined in international law, since this status in most cases rely on them in fact fighting within a state structure."*¹⁷

16. While individuals fighting in Afghanistan are not legally combatants under IHL, legally they therefore remain civilians who may only be targeted while directly participating in hostilities.¹⁸

¹² Tabassum Zakaria, *White House: U.S. drone killings legal to combat threats*, Reuters, 30.04.12. <http://www.reuters.com/article/2012/04/30/us-obama-drones-idUSBRE83T0TN20120430>

¹³ Owen Bowcott, *Drone strikes threaten 50 years of international law, says UN rapporteur*, The Guardian, 21.06.12. <http://www.guardian.co.uk/world/2012/jun/21/drone-strikes-international-law-un>

¹⁴ Ian Cobain, *UK support for US drones in Pakistan may be war crime, court is told*, The Guardian, 23.10.12. <http://www.guardian.co.uk/world/2012/oct/23/uk-support-us-drones-pakistan-war-crime>.

¹⁵ Tom Whitehead, *Terror watchdog warns of wave of compensation claims over drone strikes*, The Telegraph, 20.06.12. <http://www.telegraph.co.uk/news/uknews/defence/9342396/Terror-watchdog-warns-of-wave-of-compensation-claims-over-drone-strikes.html>

¹⁶ See for example RAF Update report of 18 February 2012; www.raf.mod.uk/rafoperationalupdate/opsupdate/opsupdate25feb2012.cfm

¹⁷ Noam Lubell, *Extraterritorial Use of Force Against Non-State Actors*, OUP, Oxford, 2011. P139. Chapter 6 Status of Individuals and the Regulation of force is very helpful on this whole question.

After much debate on this issue, in 2009 the International Committee of the Red Cross (ICRC) put forward interpretative guidance suggesting that member of armed groups have a “continuous combat function”.

“While members of organized armed groups belonging to a party to the conflict lose protection against direct attack for the duration of their membership (i.e., for as long as they assume a continuous combat function), civilians lose protection against direct attack for the duration of each specific act amounting to direct participation in hostilities. This includes any preparations and geographical deployments or withdrawals constituting an integral part of a specific hostile act. In order to avoid the erroneous or arbitrary targeting of civilians, parties to a conflict must take all feasible precautions in determining whether a person is a civilian and, if that is the case, whether he or she is directly participating in hostilities. In case of doubt, the person in question must be presumed to be protected against direct attack.”¹⁹

17. The lack of clarity surrounding who may be targeted and when, combined with the secrecy surrounding UAV strikes is extremely troubling. Residents of areas in which armed UAVs are operating simply do not know what kind of conduct or relationships could put them at risk. Offering indirect support to militants such as food or quarter or political or ideological support would not formally qualify under international norms as direct participation in hostilities. However, it is entirely possible that people may be being targeted owing to their relationships to known militants, when they are legally civilians.²⁰
18. Although the ICRC guidance is not legally binding, it would be helpful to know - perhaps particularly in relation to its use of armed UAVs - if the UK is abiding by the ICRC interpretative guidance.
19. While UK Rules of Engagement are secret, it should be possible for the UK to confirm or deny whether it has carried out targeted killings in Afghanistan, particularly if the UK believes it has the legal authority to do so under IHL. In addition the UK should make clear to the US that intelligence provided by the UK must be used in accordance with international law norms.

The ‘PlayStation Mentality’

20. A further concern about the use of armed UAVs is whether the geographic and psychological distance between those operating armed UAVs and potential targets leads to a lowering of the significance of such lethal operations. Rather than seeing flesh and blood, all that is perceived, perhaps, are pixels on a screen. As Philip Alston, former United Nations Special Rapporteur on extrajudicial, summary or arbitrary executions noted, this could be particularly

¹⁸ Ibid.

¹⁹ Direct participation in hostilities: questions & answers, ICRC, 02.06.09.

www.icrc.org/eng/resources/documents/faq/direct-participation-ihl-faq-020609.htm. It should be noted that several legal scholars and the UN special rapporteurs have argued against the ICRC interpretative guidance.

²⁰ See Christopher Rogers, *Civilians in Armed Conflict: Civilian Harm and Conflict in Northwest Pakistan, Campaign for Innocent Victims in Conflict*, 2010.

true for armed UAV operators who play video games, leading to what he dubbed 'the PlayStation mentality'.²¹

21. Drone Wars UK understands the counter arguments made by the Ministry of Defence in relation to this suggestion, namely that RAF Reaper crews are professionals who take their responsibilities seriously and that as they are under the authority and control of senior commanders they are constrained in their ability to launch weapons without due authorisation. Nevertheless our concerns remain.
22. While some dismiss the idea of such a 'mentality' out of hand, there is some evidence for it. In 2010 an airstrike involving armed UAVs led to the deaths of 23 Afghan civilians in Uruzgan province. A USAF inquiry into the tragedy concluded that a significant contributing factor to the deaths was that the USAF Predator aircrew at Creech had "a propensity/bias towards kinetic action".²² Indeed, a USAF Captain observing at Creech told the investigators that "there was a 'Top Gun' mentality amongst the Predator Crews." While one incident of course can never be conclusive, it does suggest that further exploration is necessary.
23. More information about how armed UAVs are operated on a day-to-day basis would enable a proper and informed conclusion to be reached on the idea of a PlayStation mentality. We have for example requested information about the balance of weapon launches from the UK's Reaper UAVs under daily tasking orders (i.e. pre-planned) and those launched under dynamic tasking procedures (i.e. during missions) but again such information has been refused.

Precision strike and civilian casualties

24. The MoD argues that the Reaper UAV is capable of precision strike - the term "pinpoint accurate" is repeatedly used by journalists in media reports - but it is unclear exactly what that means.²³ Requests for information about the variants of Hellfire missiles and GBU-12 bombs used in UK Reaper strikes, their blast radius and details about how often they have landed outside their given Circular Error Probability have been refused.²⁴
25. In its most recent annual report, the United Nations Assistance Mission in Afghanistan (UNAMA) reported that the number of weapons released by drones in Afghanistan jumped from 294 in 2011 to 506 in 2012, a 72 per cent increase.²⁵ UNAMA documented five incidents of drone strikes which resulted in 16 civilian deaths and three injuries, during 2012, an increase from 2011 when UNAMA documented only one incident. However as UNAMA states "the number of civilian casualty incidents from drone strikes may be higher as UNAMA is not always able to confirm which type of platform was used during an aerial operation (fixed-wing, rotary or remotely-controlled) that resulted in civilian casualties."²⁶

²¹ Philip Alston and Hina Shamsi, A killer above the law, *The Guardian*, 2nd August 2010

²² A summary of the full 2,100 page report released by US Central Command is available at <http://cryptome.org/2012/03/creech-savagery.pdf>. See also David S. Cloud, Anatomy of an Afghan war tragedy, *Los Angeles Times*, 10.04.11; <http://articles.latimes.com/2011/apr/10/world/la-fg-afghanistan-drone-20110410>.

²³ See 'Reaper: Roles and Specifications' on RAF website: <http://www.raf.mod.uk/equipment/reaper.cfm>

²⁴ Hansard 4 Mar 2013: Column 850W. Circular Error Probability (CEP) is the radius of a circle, the boundary of which is drawn around the landing points of 50% of rounds fired during tests.

²⁵ UNAMA, Afghanistan: Annual Report on Protection of Civilians in Armed Conflict: 2012, February 2013; p33/34; <http://unama.unmissions.org/LinkClick.aspx?fileticket=K0B5RL2XYcU%3D&tabid=12254&>

²⁶ *Ibid.*

26. Out of 365 weapons launches from British Reaper UAVs in Afghanistan the MoD insists that only 4 civilians have been killed.²⁷ However there are no public figures available figures for total numbers of people killed. The MoD states that “for reasons of operational security we are not prepared to comment on the assessed numbers of insurgents killed/wounded in Reaper strikes.”²⁸
27. By coincidence the number of US airstrikes across the border in Pakistan (366) is almost exactly the same number as UK Reaper airstrikes in Afghanistan (365).²⁹ Credible reports show that between 2,537 and 3,581 have been killed in US UAV strikes in Pakistan of which between 411 and 884 have reliably been recorded as civilians.³⁰ Given that the US and the UK are operating similar armed UAVs in the same part of the world in apparently similar ways, there is, to say the least, a remarkable difference in reported civilian casualty figures.
28. In January 2013, the UN announced that it was holding an inquiry into the impact of armed UAV strikes on civilians, led by London-based UN Special Rapporteur on Counter-Terrorism and Human Rights, Ben Emmerson QC.³¹ It is to be hoped that this inquiry make an important contribution to our understanding of the use of armed UAVs and we assume that the UK MoD will fully cooperate with Mr. Emmerson and his team.

Creating instability rather than security

29. The stated aim of UK military action in Afghanistan (and presumably any military action) is to create long term peace and security. Increasingly however there is a growing understanding that the use of armed UAVs may be doing just the opposite. As Kurt Volker, the former US Permanent Representative to NATO put it recently,

“Drone strikes allows our opponents to cast our country as a distant, high-tech, amoral purveyor of death. It builds resentment, facilitates terrorist recruitment and alienates those we should seek to inspire. Drone strikes may decapitate terrorist organizations, but they do not solve our terrorist problem. In fact, drone use may prolong it. Even though there is no immediate retaliation, in the long run the contributions to radicalization through drone use may put more lives at risk.”³²

30. Volker is not alone. Many others counter terrorism experts are now raising similar concerns. In a recent issue of the Chatham House journal, Professor Michael Boyle, former counter terrorism adviser to President Obama has outlined how use of armed UAVs is directly

²⁷ Nick Hopkins, *Afghan civilians killed by RAF drone*, The Guardian, 05.07.11. <http://www.guardian.co.uk/uk/2011/jul/05/afghanistan-raf-drone-civilian-deaths>

²⁸ Defence in the Media [Official UK MoD New blog] 19 June 2012; http://www.blogs.mod.uk/defence_news/2012/06/page/4/. In December 2010 The Telegraph reported that David Cameron stated that UK Reapers had ‘killed more than 124 insurgent’. However this has subsequently been denied by the PM’s office.

²⁹ It should be noted however that the US figures refer to ‘kinetic operations’ in which more than one weapon may be launched. UK figures refer to individual weapons launched.

³⁰ See The Bureau of Investigative Journalism’s Covert War on Terror Datasets: <http://www.thebureauinvestigates.com/2013/01/03/obama-2013-pakistan-drone-strikes/>

³¹ UN launches inquiry into drone killings, BBC News, 24.01.13; <http://www.bbc.co.uk/news/world-21176279>

³² Kurt Voller, What the U.S. risks by relying on drones, The Washington Post, 26.10.12; http://articles.washingtonpost.com/2012-10-26/opinions/35500650_1_drone-strikes-drone-attacks-guantanamo-bay

conflicting with other long term counter-terrorism initiatives and doing real damage.³³ Yet again, Robert Grenier, who headed the CIA's counter-terrorism center from 2004 to 2006 and was previously CIA station chief in Pakistan said of the use of armed UAVs in Afghanistan and Pakistan:

"We have gone a long way down the road of creating a situation where we are creating more enemies than we are removing from the battlefield. We are already there with regards to Pakistan and Afghanistan."³⁴

31. As well as these direct concerns from counter terrorism experts, a number of recent reports have detailed how the use of armed UAVs , and in particular their use of loiter over particular areas for long periods of time before launching attacks, is causing severe mental trauma to the local populations,³⁵ disturbing children's education,³⁶ and disrupting food production all of which may be leading to the radicalization of local populations.

Specific recommendations relating to current use of armed UAVs

32. Having detailed the above concerns we would make the following specific recommendations:
- The UK government should publish details of the numbers of individuals it believes to have been killed or injured in UK Reaper airstrikes in Afghanistan, their status as civilians or combatants, and affiliation to any armed group if known. The UK should also improve its casualty recording and reporting in general.
 - The UK government should clarify if it is abiding by the ICRC interpretative guidance on civilians directly participating in hostilities.
 - The UK government should clarify whether it has carried out the targeted killing of any individuals using Reaper UAVs within Afghanistan and if so, provide details.
 - The UK government should seek assurances from the US that intelligence provided will not be used for targeted killing contrary to international law norms.
 - The UK government should release information about the accuracy and precision of weapons released from UK Reapers, including details of when munitions have fallen outside their given CEP on operations in Afghanistan.
 - The UK government should carry out a review, available for public scrutiny, examining the impact of armed UAVs on the stabilisation of Afghanistan and including reference to assertions of increased radicalisation, political instability, and a reduction in socio-economic activity.

C. Concerns about future UAV development

33. While not the main focus of this submission, we wanted to highlight two concerns in relation to future use of armed UAVs: the push towards autonomy, and the increasing weaponisation of small UAVs.

³³ Michael Boyle, The costs and consequences of drone warfare, *International Affairs*, January 2013. Available at www.chathamhouse.org/sites/default/files/public/International%20Affairs/2013/89_1/89_1Boyle.pdf

³⁴ Paul Harris, Drone attacks create terrorist safe havens, warns former CIA official, *The Guardian*, 05.06.12; www.guardian.co.uk/world/2012/jun/05/al-qaida-drone-attacks-too-broad

³⁵ See Living Under Drones, Stanford International Human Rights & Conflict Resolution Clinic, September 2012, www.livingunderdrones.org/wp-content/uploads/2012/10/Stanford-NYU-LIVING-UNDER-DRONES.pdf

³⁶ See 'Drones: No Safe Place for Children', Reprieve, March 2013; www.reprieve.org.uk/media/downloads/2013_04_04_PUB_drones_no_safe_place_for_children.pdf

The push towards autonomous UAVs

34. While the current generation of armed UAVs are remotely controlled by pilots from the ground, the generation currently under development will fly autonomously, with minimal supervision from the ground. UAVs such as Mantis and Taranis being developed by BAE Systems can take off by themselves, flying pre-programmed missions before returning and landing, all without the intervention of a human pilot. Some argue that this is merely an extension of the 'auto-pilot' currently in use on most aircraft, while others see the growing autonomy of armed drones as a dangerous step towards autonomous weaponry.³⁷
35. The UK MoD has stated that it "currently has no intention to develop systems that operate without human intervention in the weapon command and control chain" but they are "looking to increase levels of automation where this will make systems more effective."³⁸
36. However, the MoD is taking what can be called a 'maxim' approach to the definition of autonomy. For example in *The UK Approach to Unmanned Aircraft Systems*, they state:

*"Autonomous systems will, in effect, be self-aware and their response to inputs indistinguishable from, or even superior to, that of a manned aircraft. As such, they must be capable of achieving the same level of situational understanding as a human."*³⁹

This would be a substantially different definition of 'autonomy' than is being used by many scientists and companies involved in developing autonomous systems as the MoD document itself recognizes.

37. The commonly held consensus is that under IHL, a human must be 'in the loop' when it comes to launching weapons. The MoD's assurances that they are not *currently*, as they put it developing autonomous weapon systems, while at the same time blurring the distinction between 'autonomous' and 'automated' is unhelpful. This together with the fact that exploration into the "the technological challenge" to achieve such a capability appears to be continuing is extremely worrying.⁴⁰ It would be helpful if the MoD simply, clearly and unambiguously ruled out the idea of the UK developing and/or using autonomous weapons.

Arming of Smaller UAVs

38. A second concern in relation to future development of UAVs is the increasing weaponisation of small UAVs that are currently being used for surveillance. Various manufactures including Raytheon, General Dynamics, Thales and MBDA have reported that they are developing weapons for small UAVs. Raytheon, for example says that it is working on a 'baby Paveway

³⁷ Tracey McVeigh, Killer robots must be stopped, say campaigners, *The Guardian*; www.guardian.co.uk/technology/2013/feb/23/stop-killer-robots

³⁸ The UK Approach to Unmanned Aircraft Systems (Joint Doctrine Note 2/11), MoD Development, Concepts and Doctrine Centre, paragraph 508. www.gov.uk/government/uploads/system/uploads/attachment_data/file/33711/20110505JDN_211_UAS_v2U.pdf

³⁹ Ibid. Paragraph 206b.

⁴⁰ See for example Tony Gillespie & Robin West 'Requirements for Autonomous Unmanned Air Systems set by Legal Issues', *The Intentional C2 Journal*, Vol.4, No.2, 2010. The authors both worked for the British MoD at the time of writing. www.dodccrp.org/files/IC2J_v4n2_02_Gillespie.pdf.

for small surveillance drones that has a warhead that “weighs only 7lb but has over 2,000 fragments.”⁴¹

39. While it is argued that smaller bombs on surveillance UAVs will mean less collateral damage, the reality is that it will mean air strikes in areas that would have previously have been out of bounds because of the presence of civilians. In other words we will see armed UAVs yet again expanding the battlefield. In addition arming small UAVs will massively increase the overall number of armed UAVs in operation. While the US currently has approximately 240 armed UAVs in its inventory, moves to arm the Shadow UAV could increase its armed UAV capacity by more than 250%.

Specific recommendations relating to future development of UAVs

40. With regard to future developments in relation to armed UAVs we would make the following recommendations:
 - The UK government should make a clear and unambiguous commitment not to develop autonomous weapon systems and to take part in efforts to build an international treaty to ban the use of these weapons.
 - The UK government should investigate carefully the implications of arming smaller surveillance UAVs before it takes any steps to do so.

D. The need for greater transparency

41. As we have tried to detail, there are a number of concerns and questions about the growing use of armed UAVs, ranging from how armed UAVs could lower the threshold for launching lethal military force to how they create instability rather create security. All of these questions, and more, need to be debated openly and honestly and require careful analysis and clear-headed judgement based on evidence. Unfortunately that evidence is being kept strictly under wraps and request for more information about the use of armed UAVs are regularly refused.
42. While it may be necessary to keep some information secret, we do not believe it is appropriate, or legitimate to refuse to disclose practically all information about the circumstances of the use of Reapers over the past five years.
43. In addition to the lack of transparency with regard to use of UAVs currently in service, information about the development of future UAVs is also less than opaque. When contracts were awarded to develop the Watchkeeper UAV for the Royal Artillery in 2005, the in-service date was estimated as being September 2010. Now some two and half years late, there is no indication when Watchkeeper will come into service. Most recently the delay has been attributed to the need to gain air worthiness certification for Watchkeeper to fly within UK airspace yet as recently as July 2012 the MoD stated it had no requirement to operate military UAVs in UK civilian airspace.⁴²

⁴¹ Dave Majumdar, Raytheon develops small bombs for UAVs, *Flight Global*, 09/07/12: www.flightglobal.com/news/articles/farnborough-raytheon-develops-small-bombs-for-uavs-373910/

⁴² Hansard, 12 July 2012 : Column 381W

44. In relation to the Scavenger programme too there is a complete lack of public information.⁴³ In February 2012 the UK and France announced that they were to jointly develop a new armed MALE UAV, with BAE systems and Dassault Aviation expecting contracts to be signed at the 2012 Farnborough Air show to develop their Telemos UAV to fulfil the requirement. However with the change of administration in France this proposal appears to have ground to a halt and it is unclear whether a new MALE UAV is to be procured or not.
45. The lack of transparency about the use and development of UAVs leads to a sense that public discussion on this issue is being curtailed, if not manipulated. This sense has been fuelled by a 2011 MoD internal briefing on Remotely Piloted Aerial Systems (RPAS) which stresses the need for the MoD to develop a “communication strategy” to win over public opinion in support of armed UAV with the suggestion that the MoD should “stress the equivalence of RPAS to traditional combat aircraft.”⁴⁴ We now have to decide if material provided by the MoD about Reapers is objective information, or if it is part of a ‘communication strategy’ meant to persuade us of the efficacy of using armed drones.
46. We believe that greater transparency from the MoD on the wider strategic policy of using armed UAVs, their day-to-day use within Afghanistan, and future procurement and development of armed UAV is essential in order for decision makers and the public to make up their minds carefully about the legal and ethical issues surrounding the use of armed UAVs. It should be noted that the MoD themselves acknowledge these concerns in their publication *The UK Approach to Unmanned Aircraft System* which states:

*“It is essential that, before unmanned systems become ubiquitous (if it is not already too late) that we consider this issue and ensure that, by removing some of the horror, or at least keeping it at a distance, that we do not risk losing our controlling humanity and make war more likely.”*⁴⁵

The passage concludes “what is needed is a clear understanding of the issues involved so that informed decisions can be made.” This clear understanding can only be aided by greater transparency about how UAVs are actually being used in Afghanistan.

Specific recommendations relating to transparency on armed UAVs

47. The UK Government should commit to a more open approach to Parliamentary Questions and Freedom of Information requests on the use of armed UAVs, which would lead to the achievement of the objective set out in the MoD’s Joint Doctrine Note on the need for a public debate on this technology.

⁴³ For details of the Scavenger programme see ‘UK approach to UAS’, Para 408

⁴⁴ See ‘Internal MoD briefing on British drones reveals push to capture public opinion’, 04/07/11 <http://dronewarsuk.wordpress.com/2011/07/04/internal-mod-briefing-on-british-drones-reveals-push-to-capture-public-opinion/>

⁴⁵ The UK Approach to Unmanned Aircraft Systems, Joint Doctrine Note 2/11, DCDC, Ministry of Defence, April 2011. Para. 517

E. Concluding remarks

48. Arising out of its five years of armed UAVs operations, the UK has a great deal of pertinent information and data that could go a long way to answering some of the serious ethical and legal questions surrounding their use. As one of only three countries that have used armed UAVs in combat, we believe the UK has a specific responsibility to address these concerns and to take the lead in helping the international community grapple with the rise in use of armed unmanned systems before further they proliferate further.
49. Finally, Chris Cole of Drone Wars UK would of course be happy to brief the Committee further on these issue in person if it would be helpful.

Summary of our recommendations

50. The following is a summary of our specific recommendations made in this submission:

- The UK government should publish details of the numbers of individuals it believes to have been killed or injured in UK Reaper airstrikes in Afghanistan, their status as civilians or combatants; and affiliation to any armed group if known. The UK should also improve its casualty recording and reporting in general.
- The UK government should clarify if it is abiding by the ICRC interpretative guidance on civilians directly participating in hostilities
- The UK government should clarify whether it has carried out the targeted killing of individuals using Reaper UAVs within Afghanistan and if so, provide details.
- The UK government should seek assurances from the US that intelligence provided will not be used for targeted killing contrary to international law norms.
- The UK government should release information about the accuracy and precision of weapons released from UK Reapers, including details of when munitions have fallen outside their given CEP on operations in Afghanistan.
- The UK government should carry out a review, available for public scrutiny, examining the impact of armed UAVs on the stabilisation of Afghanistan and including reference to assertions of increased radicalisation, political instability, and a reduction in socio-economic activity.
- The UK government should make a clear and unambiguous commitment not to develop autonomous weapon systems and to take part in efforts to build an international treaty to ban the use of these weapons.
- The UK government should investigate carefully the implications of arming smaller surveillance UAVs before it takes any steps to do so.
- The UK Government should commit to a more open approach to Parliamentary Questions and Freedom of Information requests on the use of armed UAVs, which would lead to the achievement of the objective set out in the MoD's Joint Doctrine Note on the need for a public debate on this technology.