

Written evidence submitted by Article 36

1. **Article 36** (www.article36.org) is a specialist non-profit organisation, focused on reducing harm from weapons. We do this by working with other civil society partners and governments to develop new policies and legal standards for existing and emerging weapons. Our work is underpinned by rigorous, transparent and independent analysis of how weapons harm civilians, and how such harm can be prevented.
2. Article 36 coordinates the **International Network on Explosive Weapons (INEW)**, an international civil society network which calls for immediate action to prevent human suffering from the use of explosive weapons in populated areas, including for states to recognise the harm from the use of explosive weapons in towns and cities and other populated areas; to strive to avoid such harm and suffering in any situation, to review and strengthen national policies and practices on use of explosive weapons and gather and make available relevant data; to work for full realisation of the rights of victims and survivors; and to develop stronger international standards, including an end to the use of explosive weapons with wide area effects in populated areas.
3. **Executive summary**
 - This submission notes the use of heavy explosive weapons in Mosul and Raqqa as a central feature of the military operation and as a primary driver of civilian harm.
 - It also notes a situation of contested claims regarding the direct relationship between UK strikes and instances of civilian death and injury.
 - In that context this submission concludes with key procedural questions which, if openly addressed, would get beyond rhetorical claims regarding ‘precision’ and ‘full implementation of international humanitarian law’ to more substantive questions of how civilian protection can be enhanced in practice.
 - Article 36 urges the UK government, which claims a leadership role on the protection of civilians at the United Nations Security Council, to promote further efforts to avoid the use of explosive weapons with wide area effects in populated area, in line with international policy recommendations.
 - Furthermore, the UK should track and record casualties in the conduct of its military operations, and increase transparency and public accountability over its use of weapons in military operations
4. **The use of explosive weapons in the cities of Mosul and Raqqa**
The UK and its coalition partners made extensive use of heavy explosive weapons, including aircraft bombs, missiles, rockets, mortars, and artillery shells, in the densely populated cities of Mosul, Iraq, and Raqqa, Syria.
5. The UK’s involvement in joint military operations led by the US in the cities of Mosul in Iraq, and Raqqa in Syria, has involved conducting hundreds of airstrikes and training local forces in Iraq. The UK’s Royal Air Force has used more than 3,500 bombs and missiles in Iraq and Syria since September 2014, the specific figures for the operations in Mosul and Raqqa are difficult to obtain and could be clarified.¹
6. **Mosul:** The US-led Coalition declared more than 1,250 airstrikes in the city. The UK announced at the end of the Mosul operation that it “has struck more than 750 targets” second only to the US in the number of airstrikes conducted in the operation.²

¹ <https://dronewars.net/2018/02/26/cost-of-uk-air-and-drone-strikes-in-iraq-and-syria-reach-1-75-billion/>

² <https://www.gov.uk/government/news/defence-secretary-welcomes-iraqi-victory-in-mosul>

7. In addition to the airstrikes, the UK's coalition partners made extensive use of ground based heavy weapons. A low estimate suggests several thousand of artillery rounds were fired into Mosul.³ Improvised rocket-assisted munitions (IRAMs), were fired into western Mosul by Iraqi Security Forces (ISF). The US and ISF fired heavy mortars and unguided artillery rounds into the city. France reported undertaking almost 1,200 artillery strikes on the city.⁴
8. **Raqqa:** The UK has reported striking 215 targets in Raqqa, France has declared 50 airstrikes and all other air and artillery strikes were by US forces, totalling at least 20,000 munitions fired.⁵ Amnesty International reports that US forces acknowledge firing tens of thousands of artillery rounds into the city.⁶ Victim testimonies report salvos of unguided artillery shells fired into the city's residential neighbourhood targeting areas of hundreds of square metres rather than specific point targets.⁷
9. Much of the city of Raqqa was destroyed, with countless homes, private and public buildings and infrastructure reduced to rubble or damaged beyond repair.⁸ The UN estimated that 80 percent of the city had been left uninhabitable due to the destruction wrought by intense military operations including regular airstrikes and shelling.⁹ The UN's Humanitarian Coordinator for Syria expressed deep concern over the high civilian casualty rates and the use of explosive weapons in populated neighbourhoods.
10. **Extensive civilian harm**
The precise number of direct civilian casualties from these operations is currently unknown – as are the wider patterns of morbidity and mortality resulting from the effects of the destruction of services and infrastructure. A number of different actors have attributed significant civilian harm to this operation. The UK NGO Airwars estimates that the coalition is responsible for between 6,250 and 9,600 civilian deaths overall in military operations against Daesh. Of those reported deaths, more than half took place either in the vicinity of Mosul or of Raqqa.¹⁰
11. The United Nations Secretary-General (UNSG) highlights the operations in Mosul and Raqqa in his latest report on the protection of civilians in armed conflict and concludes that:
“the impact of conflict on civilians and civilian objects was particularly acute when fighting took place in densely populated areas and involved the use of explosive weapons with wide-area effects”
12. The UNSG identifies air- and ground- launched attacks¹¹ using explosive weapons as a cause of significant numbers of civilian deaths and injuries in Syria, as well as leading to the destruction of essential infrastructure, schools and hospitals. Similarly, in Iraq, he identifies shelling and airstrikes as a key cause of concern to civilian safety and as a cause of destruction to homes and infrastructure.¹²

³ <https://airwars.org/wp-content/uploads/2018/05/Airwars-Death-in-the-City-web.pdf>

⁴ <https://airwars.org/wp-content/uploads/2018/05/Airwars-Death-in-the-City-web.pdf>

⁵ <https://airwars.org/wp-content/uploads/2018/05/Airwars-Death-in-the-City-web.pdf>

⁶ [https://www.amnesty.org.uk/files/2018-](https://www.amnesty.org.uk/files/2018-06/WAR%20OF%20ANNIHILATION.%20DEVASTATING%20TOLL%20ON%20CIVILIANS%20RAQQA-SYRIA.pdf?buqJf0s6vjlQ0ej4WZAJ1GCRNUZV4wGJ)

[06/WAR%20OF%20ANNIHILATION.%20DEVASTATING%20TOLL%20ON%20CIVILIANS%20RAQQA-SYRIA.pdf?buqJf0s6vjlQ0ej4WZAJ1GCRNUZV4wGJ](https://www.amnesty.org.uk/files/2018-06/WAR%20OF%20ANNIHILATION.%20DEVASTATING%20TOLL%20ON%20CIVILIANS%20RAQQA-SYRIA.pdf?buqJf0s6vjlQ0ej4WZAJ1GCRNUZV4wGJ)

⁷ <https://airwars.org/wp-content/uploads/2018/05/Airwars-Death-in-the-City-web.pdf>

⁸ <https://www.amnesty.org.uk/press-releases/syria-us-led-coalitions-aerial-attacks-raqqa-killed-hundreds-civilians-new-report>

⁹ <https://reliefweb.int/sites/reliefweb.int/files/resources/NES%20Sit%20Rep%20Sept%20Monthly%20no%2016%20FINAL.pdf>

¹⁰ <https://airwars.org/wp-content/uploads/2018/05/Airwars-Death-in-the-City-web.pdf>

¹¹ https://civiliansinconflict.org/wp-content/uploads/2017/10/civic-interaction-protection-of-civilians-in-mosul-october-2017_final.pdf

¹² <http://undocs.org/s/2018/462>

13. In Mosul, UN Office for the Coordination of Humanitarian Affairs reports that 900,000 people fled the city, with 750,000 from west Mosul alone.¹³ Six months into the operations, UN Habitat estimated that the number of residential houses damaged or destroyed by the operation already amounted to 5,000.¹⁴

14. Responding to concerns: claims of ‘precision’ and a rhetoric of ‘zero civilian casualties’

The use in these operations of explosive weapons that create a wide area effects, because they are inaccurate or imprecise, or because they contain large quantities of explosives, have been identified as presenting increased harm to civilians.¹⁵ In response to concerns about civilians casualties there has been an emphasis by the UK on highlighting the ‘accuracy’ of its bombs and on suggesting that it is for third parties to prove a link between its specific bombing missions and specific instance of civilian harm.

15. **Precision:** During the operation in Mosul, the then UK Defence Secretary, Sir Michael Fallon MP, claimed that the UK’s use of “highly accurate” missiles and bombs such as the Paveway guided bombs allow strikes “while minimising the risk of civilian casualties.” Similarly, the Coalition Commander with oversight of the operation in Raqqa stated that, “there has never been a more precise air campaign in the history of armed conflict.”¹⁶

Such statements risk an implication that ‘precision’ is the only determinant of civilian harm, when in reality, even very precisely delivered weapons can cause extensive harm to civilians if the object being targeted has been wrongly identified or the effects of the weapon used extend significantly beyond that target object. Furthermore, an emphasis on air-deliver ordnance risks implying that the air-campaign was itself the only mechanism by which explosive force was being applied into these urban areas.

16. Although significantly larger air-dropped bombs are available, 500lbs munitions such as Paveway IV, contain around 90kg of explosive and project a powerful wave of blast and fragmentation around the point of detonation creating a large lethal area.¹⁷ Anyone within a distance of 250m from the point of detonation faces a 10% risk of a being incapacitated, and there is a 0.1% (1 in 1,000) risk of being incapacitated at 425m.¹⁸ In conjunction with challenges of intelligence in the identification of targets, and the challenges of reliably striking specific targets even with guided aircraft bombs (including the risks of mechanical failure within the delivery process), such area-effects will present significant risks to the surrounding area.¹⁹ Thus, whilst such bombs may be significantly more accurate than unguided aircraft bombs, the pattern of blast and fragmentation that they produce will present a significant threat if used against targets in an area of civilian population.

17. Amnesty International highlights that the UK’s partners on the ground made extensive use of explosive weapons which are likely to cause wide area effects. This is notably the case for artillery rounds, which can have a substantial margin of error in terms of where munitions will land (even assuming that they are aimed correctly in the first place).²⁰ In a

¹³ <https://reliefweb.int/report/iraq/hundreds-civilians-are-being-killed-and-injured-fighting-intensifies-mosuls-old-city>

¹⁴ http://unhabitatiraq.net/mosulportal/wp-content/uploads/2017/07/170713_Damage-Assessment.pdf

¹⁵ https://civiliansinconflict.org/wp-content/uploads/2017/10/civic-interaction-protection-of-civilians-in-mosul-october-2017_final.pdf

¹⁶ <https://foreignpolicy.com/2017/09/15/reports-of-civilian-casualties-from-coalition-strikes-on-isis-are-vastly-inflated-It-gen-townsend-cjtf-oir/>

¹⁷ Amnesty

¹⁸ <http://characterisationexplosiveweapons.org/studies/annex-e-mk82-aircraft-bombs/>

¹⁹ <http://www.article36.org/wp-content/uploads/2016/10/PAX-A36-Areas-of-Harm.pdf>

²⁰ <https://www.amnesty.org.uk/files/2018->

context where buildings were no more than few metres apart such margins for error would not allow targeting at anything other than a general urban area.

18. The unsuitable choice of heavy explosive weapons in urban centres, and the UK's failure to track civilian casualties, investigate allegations over civilian deaths, and the UK's repeated claims discounting RAF involvement from any of the strikes where there were civilian casualties and which were brought to the UK's attention²¹ lack credibility and show disregard for the protection of civilians.
19. The UK and other coalition partners civilian casualty monitoring and investigation processes have been lacking, and most members of the alliance - including the United Kingdom and France - have yet to admit a single casualty.²² This is despite statements that Mosul has been the scene of the most intense urban fighting since World War II according to US officials. Civilian casualties from US-led strikes appear to be at their highest levels since Vietnam, and yet there is little or no official effort made to track the overall death toll from urban fighting.²³ Airwars notes that Russia's campaign in Syria has reportedly featured systematic violations of international law, including the alleged targeting of medical facilities but that the Coalition's operation has claimed a similar number of civilian lives which speaks to the catastrophic consequences of using explosive weapons in urban areas - despite the extensive use of guided munitions, and a stated intent to minimise civilian harm.²⁴

20. **International policy recommendations on the use of explosive weapons in populated areas**

The use of explosive weapons with wide area effects (heavy explosive weapons) in populated areas has been repeatedly raised as a top issue of humanitarian concern by the United Nations Secretary-General,²⁵ the International Committee of the Red Cross (ICRC)²⁶ and the International Network on Explosive Weapons (INEW) based on occurrences across a variety of contexts including but not limited to the cases of Mosul and Raqqa. Over 90 states, including the UK, have also recognised the humanitarian concerns over the use of explosive weapons in populated areas.²⁷

21. Furthermore, the UN Secretary-General, the ICRC and INEW all call on states and parties to conflict to *avoid the use of explosive weapons with wide area effects in populated areas* due to the unacceptably high risk of harm this presents to civilians, and the significant likelihood of indiscriminate effects. Wide area effects result from blast and fragmentation effects extending beyond the intended target as a result of a large blast and fragmentation radius, inaccuracy of delivery, and the use of multiple firings or weapons with multiple warheads.

22. **Key questions that the UK Ministry of Defence should address: Understanding the technical characteristics of the weapons used:**

- What are the UK's evaluations of the blast and fragmentation radii, or other area of effect indicators, for the different types of explosive weapons that it has employed in Raqqa and Mosul? If it is not possible to release actual figures, is it possible to

06/WAR%20OF%20ANNIHILATION.%20DEVASTATING%20TOLL%20ON%20CIVILIANS%20RAQQA-SYRIA.pdf?buqJf0s6vjIQ0ej4WZAJ1GCRNUZV4wGJ

²¹ <https://www.parliament.uk/business/publications/written-questions-answers-statements/written-question/Commons/2017-12-20/120695/>

²² <https://airwars.org/wp-content/uploads/2018/05/Airwars-Death-in-the-City-web.pdf>

²³ <https://airwars.org/wp-content/uploads/2018/05/Airwars-Death-in-the-City-web.pdf>

²⁴ <https://airwars.org/wp-content/uploads/2018/05/Airwars-Death-in-the-City-web.pdf>

²⁵ <http://undocs.org/s/2018/462>

²⁶ <https://www.icrc.org/en/document/explosive-weapons-populated-areas-factsheet>

²⁷ <http://www.inew.org/acknowledgements>

release comparative figures (e.g. the Paveway IV is anticipated to affect an area approximately [y] x the area anticipated for the Brimstone). How were these indicators factored into collateral damage estimation processes?

- Did the UK have available minimum safety distances for the use of explosive weapons in proximity to friendly forces on the ground (distances within which strikes would not be undertaken or would require elevated command authority)?
 - Did those minimum safety distances provided different distances for different types of explosive weapons?
 - What were those distances?
- Where the UK has provided training to local forces, what training or information was provided on understanding the area effects of different weapons that those forces might use?

23. Evaluating weapon performance:

- Has data on the on the type, location and quantity of weapons used by the UK been retained as required by UN CCW Protocol V (to which the UK is not a Party) and has it been made available to any third parties to facilitate the clearance of unexploded ordnance?
- How many weapons releases that the UK undertook were evaluated as having failed to function, or having landed away from the intended target?
- How many weapons releases have been subject to a subsequent Battle Damage Assessment?

24. Understanding the context of specific strikes:

- How many of the UK's airstrikes would it evaluate as having been undertaken in a built-up area?
- In how many cases was it presumed that a civilian population was still present in that area?
- Were there cases where UK forces presumed that no civilians were present in a built-up area (i.e. where they took the absence of visible civilian activity to suggest that no civilians were present)?

25. Understanding civilian harm:

- What assessment has the UK undertaken of the damage to property, community facilities and infrastructure from the strikes that it undertook? (including dates, times, locations, weapons used and intended targets).

1 July 2018