

Artillery and Fire Support in the Defence Forces of the future.

Capt Brian Clarke

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Introduction

The roles that artillery plays can often be overlooked or misunderstood. With an increased requirement for peacekeepers to be able to defend themselves and others, and with war once again waging in Europe, these roles are crucial to successful military operations, and are an essential capability for a modern armed forces. The future disposition of the Defence Forces is being considered by the government following the publication of the Report of the Commission on the Defence Forces in 2022. What the Defence Forces may be asked to do in the future is also being considered. At this pivotal point in time for the Irish Defence Forces, it is of great importance to examine and understand the role that artillery plays today, the changes that defence in Ireland is facing, and the key capabilities that a well-resourced and staffed Artillery Corps could bring in the future.

The Role of Artillery in Peace Support Operations and Modern Conflict

In simple terms, the provision of fire support on the ground against land and air based threats is the role of the artillery element of the Army. In Ireland's case these roles breakdown further to providing fire support to land components, light field battery support to Irish peacekeepers, and tactical level air defence to land components. There are a plethora of specific skillsets and capabilities required within these roles. Modern artillery units provide capabilities such as surveillance, target acquisition, use of unmanned aerial vehicles (UAVs) for reconnaissance, counter battery strikes, enhanced observation, and advanced warning of attack. These skills and capabilities are required for any modern artillery unit to provide their overall core function of fire support. They are also invaluable to commanders in a modern operating environment where information, deterrence, and advanced warning of threats can be decisive in mission success. This remains true for every level of operation from low intensity peacekeeping to conventional war fighting.

Peace Support Operations

Artillery has played a key role in peace support operations. The Irish Artillery Corps first deployed overseas in a fire support role in 1960 as part of Ireland's contribution to the United Nations peacekeeping mission in the Congo, (ONUC). In 1962 and 1963 the Irish Heavy Mortar Troop of the 38th Infantry Battalion, drawn primarily from the now disbanded 4th Field Artillery Regiment, provided significant amounts of fire in support of friendly forces engaging in battalion and brigade level attacks. Irish troops received similar fire support from other contingents during combat, specifically having Indian Army heavy mortars fire on targets for them during the battle to take the town of Elizabethville. Since these early days of Irish peacekeeping, the Artillery Corps has been in an almost constant state of providing a fire support capability to Irish units in places such as Lebanon, Chad, and Liberia. Despite it not being required to provide such a lethal level of support since Ireland's involvement in ONUC, such a capability remains essential. The Artillery Corps has also provided surveillance and observation skills on deployments. The Artillery Corps operates UAVs for target acquisition, surveillance, and information gathering. Artillery UAVs were used in surveillance of armed groups as an early warning system when the Defence Forces were deployed as part of EUFOR Chad in a robust protection of civilians role. The Artillery Corps also provided a mortar battery for force protection on the same mission. Artillery UAVs have even been used in support of the civil authorities at home in Ireland.



Prototype 155mm Howitzer mounted on an APC

Artillery has played a vital role in peace support operations for other militaries also. In 2006 the French Army deployed self-propelled 155mm artillery guns and artillery radar to the United Nations Interim Force in Lebanon (UNIFIL), where Irish troops also serve, providing a significant deterrent to aggression against peacekeepers. The French Artillery Corps' COBRA radar is still deployed with UNIFIL and provides a vital service in the tracking and early warning of munitions being fired in the UNIFIL AO. The British Royal Artillery deployed self-propelled 155mm artillery guns to Bosnia in 1996, and their towed L118 105mm light howitzers were used in action to protect the civilian population of Sarajevo city in 1995. These same weapon systems are in use by the Irish Artillery Corps today. The United States Army also deployed 155mm artillery on peace support operations in Bosnia. They provided a significant deterrent to attack and an illumination capability allowing friendly forces to identify snipers and other potential aggressors at night. Artillery has played a significant role on more contemporary peace support operations also. The United Nations Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO) has within its structure a combined arms brigade containing infantry, special forces, artillery, and other assets established to directly target aggressors. The Force Intervention Brigade (FIB) was forced to use artillery guns, mortars, and attack helicopters in combat in support of MONUSCO after employment of mortars and rockets by armed elements on numerous occasions. It also uses UAVs in support of its operations. Despite being generally seen as an item of war, artillery and all of the required skillsets and capabilities that come with it, are evidently highly valuable to peace support operations.

Modern Conflict

Artillery remains a central component of any NATO standard combined arms force. The long range and mobile artillery gun is considered essential in support to battalion level operations. A combined arms approach to warfighting is the “simultaneous application of several arms to achieve an effect on the enemy [...]”. This approach is central to the doctrine of NATO member states as “[...] no single arm of the land force can operate entirely independently of other arms [...]”. In modern conflict artillery has played a prominent role. The British Army relied heavily on their L118 105mm light howitzers during their Afghanistan campaign, where their relative lightness and ability to be airlifted allowed the Royal Artillery to provide close fire support from Forward Operating Base. Most significant troop contributing countries to the International Security Assistance Force (ISAF) in Afghanistan provided their own artillery capability. More recently, in Ukraine, the centrality of artillery to modern conflict is plainly visible. Russian doctrine favours the liberal use of artillery, while western and NATO doctrine focuses more on precision fires and manoeuvre warfare. After having spent over twenty years fighting insurgencies using many of the same artillery systems in service decades before the Afghanistan and Iraq wars began, the West may have somewhat neglected the development of its artillery, while Russia focused on artillery and indirect fire capabilities. In Ukraine the conflict has been described as an “artillery war” by the Ukrainian Deputy Head of Military Intelligence, with the Ukrainians claiming to be firing between five and six thousands artillery shells per day in the summer of 2022. Ukraine has been given artillery systems from many western countries in order to bolster its chances against the onslaught of the artillery focused Russian Army. As well as equipment, western nations such as the UK and New Zealand have provided artillery specific training to the Ukrainian Army. It has been argued that Ukraine’s best use of artillery would be in countering the artillery threat posed by Russia, as it is central to Russian doctrine. Ukraine has used its own counter battery radar in conjunction with its UAVs to direct the fire of its newly acquired western artillery systems, as well as their older ex-soviet equipment. They have focused on targeting Russian artillery ammo depots and other targets essential to Russia’s indirect fire capabilities. It is clear that artillery retains its status as being a central component of conflict today.

Changes in Irish Defence

The Irish Defence Forces is facing a period of significant change. Minister for Defence and Foreign Affairs, Simon Coveney TD, has outlined his wishes for the Defence Forces to partake in more specialised, robust, and challenging peace support operations, particularly across the Sahel and in difficult roles such as the protection of civilians. The White Paper on Defence 2015 states that the Defence Forces will maintain a land component with “all-arms conventional military capabilities”. The White Paper also states that NATO is the standard setter for modern armed forces, and that if Ireland is to continue being an acceptable partner for peacekeeping operations then it is “[...] necessary for the Defence Forces to be trained and equipped to NATO standards”. The Report of the Commission on the Defence Forces made clear that the Army should have significantly improved mobility, firepower, and force protection, and that sufficient firepower should be provided to enhance the Army’s combat effectiveness. The Commission has also recommended that the Army have an artillery regiment (or regiments) of five hundred personnel each, which would be a significant increase in size on the current artillery unit structure. The Commission has also outlined its vision of the Defence Forces in the future as being “[...] a partner of choice for robust multi-national peace support, crisis management and humanitarian relief” operations. During the Commission’s public consultation phase the Department of Foreign Affairs made its own submission where it called for the Defence Forces to partake in more specialised peacekeeping and in closer cooperation with NATO and the EU on peace support operations in the future. In response the government has committed to a relatively significant increase in defence spending, and have signalled their intent to act upon a large amount of the Commission’s recommendations. The Commission has specified in its vision for the Defence Forces that it will “[...] serve in higher intensity peace support, crisis management and humanitarian relief operations” overseas. It is evident that Defence Forces overseas operations may very well lay in more challenging and robust deployments to Africa and other more troubled regions throughout the world in the relatively near future. It is also clearly a goal of government for the Defence Forces to strive towards NATO standards. This goal has only been reinforced by the recommendations of the Commission. Central to a NATO standard ‘conventional all arms’ land component capable of engaging in such deployments in a safe manner, is a credible Artillery Corps.

The Reality of Robust Peacekeeping Operations

The seriousness of Ireland again partaking in more robust peace support operations on a larger scale cannot be understated. In order for a military to contribute to such operations, it must at a minimum be able to defend itself and counter threats. There are some ongoing peace support operations that can be considered robust in this context. Almost all of them are in Africa, and most of them are in the Sahel. Irish Army Ranger Wing soldiers are more than familiar with the robust nature of deployment to this region. In 2020 they survived a significant IED attack on one of their patrols when deployed to the United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA). British peacekeepers deployed to MINUSMA killed two fighters in combat when they were attacked while on patrol in 2021. In the nine years that MINUSMA has been operating since 2013, it has lost 275 peacekeepers, over three times the fatal casualties the Irish Defence Forces has sustained while deployed on UN operations since 1960. Unfortunately many of the Irish soldiers who lost their lives in the service of peace were killed by indirect fire. Indirect fire such as mortars and artillery remains a significant threat to peacekeepers and a major contributor to peacekeeper casualties in Mali today. The European Union Training Mission (EUTM) Mali has even trained the Malian Army in the use of artillery to combat the threat from opposing forces. Established in 2010, the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO) has lost 230 peacekeepers and artillery and mortars are also a significant threat to peacekeepers there. The United Nations Interim Security Force for Abyei (MINUSFA) has lost 49 peacekeepers since 2011. The United Nations Mission in South Sudan (UNMISS) has also lost 103 peacekeepers since 2011 where mortar attacks on UN posts and patrols are a cause of fatal casualties. This sample of missions reveals that indirect fire remains a major threat to peacekeepers today.



French Caesar 155mm truck mounted Howitzers

The Place of Artillery in the Defence Forces of the Future

The Defence Forces of the future would benefit greatly from an Artillery Corps capable of providing a full spectrum of deployable artillery capabilities, including: mobile fire support, deployable artillery radar, tactical level air defence, counter battery capabilities, UAV capabilities, and surveillance and target acquisition capabilities. Operation of self-propelled guns would significantly enhance the mobility and firepower of the Army, and would allow for significantly greater 'stand-off' range in protection of Irish peacekeepers than the lower level mortar fire support usually deployed with Irish units offers. More mobile and agile self-propelled 105mm howitzers mounted on smaller vehicle such as HUMVEEs and APCs have been developed in the US. In the UK a mounted 155mm howitzer for the newly developed 'Boxer' APC has been developed. The French military use the CAESAR truck mounted 155mm howitzer. Several European Union member states are currently developing a mobile artillery platform through the PESCO framework. Self-propelled artillery is no longer confined to large and expensive tracked vehicles like the older British AS90. The enhanced range provided by mobile artillery guns is superior to lesser capable self-propelled mortars, which can also provide some level of enhanced fire support. Heavy mortar turrets for APCs such as the Finnish manufactured Patria NEMO system provide enhanced mobility and firepower for ground forces. Older fashioned open top mortar carrying APCs such as the Italian Centauro AMC are still widely used and available. Even towed artillery still has a place in modern militaries. The US Army has recently upgraded their version of the L119 105mm light howitzer that is also used by the Irish Artillery Corps. Lighter guns such as these still provide a vital capability in expeditionary military operations.

Tactical level air defence would also be an essential capability. Modern tactical level air defence systems are of use against both conventional low flying manned hostile aircraft, and UAVs which could be used for surveillance or targeting of peacekeepers by threat actors. Non-sophisticated UAVs are readily available and are easily used in attacks as IEDs or IED carriers. In conjunction with air defence radars and missiles, lower level counter UAV systems such as the 'Nightfighter X' now in use by air defence troops in the UK can be used in a force protection role. Modern artillery systems are almost useless without their sensors, and a strong radar capability is also essential. The Commission on the Defence Forces has noted that the current air defence and radar systems used by the Artillery Corps are almost obsolete. This is most likely due to the age of the systems, and the fact that they cannot provide a counter battery capability. Enhanced counter battery and air defence capable radar is essential for the Artillery Corps of any capable armed forces. The British Royal Artillery



Patria NEMO 120mm APC mounted Mortar

use the Arthur MAMBA Mobile Artillery Monitoring System mounted on similar vehicles to those currently used for the Irish Artillery Corps' SAAB Giraffe radar system. The Royal Regiment of Australian Artillery use the smaller and more deployable AN/TPQ-48 Lightweight Counter Mortar Radar (LCMR). The Royal Regiment of New Zealand Artillery also use the same system in conjunction with their L119 105mm light towed howitzers. Such systems allow a commander to have advanced warning of indirect fire directed towards their own troops, or civilians they're supposed to protect. These systems also provide accurate data to allow for such threats to be targeted in self-defence if needs be. More modern systems exist, such as the SAAB Giraffe 4A, which can fulfil the role of both counter battery radar and air defence radar together. Both capabilities are no longer exclusive to each other in terms of equipment. All of these capabilities are what is expected of a modern Artillery Corps internationally.

Integration into Overseas Units

The Artillery Corps of the future could significantly improve the safety of Irish peacekeepers, and those they are charged to protect, by providing these capabilities on future robust peace support operations. The Irish military generally deploys overseas units in the form of Infantry Battalions or Infantry Groups. Despite their naming convention, these units are almost always combined arms forces with elements from every corps of the Army, not just the Infantry Corps. This model will likely continue. As part of a future enhanced Artillery Corps' contribution to such units it could provide a package of mobile fire support, advanced warning and threat detection, UAV observation, and air defence capabilities if needs be. Such a package would provide significant abilities for Irish peacekeepers to protect themselves on long range patrols and in camp, and to protect vulnerable civilians. It would also provide a potent deterrence to potential threat actors. These capabilities could even enhance the force protection and abilities of a whole peacekeeping force in a similar fashion to the enhanced capabilities offered to UNIFIL by the presence of the French artillery's COBRA radar.

Conclusion

The role to be played by artillery in modern conflict and peace support operations is central, and can be decisive. The intent of government to involve the Defence Forces in a more meaningful and challenging contribution to peace support operations in the future, while also building on the Defence Forces' current capabilities towards NATO standards, is clear. Ireland currently enjoys a relative freedom of choice in what peace support operations it takes part in. The capabilities examined in this paper are the standards expected of the artillery elements of modern NATO standard armed forces. These standards are what may be expected of the Defence Forces in the future if Ireland is to retain its privileged position in terms of choice of missions. If Ireland were to aspire to these standards for its Artillery Corps, such enhancements could not only benefit the Defence Forces in terms of enhanced protection for its troops and others, but also in its standing as a partner of choice for multinational operations.



STA Detachment Provides Overwatch and Security for Engineer Operations in UNDOF