

# BOMBS AWAY!



## Jeanne McKinney uncovers the resilient warcraft of explosives

**W**hether launched from aircraft, drones, missile sites, by hand or lying in the ground, bombs have been the weapons of choice for decades of terror attacks and wars. Laser-guided technology provides precise targeting for larger bombs, yet smaller types of bombs are not as discriminate. The intent of all bombs is death and destruction against both adversaries and civilians. Osama bin Laden declared in a declaration of war against the United States and Saudi Arabia: "Almighty Allah said: 'But when the forbidden months are past, then fight and slay the Pagans wherever ye find them and seize them, beleaguer them, and lie in wait for them in every stratagem (of war) [AlTawbah: 5]. The youth know that the disgrace and shame that afflicted the Muslims, by occupying their sacred places, would not be removed except by Jihad and explosives.'" Bin

Laden's followers put his words to action on bombing/killing campaigns that shocked nations and alerted the world that jihad was alive and lethal.

Jarred Alden is a lieutenant for the city of Akron, Ohio, Fire Department. He runs an engine and med unit out of there and has over 16 years as a SWAT tactical medic. Years ago, his SWAT commander asked him to put on a course for his SWAT operators dealing with explosives. SWAT uses explosive breaching when "looking for bad guys. . . If we cannot break through the door with regular tools, we will place high explosives on the door to blow the door off the hinges or to taco the door in half," says Alden.

Alden is an expert in blast injuries and explosives in general. He has been tasked to investigate post blast scenes. He describes the difference between high and low explosives: "Low order explosives would be your flash powders, black powders, gunpowders, things of that

**The Taliban use rocks, chunks of metal or rusty screws and nails for shrapnel in its IEDs**

nature." They must be encapsulated to build the pressure on the inside to explode to detonation.

"If you have enough explosive material, and if it is encapsulated perfectly with no gaps or vents in that explosive device, it can detonate if it reaches above 3,300 feet per second detonation velocity. Anything above 3,300 feet detonation velocity, which is how fast that material was consumed, is a high explosive. Anything below that is considered a low explosive."

A grenade is an example of an encapsulated explosive, used in warcraft for centuries. The Byzantines employed 'Greek Fire' in hand thrown containers, according to Warfare History Network. Mongols and Chinese made key advances to their use of fire arrows and small rockets, adding: "metal casings that held explosive material used for incendiary grenades". These hand-thrown explosives proved highly effective in close quarters combat in Europe by the 17th century.

In modern day warfare, the nefarious IED is an indiscriminate tactical weapon used by violent insurgents throughout the Afghan War. Hidden IEDs spared no one, not even local children at play. USMC Combat Engineer

David Noblit (Ret.) was attached to Ronin 3 platoon with 3rd Battalion 5th Marines (3/5) in Sangin, Afghanistan 2010. His job was to find Taliban IEDs and detonate or remove them.

He says most IEDs were homemade, using plastic buckets or jugs with HME packed inside. The Taliban also threw rocks, chunks of metal or rusty screws and nails in for shrapnel making injuries much more grievous and lasting if one was not killed by it first. They also used 105 and 155 rounds they would pack explosives in. When it exploded it used the casing as shrapnel.

In Afghanistan, ammonium nitrate and potassium chlorate were used as an oxidiser reacting violently with combustible materials, becoming highly sensitive to friction. A simple battery as a power source could be used to detonate an explosion. An initiator (like a blasting cap) triggers the switch. Lightbulbs have also been used as initiators.

## WHY CREATE SOMETHING SO DESTRUCTIVE THAT IT THREATENS THE SURVIVAL OF MANKIND?

While on patrol Noblit picked up a battery on the ground, so the Taliban could not use it. He stepped on a hidden IED next to it and his life changed drastically, becoming a double amputee. Remaining shrapnel caused problems once back home with recurring infections. He has overcome his injuries courageously. Shrapnel causes penetrating injuries that medics, EMTs and battlefield corpsmen must deal with until those victims can be triaged to a higher level of care.

"High explosives are rated on their sensitivity," says Alden. Dropping a pin on a dime size portion of Triacetone Triperoxide (TATP) on a table would cause detonation. Alden says TATP is a signature explosive used by ISIS. TATP is also called "Mother of Satan" because it can be made using household chemicals. It is a white crystalline powder considered one of the world's most unstable explosives.

TATP has been linked to widespread carnage including the i20 car blast site near the Red Fort in Delhi, India, which killed 15 people and injured 20 others. TATP has been used in terror attacks in London, 2005, Paris 2015, Brussels 2016, Manchester 2017 and the Sri Lanka Easter bombings of 2019.

"In the space of 20 minutes from 8:45 AM local time on Easter Sunday 21 April, 2019, in Sri Lanka, there were a series of seven coordinated suicide bomb attacks in popular hotels and historical churches across the capital city of Colombo, other coastal cities in the west, and towns in the east of the country, killing hundreds as they gathered for Easter. Hundreds more were injured. The bombers' devices were packed with iron nails, ball bearings, and TATP. . . ." (Combating Terrorism Center at Westpoint).

Terrorists are never content with just one injury. Alden relates a loathsome tactic not well known: "they are recruiting people who have communicable diseases like Hep C, HIV, and AIDS to be suicide bombers. They want that biological piece. Let us say I am close enough to the explosion of a suicide bomber. I do

not catch the fragmentation or the shrapnel from the device, but I catch bone fragmentation from the person. Now I might end up with HIV or Hep C.”

Every explosive is weighted based on Trinitrotoluene (TNT), a very strong explosive. TNT has a Relative Effectiveness (RE) factor of 1.0. That is the baseline to compare the explosive power of other energetic materials, measuring detonation velocity, blast wave energy, and shattering capacity. TNT and dynamite are two different explosives, but similar detonation velocity and so both extremely high explosives. Alden states, Pentaerythritol tetranitrate (PETN) has a RE rating of 1.6, so it only takes 0.6 of PETN to equal TNT of 1.0.

## THE USMC BARRACKS BOMBING IS THE LARGEST NON-NUCLEAR EXPLOSION SINCE WWII

Bin Laden’s call to jihad proved to be not an empty threat in bombings that cut a fiery swath of terror through people working and living in US government buildings, unaware they were about to die. On 18 April, 1983, a van loaded with approximately 2,000 pounds of TNT gained access to the US Embassy compound in Beirut, Lebanon. The blast collapsed the entire central façade, spewing masonry and metal and glass fragments in a wide blast range. A total of 63 people were killed; of the Americans killed eight worked for the CIA. The bombing is considered the start of Islamist attacks on US targets.

Just a few months later, 23 October, the USMC barracks in Beirut were savagely attacked. A suicide bomber crashed a truck laden with explosives equivalent to 12,000 pounds of TNT into the building’s entryway and detonated it. The force

initially lifted the entire four-story structure, shearing the reinforced concrete support columns then fell on itself. Compressed butane in canisters employed with PETN created a fuel air explosive. The USMC Barracks bombing is said to be the largest non-nuclear explosion since WWII. It crushed 241 Service members. Another 128 were injured in the fiery inferno.

Although this bomb was not considered sophisticated and its parts widely available, the gas-enhanced device was like fuel-air thermobaric weapons, so powerful, forensic investigators concluded even if sentries had stopped the truck, it would have still brought down the building. Near simultaneously, a second suicide bomber struck a nine-story building where the French contingent was stationed. As many as 58 paratroopers were killed and 15 injured.

Ultimately, we live under the shadow of the turn of a key to incur nuclear bomb wrath on the world. Why create something so destructive it threatens the survival of mankind? Everyone wants it, including nations and terror groups. Judges sit at the heads of governments who can decide who lives or who dies. No bomb is dropped without death and destruction intent. Many times, the innocent are not only instant casualties, but long-term victims of countries reduced to rubble, dying from starvation, disease, and displacement.

Bomb expert Jarred Alden has seen plenty of destruction from explosives he as his team are tasked with investigating in the aftermath. He is actively educating the public about many types of explosives used in bombs. Instead of living in a utopian American bubble thinking everything just happens overseas or countries in Africa, the Middle East or the Philippines, he is preparing for: “stuff is coming this way. I am not saying it is going to happen tomorrow or even this year, but I think we are looking at high explosives being placed in many different areas around the country”. As war, chaos and conflicts expand by the hour, it is wise to understand what threats we may face and be on alert and ready ●

**Jeanne McKinney** is an award-winning military journalist, book author, and documentary filmmaker. She recently published the true historical account of *Triumph Over the Taliban: The Untold Story of US Marines’ Courageous Fight to Save Camp Bastion* (now on Amazon). McKinney also wrote, directed, produced, and completed a limited documentary series called *Ronin 3: The Battle for Sangin* – that follows 3rd Battalion, 5th Marines through a labyrinth of murder holes and IEDs in a heavily entrenched Taliban stronghold in 2010, on mission to restore security to the local Afghan people.

**President and Mrs. Reagan honour the victims of the bombing of the US Embassy in Beirut 1983**

