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Saddle	The part of a gun carriage that enables the super-structure to pivot on the lower portion of the carriage (see: <i>Basic-structure</i>).
Safe Target Area Adjusted for Meteorological Conditions	Applying the effect of meteorological data onto a plotted safe target area to determine whether-or-not a call for fire, onto a particular target, will still fall within the relevant safe area.
Safety Officer	(see: <i>Command Post Safety Officer</i>)
Scheduled Target	A planned target on which fire is to be delivered at a specified time.
Screw Breech	A form of breech that operates by the engagement of a screw within corresponding threads in the breech. The obturator pad is held around a mushroom-headed spindle passing through the screw (see: <i>Breech Mechanism</i>).
School of Artillery	The military establishment where graduating officer cadets and private recruits (on their allocation to Artillery, having completed their officer training and recruit training respectively) attend to learn the basics about gunnery before being allocated to a unit. The School also conducts all the relevant Gunnery promotion and trade courses. The School is made-up of a number training cells, relevant to the various Gunnery branches (eg. field Artillery, air defence, etc) and is commanded by a (lieutenant colonel) Commanding Officer/Chief Instructor.
Seagull	The radio appointment title for the gun position officer.
Second Line Ammunition	(see: <i>Line Ammunition</i>)
Second-in-Command	<p>An Artillery regiment's second-in-command (2IC) (a major) is the regiment's operations officer (OPSO) and deputises for the commanding officer in the regimental area. His overall responsibilities include all matters relating to operational command and the deployment of the batteries during a regimental deployment.</p> <p>His duties also include:</p> <ul style="list-style-type: none">* Matters relating to technical gunnery.* Communications security.* Co-ordination of local defence. <p>The second-in-command of a gun battery is the battery captain (BK) (see: <i>Battery Captain</i>).</p>
Section	(see: <i>Section Commander</i>)
Section Commander	The gun line in a battery is split-up into two sections, with the number of the battery's guns equally divided between the two, and each section is commanded by a subaltern (see: <i>Subaltern</i>). Within the battery area the section commanders assist the battery captain (BK) by commanding their local defence sectors. The duties of a section commander include:

- * Acting as a duty officer in the battery command post.
- * Ensuring the maintenance of parallelism between guns.
- * Supervising the serving of the guns in action which includes the application of fire orders and gunnery data, the distribution and handling of ammunition, and the standard of drill on the guns.
- * Supervising the deployment and operation of any muzzle velocity measuring equipment within their section.
- * Supervising the routine servicing of the guns (including regular sight tests) and the maintenance of the ammunition.
- * Supervising the general administration of their section.

The section commander also performs the duties of the battery reconnaissance officer during the reconnaissance for a new gun position, and the battery leader of the main body of the battery in its deployment to the new position.

Self-Propelled	An artillery gun system mounted on a tracked armoured carriage (at times resembling a tank).
Semi-Automatic Breech	A gun's breech which, without intervention from the detachment, opens after the gun has fired and ejects the spent cartridge case.
Semi-Fixed Ammunition	Ammunition which comes in two separate components. The projectiles and the cartridge cases are packed separately but they are connected together before being loaded into the gun/howitzer (eg. L5 Pack Howitzer / L118 Light Gun).
Senior Instructor	The senior gunnery instructor (an officer with the rank of major) of a wing within the School of Artillery.
Senior Assistant Instructor-in-Gunnery	(see: <i>Master Gunner</i>).
Sense Warn and Locate Battery	The battery's role is to defeat surface-to-surface and air threats, and to enable joint air land integration in order to support the relevant deployed force.
Separate Loading Ammunition	The projectile and the cartridge case, containing the (propelling) charge bags are separate. The projectile is loaded into the gun/howitzer, and rammed-home with a rammer; then the cartridge case is loaded into the chamber (eg. 25 Pounder Gun).
Separated Ammunition	The projectile and the propelling charge bags are separate and the charges are not encased within a cartridge case. The projectile is loaded into the gun, and rammed-home with a rammer; the propelling charge bags are then loaded separately into the chamber (eg. 5.5 Inch Gun).
Sequence of Orders	The orders from the observer to the command post, to engage a target, are laid down and given in a set sequence, however, only those orders relevant to the type of mission are given. The orders given to the guns from the command post (which are different to those orders used by the observer) are also in a set sequence, and again, only those relevant to the particular mission are given.

Within the command post the signaller taking the orders reads back each order, as it is received, as confirmation that the relevant order has been correctly received and understood.

Sergeant-Major Instructor-in-Gunnery	A warrant officer class two gunnery instructor at the School of Artillery. A Regular Army Artillery warrant officer class two posted to an Army Reserve Artillery unit is also referred to as a sergeant-major instructor-in-gunnery. Prior to 1981 the title was Assistant Instructor-in-Gunnery (Ack IG).
Shaped Charge	A shell consisting of a main explosive charge inside the cylindrical body. The front-end of the charge is hollowed-out in the form of a cone which is lined with copper, or other metal, and in front of the cone the shell's shape is continued by a hollow conical head, with a fuze at its tip; the ammunition is used against armour plates. When the projectile hits the target the detonation of the charge is initiated from the base; the detonating wave passes through the explosive and, as it begins to pass around the hollow cone, the cone collapses towards the axis of the hollow. The detonating wave and the gases move forward, in the form of a jet, at a very high speed, to strike through the armour.
Shell	An artillery ammunition shell (projectile) may be solid or hollow, depending on its purpose. Hollow shells may carry high explosive (made to burst on impact or when set-off by a time fuze in flight). Or they may be a carrier base-ejection shell; a time fuze ignites a burster charge which blows-out the base of the shell and ejects the contents (eg. smoke compounds, illuminants, etc) (see: <i>Carrier Shell, Projectile and Round</i>).
Shelling Report	A record of incoming rounds. It includes the time from the primary (the sound of the round being fired) to the secondary (the projectile landing at its target), the location of the observer, the area being shelled, the nature and number of enemy guns/mortars (if possible), the types and number of incoming shells, and the direction/bearing to the suspected enemy position.
Shield	The part of the carriage that provides the gun detachment with a measurement of protection against blast and fragments.
Short	A round which falls short (by range) of the target, as seen by the observer (see: <i>Over and Target Grid Corrections</i>).
Shot	The order reported to the Observer after firing each round, or group of rounds, in adjustment and after firing the first round of each method of 'Fire for Effect'. The report may be qualified by including the number of the gun(s) that fired (eg. 'Shot 3').
Shot Seating	The portion of the barrel's bore where the chamber diameter is reduced to join the rifled portion. The rifling develops within the shot seating in a portion known as the 'development of rifling' (see: <i>Development of Rifling</i>). The commencement of rifling is the point at which the bore's grooves first reach the maximum depth and marks the end of the shot seating. The depth of the rifling is measured from the top of the land to the bottom of the

groove.

Shot Start Pressure	When the propellant charge is ignited gases are evolved and, as a consequence, pressure in the gun's chamber increases until the resistance of the projectile is overcome; the pressure of the propellant then pushes the projectile up the barrel.
Shot Travel	The distance from the base of the projectile up to the barrel's muzzle. When the projectile is rammed into the breech the driving band engages in the shot seating and is deformed to fit the rifled portion of the barrel.
Shrapnel	An obsolete anti-personnel projectile containing a large number of lead balls, which, when the shell detonated, flew-out at a very high velocity (see: <i>High Explosive</i>).
Sights	The object of a gun sight is to so relate the axis of the barrel's bore and the sight line, that the trajectory intersects the line of sight at the target. When the necessary data has been set on the sight, the process of setting the bore in the required direction is referred to as 'laying' (see: <i>Dial Sight</i>).
Signal Officer	(see: <i>Regimental Signal Officer</i>)
Signal Operation Instructions	Communication instructions (SOIs) that change at regular time schedules. They lay-down what relevant frequencies, codes and timings are to be used over a set-down period.
Situation Report	An informal summary of what is currently happening within the operational area. This includes any relevant enemy activities/ actions, and friendly troop deployments and movements.
Slipper	(see: <i>Jacket and Loose Barrel</i>)
Smooth Bore	A gun (cannon) which has no lands and grooves in the barrel.
Smooth Bore Muzzle Loading	A gun (cannon) with a barrel that has no lands and grooves within the bore, and where the projectile is loaded from the front (muzzle end).
Sound Ranging	A method of locating guns by recording the time intervals of the arrival of sound waves, from the shock of discharge, at an array of special microphones in surveyed positions.
Spades	Devices attached to the rear of the gun's trails to prevent the carriage moving back when the gun fires.
Spin Stabilization	As the projectile moves up along the bore of the barrel, when the gun is fired, the rifling cuts grooves into the driving band (see: <i>Driving Band</i>) which forces the projectile to 'twists' as it travels; as such the projectile departs the muzzle with a spin. This spin, in conjunction with the forces of gravity and air resistance, tends to keep the nose of the projectile pointing along the trajectory throughout its flight to the target.
Splash	The order reported by the gun position officer to the observer five seconds before impact, or air-burst, of the incoming projectile.

Split Trail	A gun carriage with two trail legs, each strong enough to withstand full firing stresses, which are joined to a supporting bracket. The legs are locked in the open position when the gun is in action and they are closed and locked together (at the legs' end) for traveling (see: <i>Trails</i>).
Stadia Rod	A device used in conjunction with either a theodolite or a director for the measuring of a distance (see: <i>Theodolite</i> and <i>Director</i>).
Stand Easy	The order is only used on the gun position and is ordered by the gun position officer (GPO) to withdraw detachments from the guns/missile launcher at the conclusion of any action or drill where the order "End of Mission" is inappropriate.
Stand Fast	The order 'Stand fast' may be given by anyone, regardless of rank, when a possible safety breach is detected on the gun line (ie. a breach of safety has occurred or could possibly occur). All action is suspended at once and nobody moves; the detachment commander, or any other relevant person (eg. the BSM or BG), then undertakes the necessary relevant actions to rectify the matter. Once the safety-related problem has been rectified the order is cancelled by the originator, who orders 'Cancel stand fast'.
Standard Ballistic Coefficient	A mathematical formula used to describe the ability of a projectile to overcome air pressure, during its flight to the target, by reason of its mass and shape (the carrying power of the projectile).
Standing Operational Procedures	Standing Operational Procedures (SOPs) are a set of instructions covering those features of operations which lend themselves to a definite, or standardized, procedure without loss of effectiveness. The procedure is applicable unless prescribed otherwise in a particular case.
Standing Orders	Promulgated orders which remain in force until amended or cancelled.
Subaltern	A commissioned officer of either lieutenant or captain rank.
Sunray	The radio appointment title for the commander of a unit or party (eg. the commanding officer, the battery commander, etc).
Super-structure	The gun's mounting, based upon the basic-structure, which includes the barrel, recoil system, recuperator, breech mechanism (see: <i>Basic-structure</i>).
Supporting Fire	Fire delivered by supporting units to assist or protect a unit in combat (see: <i>Close Support</i>).
Survey	The process of relating guns, observation posts and targets to the map grid reference, essential for predicted fire, or for concentrating the fire of separated gun batteries.
Survey Control Point	The point at which artillery survey usually commences. The 'point' has known coordinates and could be either a trig point, which has been established by topographic surveyors, or by a

bearing picket which has been placed by artillery surveyors. This 'fix' can be 'carried' by traverse and/or triangulation to a point where an accurate fix is required; this will typically be a battery position or a target acquisition device (see: *Trigonometry Point*).

Survey Officer

(see: *Regimental Survey Officer*)

Survey Picket

(see: *Bearing Picket*)

Survey Reference Point

Trigonometry stations, bearing pickets, and fixation points are all considered to be survey reference points (see: *Survey Control Point*). They are known points having some, if not all, of the following:

- * Fixation; a location that could be of latitude and longitude and/or coordinates, to a designated degree of accuracy.
- * An altitude, with a reference to a known sea-level datum.
- * Directions to identified points, such as a bearing to an easily identified object (see: *Bearing Picket*).

Survey Report Centre

A Survey Report Centre is part of the divisional artillery survey troop headquarters and is commanded by the troop sergeant-major. Its role is the collection, collation and dissemination to user units of all known survey data within the division. As a general rule it physically occupies a central position within the gun areas.

Survey Troop

A sub-unit composed of Artillery surveyors who are responsible for putting the gun line onto an appropriate state of survey for both orientation and fixation.

For a battery this is a 'rough' fixation and a common orientation (see: *Battery Grid*); for a regiment all of its batteries are on a 'rough', but common, fixation and orientation (see: *Regimental Grid*).

Switch

A correction to, or angular displacement from, the line to the target.