*Delivered as a tribute by Rev'd Roger Whitehead at the centenary Service of Commemoration, 16 October 2017.*

We do not know much about Lieut Philip Pope apart from the notes that Bob Vickery has set out in the Order of Service for today, following his usual thorough research.

So, I thought that this morning I would reflect on the Royal Field Artillery of which Philip Pope was a part. It was the largest arm of the Royal Artillery which also contained the Garrison Artillery; and it was divided into: Horse batteries, Field batteries and Mountain batteries. It was re-amalgamated back into the Royal Artillery in 1924.

It is worth remembering that the guns of the Field Artillery would be pulled into place by horses for most of the war.
The first World War was an artillery war: artillery was the battle-winner. It was what caused the greatest loss of life, the most dreadful wounds, and the deepest fear. German artillery guns were numerous and could easily stop any British attempt to advance. With very few exceptional instances, the enemy's artillery was out of direct sight, hidden, often behind a hill or ridge; sometimes it was several miles away. To win the war, the British had to learn to find the enemy guns and to shoot at them accurately, with surprise and with enough firepower to knock out or neutralise them. If that was achieved, British infantry and later British tanks could advance at much reduced risk.

Knowing where the enemy's guns were (often known as "target acquisition") drove developments in a number of areas:

- Accurate survey and mapping, so the enemy's position (both of itself and also relative to the British guns that would fire at it) could be defined;
- Observation from ground level, looking both for the target and where British shells were falling so corrections could be made, (but this is obviously limited in what can be spotted);
- Observation from above, by spotter aircraft and tethered balloons, with enemy aircraft and guns trying to shoot them down);
- "Flash spotting" and "sound ranging": two mathematical techniques working out the position of an enemy gun by the light flash and the bang when it fired;
- Being able to quickly communicate the findings from these sources to the gunners, who would calculate the direction and elevation of their weapon in order to hit the targets when they fired.

Once the target was identified, the task became one of firing accurately in order to hit it. The method used by both sides in the early days in the war was to "register" on the target. This meant firing some ranging shots which could be observed and corrections made until the target was being hit. This was a slow and wasteful process, but more

importantly it gave away any possible surprise and let the enemy know where your guns were.
By 1918 this had changed completely to the point where British artillery could open fire and hit the target first time: "predicted fire". Accurate predictable fire came about through a combination of technological and methods developments:

- Improved, consistent manufacturing of shells: the weight of the shell being particularly important;
- Measurement of gun barrel wear and taking this into account in calculating gun settings;
- Measure of wind speed, air pressure and other meteorological factors which also had to be taken into account in calculating gun settings.

Artillery shells were a complex mechanism with precision parts. For a lengthy period in the war, the army found that its shells were unreliable. Some would not explode at all ("duds"), some exploded at the wrong time (with disastrous effects if within the gun barrel or over your own soldiers). It was only gradually that these issues were overcome and the shells could be fired with confidence.
In 1916 the British developed a fuse based on existing French technology which was so sensitive that it would explode the shell as soon as it touched barbed wire before it hit the ground. This, therefore, gave much better ability to clear barbed wire defences.
Shells were also developed to contain compressed poison gas in addition to the high explosive or shrapnel, used from 1914. This added the ability to deliver gas accurately into enemy positions and was much more effective than the cloud gas released from cylinders, which relied on the wind. A similar shell was developed for delivering smoke, which proved valuable in masking the enemy's visual observation of British attacks.

Trenched warfare posed new problems for the artillery and in particular for shellfire used to support an infantry attack. In the first two years of offensive operations (1915 and 1916), to a great extent the British artillery aimed at the enemy's trenches and barbed wire defences in the belief that it was necessary to destroy the enemy in the forward position. Great faith was placed in this, the most notable example being the week-long bombardment that began the Battle of the Somme in 1916. General Henry Rawlinson assured his men that , "*nothing could exist at the conclusion of the bombardment in the area covered by it*". To the great cost of the army, the firepower deployed was not sufficient. In some areas it was spread over too many targets and it was diluted even further by the proportion of dud shells.
The enemy survived the bombardments and cut down the attacking British infantry in large numbers, from small arms fire from the trenches and from shelling by their artillery.

In the knowledge that the front line trenches could survive even the heaviest bombardment, attention turned to firing on the enemy's artillery and communications.. Increasingly, the heavy British guns targeted the enemy's guns. In combination with the methods of observation and firing from the map, the British artillery became expert at knocking out or neutralising a German gun almost as soon as it had opened fire. This became a very significant, war-winning, factor.
A further development by the field artillery was that of the creeping barrage. This was a curtain wall of shellfire that was aimed just in front of the advancing British infantry that moved slowly forward (at a rate of, usually, about 100 yards every three to four minutes). This destroyed obstacles in their path and stopped the enemy's ability to see what was happening. British infantry was instructed to stay as close to its own creeping barrage as possible, which meant that shells were screaming down literally a few feet above their heads –incredibly dangerous and frightening but a most effective tactic. Firing a creeping barrage required excellence communication between guns and batteries, and detailed planning between artillery, infantry and aircraft.

It was in this area of wafare that Lt Philip Pope served and died.