

## **THE FROMELLES WAR GRAVES PROJECT: IDENTIFICATION OF SKELETAL REMAINS FROM WW1**

Jim Thomson, LGC

In 2008, a number of mass graves dating from the First World War were identified at Fromelles in northern France. These were believed to contain the remains of Australian and British soldiers killed in the Battle of Fromelles in 1916 and buried behind German lines. The graves were excavated in May 2009 and 250 bodies were recovered. The Commonwealth War Graves Commission was asked to oversee the recovery, and if possible, identification of the remains and to create a new cemetery at Fromelles for their reburial.

LGC Forensics was appointed to carry out DNA analysis on the remains, and on reference samples from living potential relatives. This analysis began in 2009 and is still ongoing in 2015 as new potential family members continue to provide reference samples.

Y-STR analysis and mitochondrial sequencing (HVI and HVII) was carried out on all 250 remains. Teeth were the primary sample type, although bone and other tissues were also used. All the remains yielded usable DNA results.

In the first year of the project, around 800 reference samples from family members of missing soldiers who had died at Fromelles were analysed for Y-STR or mtDNA as appropriate, and by the end of 2014 this had risen to 1800. Where possible, relatives from both the maternal and paternal lineages were tested to enable comparison of both Y-STR and mitochondrial data. Searches of reference against body results were completed to identify possible matches. Match probabilities for the Y-STR and mitochondrial haplotypes were estimated using the YHRD and EMPOP databases.

The DNA results were considered alongside anthropological evidence, artefacts found on the remains and historical records. In May 2010, the CWGC project team announced that 94 of the bodies could be formally identified. Further identifications have been confirmed every year since then with currently 144 of the 250 bodies identified.

All 250 bodies have been reburied in the new cemetery. A commemorative service was held in July 2010 to dedicate the cemetery and to mark the reinternment and the naming of 94 of the graves.