MATIENZO CAVES PROJECT
Site Coordinates Accuracy

CODE	EXPLANATION	NOTES
P	Coordinates taken from **Google Earth** or the **Cantabrian map** site. This is probably the most accurate if the entrance is visible on the photo.	Appears as a dot on the map (radius 0.5m). Accuracy not only depends on such things as tree cover but also gross errors such as misreading the screen and not allowing the GPS reading to stabilise.
G	Coordinates taken from a **GPS unit**. A bracketed number, eg (8m), shows the possible circle of error read from the instrument at the time. If there is no bracketed number then the error was not noted at the time.	
A	A grid reference is taken from a **GPS unit** or **aerial photo** and then **amended** to, fit the map or photo more reasonably, eg put the site on the right side of the road. There may be a number in brackets to give some indication of accuracy.	
M	An entrance or feature that has been placed on the **map** either in the field or, with some confidence, back in the Office. Many of these will have been given a 6+6 figure grid reference in the past, ie to the nearest 10m, but are now shown with 7+7 figures.	Appears as a small circle on the map (radius 5m). This method of obtaining the coordinates could be more accurate than the data from a poorly used GPS unit.
U	An uncertain grid reference which may have been plotted to 100m in the past. This is now given a precise 7+7 figure position in a large circle of error.	Appears as a large circle on the map (radius 50m).
X	No grid reference given - sometimes, not even an area !	

NOTES
From March 2014, all cave entrance coordinates and survey points underground are based on the ETRS89 datum. To change old coordinates to ones based on the ETRS89 datum, the seven-figure easting should be changed by -102 and the 7-figure northing by -209.
Example: Site 1452, Hole in the Road is at 30T 0451722 4797909 (Eur79) and 30T 0451620 4797700 (ETRS89).
   Entrance altitudes have normally been read off maps. These have all been checked on the new maps, surface surveys taken into account and the altitude altered in the database where necessary.

 Part of the documentation presented on each site description page is a grid reference, eg

1452 Hole in the Road
La Secada 30T 451722 4797909 Altitude 235m Length 1742m (including Cueva Bollón (site 98) Depth 82m

This will now change to, for example

1452 Hole in the Road
La Secada 30T 0451620 4797700 (Datum: ETRS89. Accuracy: G) **Altitude** 235m
Length 1742m (including Cueva Bollón (site 98) **Depth** 82m

If the "Datum: ETRS89" is not shown, the grid reference is likely to be Europe79-based. The Accuracy codes are explained above.

Juan Corrin, 18/3/2014, 4/4/2014, 18/1/2015, 31/8/2015