JORDANS WHITBED

Petrography: The stone was classified as a moderately sorted, moderately compacted, clast supported Oosparite Limestone. The clasts were predominantly composed of ooliths, but mollusc shell and echinoderm fragments and quartz were also present. The matrix was composed of sparitic syntaxial carbonate and some micritic carbonate. There was a moderate to high abundance of open voidage space. There was possibly some evidence of sedimentary bedding by the preferred alignment of elongate clasts.

Macro Examination (BRE Reference 231039/06/02/117): The stone was off-white in colour and had a medium–to coarse–grained texture. It effervesced with 10% hydrochloric acid indicating that it contained calcite. The clasts ranged in size from <0.5 to 9mm. There was a moderate abundance of bioclasts present, such as mollusc shell fragments. There was some preferred alignment of elongate clasts, possibly denoting sedimentary bedding. The stone had a pitted appearance which may indicate the presence of open voidage.

Microscopical Examination (BRE Reference 231039/06/02/117): The limestone was moderately : compacted, and clast supported. The clast matrix ratio was visually estimated at 95:5. There was possibly some evidence of sedimentary bedding by the preferred alignment of elongate clasts.

Clasts: There were ooliths, which were visually estimated to account for 80% of the total stone. Then ooliths were spherical in shape and ranged in size from 150 to 600µm, mean 400µm. The ooliths were composed of micritic carbonate often with a poorly preserved internal structure. They were seeded by sparitic and micritic carbonate, and angular quartz (1 to 2%).

Elongate mollusc shell fragments (bivalves) were visually estimated to account for 15% of the stone. The mollusc shell fragments ranged in size from 250µm to 7mm and were composed of sparitic carbonate often with a well preserved internal structure. These showed some preferred orientation possibly denoting sedimentary bedding. There was also occasional echinoderm fragments observed. Quartz was visually estimated to account for 1 to 2% of the stone. It was angular in shape and up to 250µm in size.

Matrix: The matrix was visually estimated to account for 5% of the stone. The matrix was predominantly composed of euhedral shaped sparitic syntaxial carbonate crystals which were up to 1mm in size. Micritic carbonate was also observed.

Viodage: There was a moderate to high abundance of open interparticle voidage space observed. The voids were visually estimated to account for 10 to v15% of the stone and they ranged in size from 40 to 750µm. The micritic carbonate present had a moderate capillary porosity.

Composition: The micritic and sparitic carbonate which made up the clastic and matrix components were composed of non-ferroan calcite. There was also 1 to 2% quartz present.

Classification: Based on the description given here, this stone would be classified as a moderately sorted, moderately compacted, clast supported Oosparite Limestone.