THE GEOLOGY OF NORMANDY

Normandy lies in the shallow valley between the Hogs Back ridge on the south and the Fox Hills to the north. The whole of the civil parish of Normandy lies on the London Clay, said to be up to 300 feet thick in places, most of it overlaid by other deposits. These deposits were laid down during the Eocene Epoch which began about 54 million years ago and lasted about 16 million years. During the period, the area formed part of a great river delta or estuary. Because of the tilting of the strata and the action of erosion the deposits appear as comparatively narrow bands running roughly east to west. The heathland to the north of Pirbright Road consists chiefly of the Bracklesham Beds overlying Bagshot Sand. The higher parts, including Henley Park, Cobbett Hill and the Fox Hills are overlaid by Barton Sand and the Fox Hills are topped with Plateau Gravels consisting of more or less rounded pebbles of flint with fragments of lignite. The Bracklesham Beds extend south-east of Pirbright Road for a short distance but south of this the Bagshot Sand is exposed. All this soil is highly acidic and the natural growth consists of heather, bracken and furze with birch and coniferous trees, although the deep-rooted oak does well. There are strips of alluvium bordering the courses of existing streams running in a north-easterly direction from Westwood to Clasford Common. Beyond the exposed Bagshot Sand, about a quarter of a mile south of the Guildford Road, the London Clay comes to the surface and this continues south in a band running east to west until it meets the Reading Beds at the base of the Hogs Back, south of which is the Upper Chalk of the ridge. There are other random deposits including the gravel ridge on which is the line of Green Lane and Flexford Road. Recent excavations have shown that the Romans utilised this ridge for their road from Farnham to Guildford.

The Bracklesham, Bagshot and Barton Beds and the London Clay are divisions of Eocene rocks. The Bracklesham and Barton beds consist of clays and sand rich in Glauconite, a greenish iron mineral which forms only in a marine environment. The Bagshot Beds consist of variegated fine-grained sands and pans composed of flint and lignite pebbles. The London Clay contains brown, bluish or grey clay. The Reading Beds are a division of the Upper Paleocene rocks and consist of reddish and mottled clays as well as silts and sand. These beds actually underlie the London Clay but outcrop due to a tilt in the stratum at the foot of the Upper Chalk of the Hogs Back ridge. Alluvium is material deposited by rivers and consists of silt, clay and gravel and often organic material. This mix makes it more fertile and favourable for settlement.

In addition to these deposits are erratics in the form of Moor or Heath Stone which is a hard sandstone known in its larger forms as Sarsen. The foundations of St. Mark's Church are built of this stone. The rest of the church is constructed of Bargate Stone rubble from the Godalming area with dressings of Bath Stone. There are also small deposits of Puddingstone on the Westwood Estate. This is a natural concrete formed of flint pebbles set in a siliceous sandy matrix mixed with iron oxide that gives it a chocolate brown colour. This material is used in the walls of St. Mary's Church at Worplesdon. The presence of brick earth as a constituent of the clay led to early use for the making of bricks at first confined to small quantities as shown by the title of more than one field as Kiln Field where the bricks were produced as and when required. It was not until 1898 that Wanborough Brickworks was established and produced bricks on a commercial scale.

The strata gives rise to numerous springs and streams mostly issueing from the lower slopes of the Fox Hills to the north and the Hogs Back to the south. This well-watered