

GLA 26: Riddlesdown Quarry (formerly Rose and Crown Pit), Recommended RIGS

London Borough of Croydon, TQ 337 594

Ownership: City of London Corporation. Access via ranger/council.

Riddlesdown Quarry

The large disused chalk quarry now known as Riddlesdown is the most spectacular of all the quarries within the Greater London area. It is straddled by the London to Oxted railway. Nearly 50 m of Chalk are exposed and it is an invaluable asset for researchers and engineers studying the nature of the Chalk beneath London. It is also an extremely useful teaching quarry for school-age children, students and geological groups. It is a biological SSSI.

The quarry predates the railway which crosses on a viaduct built about 1880-84. It appears that quarrying began in the late 1700s. It was actively worked, with lime kilns operating, until closure in 1964. It was saved from landfill or development, the fate of nearly all other former large quarries in the London area, by being purchased by the City of London Corporation in 1996. They now actively use the quarry for educational purposes. The faces are conserved and the vegetation kept down by employing a flock of sheep. Scrub has been cleared from a scree slope and steps installed to give access to the main face. A viewing point at the top of the steps gives a panoramic view of the quarry and across the Caterham Valley to the west.

The Chalk

Nearly 50 m of chalk from the Glynde Marls (New Pit Chalk Formation) at the base to the Seaford Chalk Formation at the top is displayed within the quarry, giving an overview of typical sediment types and structures found in the North Downs and beneath London. A number of marl seams and some conspicuous large flint bands form marker beds across the faces of the quarry and allow correlation with the chalk elsewhere. The quarry faces display the different styles of fracturing found within different horizons in the chalk, invaluable information for engineers.

Very little sediment from land is incorporated in the chalk at Riddlesdown which was laid down between approximately 93 and 83 million years ago; many of the marl seams are considered to have been derived from volcanic ash. It seems to have been a hospitable environment for marine animals. Chalk macrofossils found in the quarry include sponges, ammonites, bivalves, gastropods, brachiopods and echinoids.

Details of the features in the Chalk are described by Rory Mortimore in GA Guide 68, pp. 131-140 with supporting diagrams and a combined geological column. The quarry has, along with the railway cuttings from South Croydon to Oxted, an important place in geological history, as Caleb Evans measured and described the chalk strata, publishing his pioneering stratigraphical account in 1870¹.

Karst Features

At the top of the quarry is a castellated skyline. These are dissolution pipes into the chalk filled with clay-with-flints from above.

Access

The Quarry is fenced and gates locked so access is only possible on either:

- 1) Public guided walks organised several times a year by the City's ranger service— see website below².
- 2) Visits for groups or for specialist research projects which must be arranged in advance – see contact details below³.

The gas holder adjacent to Jewson's Building Yard on the A22 provides a landmark for those arriving by car (parking in Old Barn Lane and other roads opposite). The closest railway station is Kenley; bus 407 runs along the A22 between Purley and Whyteleafe.

¹ Evans, C. 1870. *On some sections of Chalk between Croydon and Oxstead, with observations on the classification of the Chalk*. Geo. P. Bacon, Lewes, for the Geologists' Association Publication.

² City of London Corporation website: www.cityoflondon.gov.uk/openspaces (2013). Click on City Commons.

³ Ashted Estate Office (for permission to visit: city.common@cityoflondon.gov.uk or telephone: 01372 279083.

Open University Students unravelling the details in Riddlesdown Quarry

Source: London's foundations, front page



Site Map

Source: London's foundations, page 161

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