

used as a high quality building stone. Towards the top of the Inferior Oolite the limestones become more fossiliferous and are widely referred to as 'grits' due to their coarser texture.

Lying above the Inferior Oolite Group is the Great Oolite Group. This consists of an extremely varied sequence of rocks that can change quite dramatically both through the sequence and geographically across the area. Important formations within the Great Oolite include the Fuller's Earth, a thick bed of clay that contains a mineral which was used to remove grease from fleeces and contributed greatly to the success of the Cotswold wool trade in the Middle Ages. Other formations important to the area's economy today are the White Limestone, quarried as an aggregate, the Chipping Norton Limestone, quarried as an aggregate and a building stone, and the Eyford Member, used to produce traditional Cotswold roofing 'slates'.

The Quaternary deposits of the Cotswolds comprise varied unconsolidated beds, referred to collectively as "Drift". These include glacial, fluvial and a mixed group of periglacial deposits known as "Head". These are scattered widely across the area but their heaviest concentrations occur in the Vale of Moreton and in the area around Cirencester, where they are extensively worked for their gravels.

#### **Fossils:**

Terebratula bullata in the Fullers Earth, 'lamp shell', Middle Jurassic, Great Oolite



Others include brachiopods, bivalves, ammonites, corals, sea-urchins.

## **North Wiltshire - a Geological outline**

*Judy Hible*

To the north-west of Wiltshire, the Jurassic rocks crop out in succession, dipping south-eastwards under the Chalk. From young to old these Jurassic rocks are:

Inferior Oolite and Upper Lias;  
Great Oolite Group (includes Fuller's Earth);  
Oxford Clay and Kellaways Sand;  
Corallian Beds;  
Kimmeridge Clay;  
Wealden, Purbeck and Portland Beds (not seen locally).

Above these are Cretaceous rocks which can be seen on the highest ground including Lower Greensand;  
Gault Clay;  
Upper Greensand. (Table 1)

Table 2 shows the local outcrops.

In this area of Avon Vale these outcrops trend from SW to NE

The following is a brief description of each area, its associated bedrock and the setting in which the rocks were formed.

**Area:** Bedrock

**Morgan's Hill, Cherhill Down:** Lewes Nodular Chalk Formation, Seaford Chalk Formation And Newhaven Chalk Formation (undifferentiated). Sedimentary Bedrock formed approximately 71 to 94 million years ago in the Cretaceous Period. Local environment previously dominated by warm chalk seas.

**Setting (1):** warm chalk seas. These rocks were formed in warm shallow 'Chalk' shelf seas with little sediment input from land. They often consist of a calcareous ooze of the microscopic remains of plankton, especially the disc-shaped calcite plates or coccoliths that make up the spherical coccolithophores.

**Cherhill White Horse:** West Melbury Marly Chalk Formation And Zig Zag Chalk

		1:625 000	1: 50 000
Cretaceous	Chalk Group	Grey chalk subgroup	West Melbury Marly Chalk Formation Zig Zag Chalk Formation
		White chalk subgroup	
	Selborne Group	Gault Formation Upper Greensand Formation	Gault Formation Upper Greensand Group
	Lower Greensand Group	Lower Greensand Group	
Jurassic	Corallian Group	Corallian Group	Hazelbury Bryan Formation
	Ancholme Group	West Walton Formation Amphill Clay Formation Kimmeridge Clay Formation	Amphill Clay Formation Kimmeridge Clay Formation Red Down Sand Formation
		Kellaways Formation Oxford Clay Formation	Kellaways Clay Member Kellaways Sand Member Oxford Clay Formation
		Great Oolite Group	Cornbrash Formation Chalfield Oolite Formation Combe Down Oolite Member Corsham Limestone Formation

Table: 1 : Succession in North Wiltshire

Formation (undifferentiated) - Chalk. Sedimentary Bedrock formed approximately 94 to 100 million years ago in the Cretaceous Period. Local environment previously dominated by warm chalk seas.

**Setting:** as Setting (1)

**Heddington, Calstone, Cherhill:** Upper Greensand Formation - Calcareous Sandstone And Siltstone. Sedimentary Bedrock formed approximately 94 to 112 million years ago in the Cretaceous Period. Local environment previously dominated by shallow seas.

**Setting (2):** shallow seas. These rocks were formed in shallow seas with mainly siliciclastic sediments (comprising of

fragments or clasts of silicate minerals) deposited as mud, silt, sand and gravel.

**Stockley, Blackland, Compton Bassett:** Gault Formation - Mudstone. Sedimentary Bedrock formed approximately 100 to 112 million years ago in the Cretaceous Period. Local environment previously dominated by shallow seas.

**Setting:** As Setting (2)

**Sandy Lane, Mile End Hill:** Lower Greensand Group - Sandstone. Sedimentary Bedrock formed approximately 100 to 125 million years ago in the Cretaceous Period. Local environment previously dominated by shallow seas.

**Setting:** As Setting (2)

White Chalk Subgroup	Lewes Nodular Chalk Formation Seaford Chalk Formation Newhaven Chalk Formation	Turonian - Campanian
	Holywell Nodular Chalk Formation New Pit Chalk Formation	Cenomanian - Turonian
Grey Chalk Subgroup	West Melbury Marly Chalk Formation Zig Zag Chalk Formation	Cenomanian
Selborne Group	Gault Formation	Albian
	Upper Greensand Formation	Albian - Cenomanian
Lower Greensand Group	Lower Greensand Group	Aptian - Albian
Ancholme Group	Amphill Clay Formation Kimmeridge Clay Formation	Oxfordian - Kimmeridgian
Corallian Group	Hazelbury Bryan Formation	Oxfordian
	Kingston Formation - Limestone	Oxfordian
	Kingston Formation - Mudstone	Oxfordian
Amphill Clay Formation	Red Down Sand Formation	Oxfordian
Ancholme Group	Kellaways Formation Oxford Clay Formation	Callovian - Oxfordian
Corallian Group	Stanford Formation	Oxfordian
Ancholme Group	Kellaways Formation	Callovian
Kellaways Formation	Kellaways Clay Member	Callovian
Ancholme Group	Kellaways Formation Oxford Clay Formation	Callovian - Oxfordian
Kellaways Formation	Kellaways Sand Member	Callovian
Ancholme Group	Oxford Clay Formation	Callovian - Oxfordian
Great Oolite Group	Cornbrash Formation	Bathonian - Callovian
	Forest Marble Formation	Bathonian

Table 2: Local Outcrops

**Quemerford:, Whetham, Mile End:** Ampthill Clay Formation And Kimmeridge Clay Formation (undifferentiated) - Mudstone. Sedimentary Bedrock formed approximately 151 to 161 million years ago in the Jurassic Period. Local environment previously dominated by shallow seas.

**Setting:** As Setting (2)

**Calne:** Stanford Formation - Limestone. Sedimentary Bedrock formed approximately 156 to 161 million years ago in the Jurassic Period. Local environment previously dominated by shallow carbonate seas.

**Setting (3):** shallow carbonate seas. These rocks were formed in warm shallow seas with carbonate deposited on platform, shelf and slope areas; often rich in corals and shelly faunas. May include evaporites where seawater was trapped and salts concentrated by evaporation.

**Bremhill, Studley, Derry Hill:** Hazelbury Bryan Formation - Sandstone. Sedimentary Bedrock formed approximately 156 to 161 million years ago in the Jurassic Period. Local environment previously dominated by shallow seas.

**Setting:** As Setting (2)

**Stanley, Tytherton, Ratford, Pewsham:** Kellaways Formation And Oxford Clay Formation (undifferentiated) - Mudstone. Sedimentary Bedrock formed approximately 156 to 165 million years ago in the Jurassic Period. Local environment previously dominated by shallow seas.

**Setting:** As Setting (2)

**Langley Burrell, Lowden:** Kellaways Sand Member - Sandstone. Sedimentary Bedrock formed approximately 161 to 165 million years ago in the Jurassic Period. Local environment previously dominated by shallow seas.

**Setting:** As Setting (2)

**Hill Corner, Hardenhuish Lane:** Kellaways Clay Member - Mudstone. Sedimentary Bedrock formed approximately 161 to 165 million years ago in the Jurassic Period. Local environment previously dominated by shallow seas.

**Setting:** As Setting (2)

**Bumpers Farm, Allington, Easton, Hungerdown:** Cornbrash Formation - Limestone. Sedimentary Bedrock formed approximately 161 to 168 million years ago in the Jurassic Period. Local environment previously dominated by shallow carbonate seas.

**Setting:** As Setting (3)

**Yatton Keynell, West Yatton:** Forest Marble Formation - Mudstone. Sedimentary Bedrock formed approximately 165 to 168 million years ago in the Jurassic Period. Local environment previously dominated by shallow seas.

**Setting:** As Setting (2)

**Ford:** Forest Marble Formation - Limestone. Sedimentary Bedrock formed approximately 165 to 168 million years ago in the Jurassic Period. Local environment previously dominated by shallow carbonate seas.

**Setting:** As Setting (3)

## BREMHILL

### *Judy Hible*

The parish of Bremhill contains a collection of smaller parishes in valleys with Bremhill prominent on a hill. The smaller hamlets are Tytherton Lucas, East Tytherton, Foxham, Charlcutt, Spirhill, Stanley and Bremhill Wick. It is in the Diocese of Salisbury, Archdeaconry of Wiltshire and the rural deanery of Avebury. The village lies two miles north west from Calne and four from Chippenham.

**Bremhill** is located on Wick Hill, a corallian escarpment which falls sharply to the valley of the river Avon. The geology is from the upper oolite, providing loam, brash and clay soil. The Wiltshire and Berkshire Canal ran through the centre of the parish from the north east to the south west.