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## Torr Works and Asham Wood

Parking is limited to roadside verges and lay-bys only.

Located on the south side of the Beacon Hill Pericline, this region covers the area between Downhead, Leighton and Chantry, including the delightful Asham Wood. However, the area is probably best known for the huge Torr Works [80] [ST 69474 44924] Quarry. One of the two 'superquarries' located on eastern Mendip, Torr Works is operated by Aggregate Industries UK Ltd. The quarry comprises one very large pit covering almost two square kilometres, and up to 90 m deep. Quarrying is now taking place below the watertable. The quarry was previously known as Merehead Quarry, but it was purchased by the Yeoman family who redeveloped and renamed the site in the early 1970s. Foster Yeoman employed around 100 full-time staff at the quarry and a similar number of employees elsewhere, until the company was taken over by Aggregate Industries in 2006.

Torr Works produces up to six million tonnes of crushed stone annually, which is used in a range of products for the building and construction industries. It is now the largest producer of Carboniferous Limestone in Europe. Approximately 80 per cent of the aggregate is sent by rail to markets in south-east England. Up to 70 trains per week leave Torr Works carrying, on average, 1500 tonnes. Operated by Mendip Rail, these trains save over a quarter of a million lorry journeys per year.

In conjunction with Natural England, the company has landscaped much of the area, creating calcareous grassland and woodland habitats as well as a picnic site and viewing point [81] [ST 69201 43949]. The site is a working quarry, but visits can be arranged by contacting the company in advance. The quarry is sited in a large area of Carboniferous Limestone on the southern limb of the Beacon Hill Pericline. Much of the northern part of the quarry is excavated in the Black Rock Limestone, with the younger Clifton Down Limestone and Vallis Limestone outcropping in the southern half of the quarry. Within the quarry the limestone dips at around 23° to 47° to the south and south-south-east.

On the eastern side of the quarry, underlying the block works, a small patch of Jurassic Inferior Oolite rests unconformably on the underlying Carboniferous Limestone [82] [ST 70102 44872]. As at Tedbury Camp Quarry and Whatley, the erosion surface, here at about 165 m above OD, is very flat and planar, and is intensively bored. Worm burrows, infilled with yellow Jurassic sediment penetrate several centimetres into the grey Carboniferous Limestone.

The quarry is bounded along the southern margin by the Cranmore Fault. The line of the fault, which almost follows the A361, can be traced by the marked break of slope created by differential erosion of the hard Carboniferous rocks and the softer Jurassic strata to the south.

Another fault, the Downhead Fault, runs along the western margin. This brings the Portishead Formation to the surface, and limits the extent of the quarry. Streams draining the sandstone slopes sink underground into the limestone along the line of the fault. Detailed monitoring and water-tracing experiments using fluorescent dyes show that the water originally flowed to the Seven Springs [83] [ST 7102 4528] and Holwell Risings (see Holwell). Much of the groundwater flow has now been intercepted by the quarry. Water entering the quarry is used for dust suppression before being pumped to augment the Whatley Brook. Some of the water is stored in a reservoir south of the quarry, which is now a good wildlife habitat.

The south-eastern corner of the quarry extends across the Leighton Valley. The stream here is culverted beneath the quarry buildings. This narrow valley, incised into the Carboniferous Limestone, is a superb example of a superimposed valley. The stream originally developed on the Jurassic strata, but as it eroded downwards, it met the harder Carboniferous Limestone, but continued to incise downwards, cutting a narrower valley in the harder rock.

To the east of Torr Works is Asham Wood [84] [ST 70947 45973], one of the finest, and largest, examples of ancient semi-natural woodland in the Mendips. It has an unusually diverse range of woodland communities, reflecting marked differences in the underlying soil. The site is owned and

managed as a nature reserve by Hanson Aggregates, who operate Whatley Quarry.

Ash and field maple are dominant on the Carboniferous Limestone, whilst old stools of the small-leaved lime are abundant at the south-western end of the wood. Heavy acid soils over the Devonian Portishead Formation in the northern part of the wood support pedunculate oak, ash and coppiced hazel. Springs in the valley here [85] [ST 70331 46383] mark the outcrop of the Avon Group.

Extensive coppicing in the past has created many interesting stub and pollard forms of oak, lime, ash and field maple, and opened up clearings and glades in which a rich ground flora flourishes. Dog's-mercury, wood anemone, bluebell and ramsons are typical, and the wood also supports many herbs that are indicators of very old woodland. Herb Paris, Solomon's-seal and toothwort thrive on the woodland floor, and the uncommon autumn-flowering meadow saffron is also widespread in parts of the wood.

Lower plants and fungi thrive in the sheltered and humid conditions. Many trees, boulders and banks support luxuriant mats of mosses and liverworts, including the distinctively flattened and wrinkled moss *Neckera crispa*, and the bright green *Anomodon viticulosus*. Soft shield-fern, hart's-tongue, broad buckler-fern and male fern form attractive leafy shuttlecocks on the woodland floor, whilst many older trees and stumps sport epiphytic ferns, lichens and fungi of many kinds. Numerous woodland birds are present, and visitors may see or hear great spotted woodpecker, spotted flycatcher and buzzard. A rich invertebrate fauna includes some notable butterflies, including purple hairstreak and silver-washed fritillary.

The disused Asham Quarry [86] [ST 71520 45850] at the south-eastern edge of the wood is rapidly being colonised by 'butterfly bush' (buddleia), ash and some sycamore. The northern part of the quarry is cut into the lower part of the Black Rock Limestone. The thinly bedded, muddy limestones here are weak and easily folded, and several excellent, highly contorted, fold structures can be seen in the northern quarry face. The stronger, thicker limestone beds farther south are less well folded and dip around 20°–30° to the south.

In the valley floor below the quarry is a series of resurgences, collectively known as Seven Springs [83] [ST 7102 4528]. This was the resurgence for water sinking in the Downhead area, although in dry summers these springs failed and the water continued on to Holwell Risings two kilometres farther east. However, quarrying below the natural level of the water table at Torr Works has now intercepted much of the underground flow. On the opposite side of the Leighton Valley is Westdown Quarry [87] [ST 71676 45543]. This dormant quarry is owned by Hanson, and exposes the Carboniferous Black Rock Limestone and the underlying Avon Group.

## Figures

(Figure 81) Aerial photograph of the Torr Works and Asham Wood area.

(Figure 82) Torr Works Quarry.

(Figure 83) The hydrogeology of the Torr Works to Asham Wood area, showing the movement of groundwater proved by tracer testing using fluorescent dyes. Adapted from University of Bristol Spelaeological Society Proceedings, Vol. 19 (1), 1991.

(Figure 84) The Whatley Brook flowing through Asham Woods. The stream here is augmented by pumping from Torr Works.

(Figure 85) Polypody ferns on oak stumps, Asham Wood. © Sharon Pilkington.

(Figure 86) Asham Quarry.

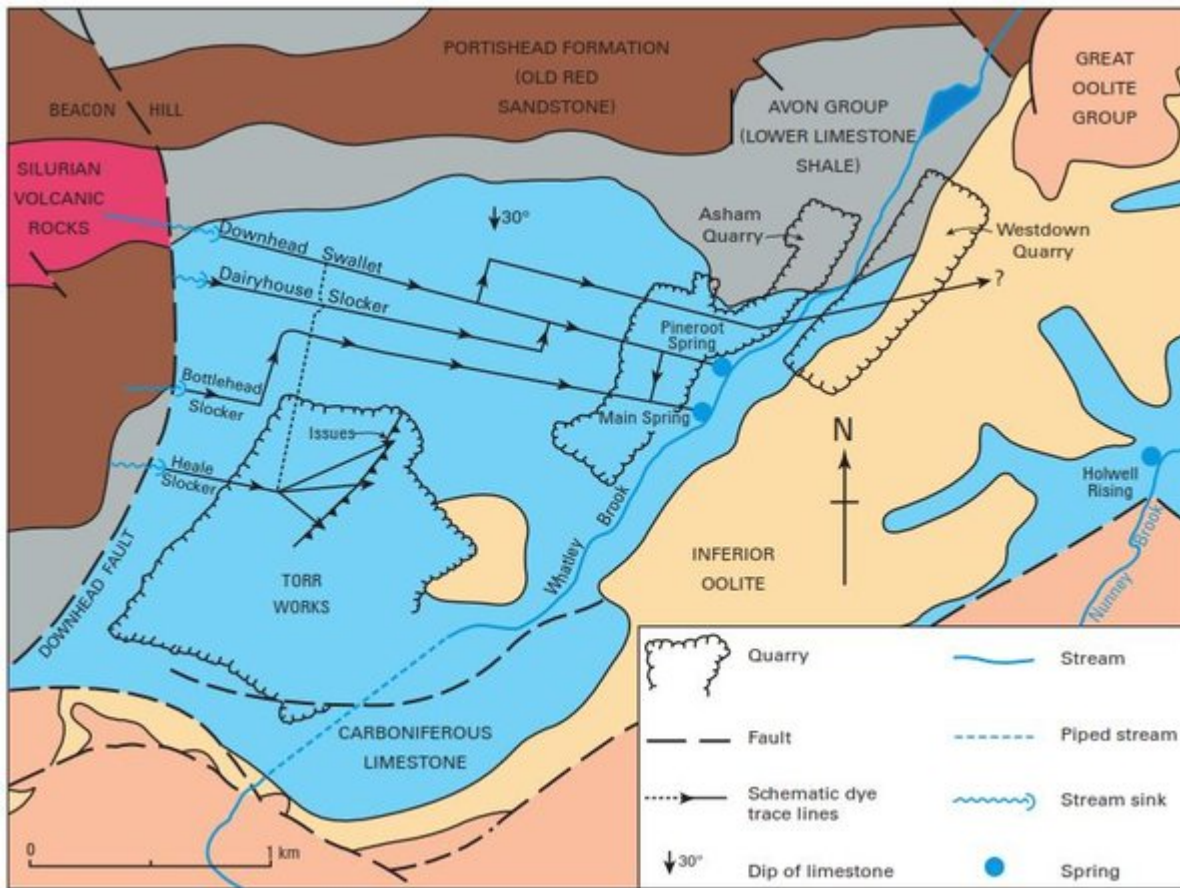
(Figure 87) Example of toothwort. © Sharon Pilkington.



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*(Figure 85) Polypody ferns on oak stumps, Asham Wood. © Sharon Pilkington.*



*(Figure 86) Asham Quarry.*



*(Figure 87) Example of toothwort. © Sharon Pilkington.*