The Pang and the Lambourn catchments contain ample evidence of karst. The upper parts of both catchments are developed on the Chalk, but in the lower reaches, Palaeogene strata are present. Around the margins of these Palaeogene outcrops surface karst features are widespread (Figure 5). At least 18 stream sinks have been recorded on the west and south side of the River Pang between Hermitage and Bucklebury, with another 25 on the north side of the River Pang in the Yattendon area. Sediment filled dissolution pipes (buried sinkholes) are widespread and well developed, especially beneath thin superficial deposits. In this area they may be up to 20 m deep and 5 m across, and commonly merge to form a very irregular rock-head. This can cause problems during construction, and dissolution pipes presented a significant engineering hazard during the widening of the A34 north of Newbury.

Figure 5 Karst in the Pang and Lambourn catchments. Contains Ordnance Survey data. © Crown copyright and database rights 2015.

There is also evidence of karstic groundwater flow. Tracer testing between stream sinks and springs has demonstrated very rapid groundwater flows of several kilometres per day over distances of several kilometres suggesting fully integrated karstic flow (Banks et al., 1994[1]; Maurice et al., 2006[2]; Maurice et al., 2010[3]).
Although surface karst features are less prevalent in the upper parts of the catchments, there are good examples of ephemeral winterbourne streams. At the head of the rivers there are seasonally active springs, sometimes known as bourne holes. These can be several kilometres upstream of the perennial river head. These seasonal springs become rapidly reactivated over a short period of time, suggesting that they are fed by karstic fissures and conduits.

Single borehole dilution testing in 24 boreholes in the Pang and Lambourn catchments showed that flow horizons are prevalent in areas with and without surface karst (Maurice et al., 2012[4]). Borehole imaging and geophysical logging data revealed that most flowing features identified from the borehole dilution tests were dissolutional in nature, and there is a strong lithological influence on flow (Figure 6).

**Figure 6** Flowing features identified from single borehole dilution tests in the Pang and Lambourn catchments.

**References**


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