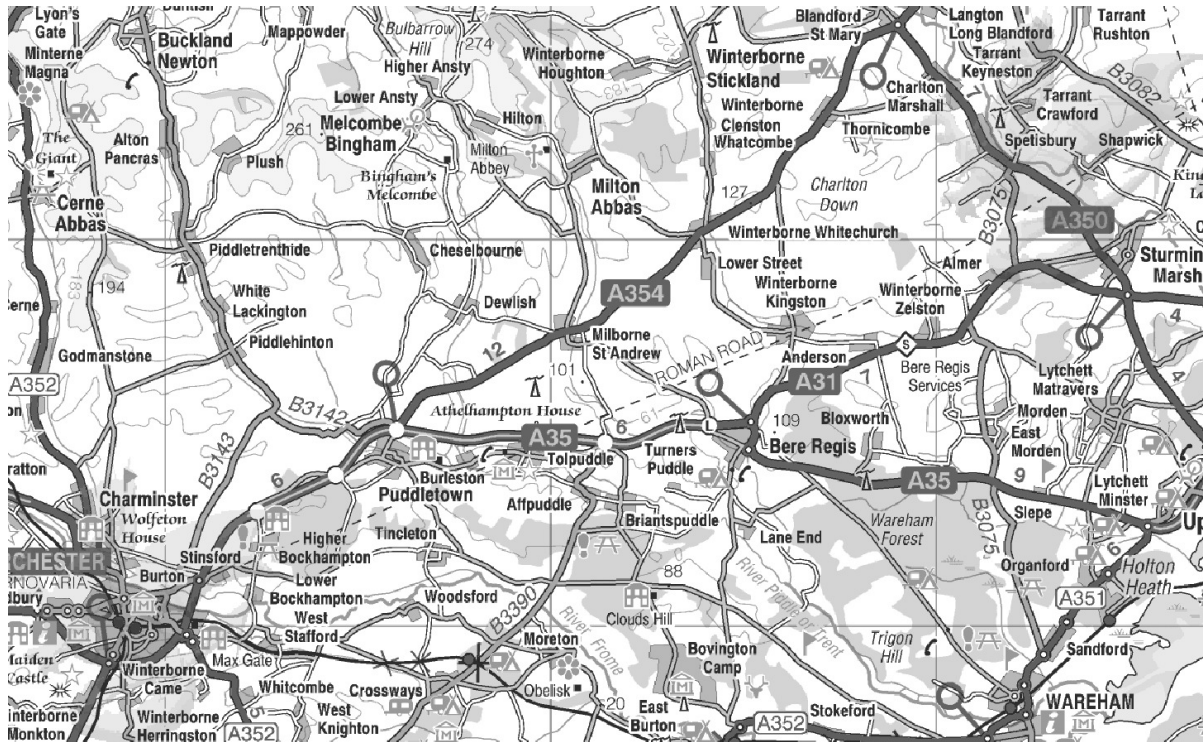


A-Level Geography River Study: the River Piddle, Dorset

Location



Intro to the River Piddle

The River Piddle (or Trent) is a small rural Dorset river which rises next to Alton Pancras church (Alton Pancras was originally named Awultune, a Saxon name meaning 'the village at the source of the river) and flows south and then south-easterly more or less parallel with the River Frome, which it joins at Wareham, where they enter Poole Harbour.

The River Piddle rises in the chalk uplands of central Dorset and has a very high water quality throughout its course. It provides an excellent habitat for a wide range of freshwater species, in particular crayfish and otters. Water extraction for agricultural uses occurs in places along the river, especially for the growing of watercress.

Aim

To investigate the characteristics of the River Piddle at 4 locations along its course

Field Study Sites - mark these onto the map above

Piddletrenthide

Puddletown

Turners Puddle

Wareham

Data to be collected at each location:

- Width of the water surface / estimated bankfull width
- Mean depth of the water / estimated mean bankfull depth
- Wetted perimeter of the water/river channel / estimated bankfull wetted perimeter
- Mean velocity of the water flow
- Gradient of the water surface
- Sediment long axis and shape
- Field sketch at each site.

Values to calculate in the field:

- Cross-sectional area (CSA or XSA)
- Discharge (Q)

Health and Safety

You will be given a full briefing but the main points are as follows

- Visual check of conditions - **Do not** go into the river at any time until you have been told it is safe to do so.
- Appropriate footwear
- Use of equipment
- Weather
- Water-borne organisms
- Traffic and roads, public land, and livestock

Suggested hypotheses to test using Spearmans Rank Correlation Coefficient Test

- There will be a significant relationship between the discharge in cumecs and the distance downstream
- There will be a significant relationship between the velocity and the hydraulic radius.
- There will be a significant relationship between the channel cross-sectional area and distance downstream.