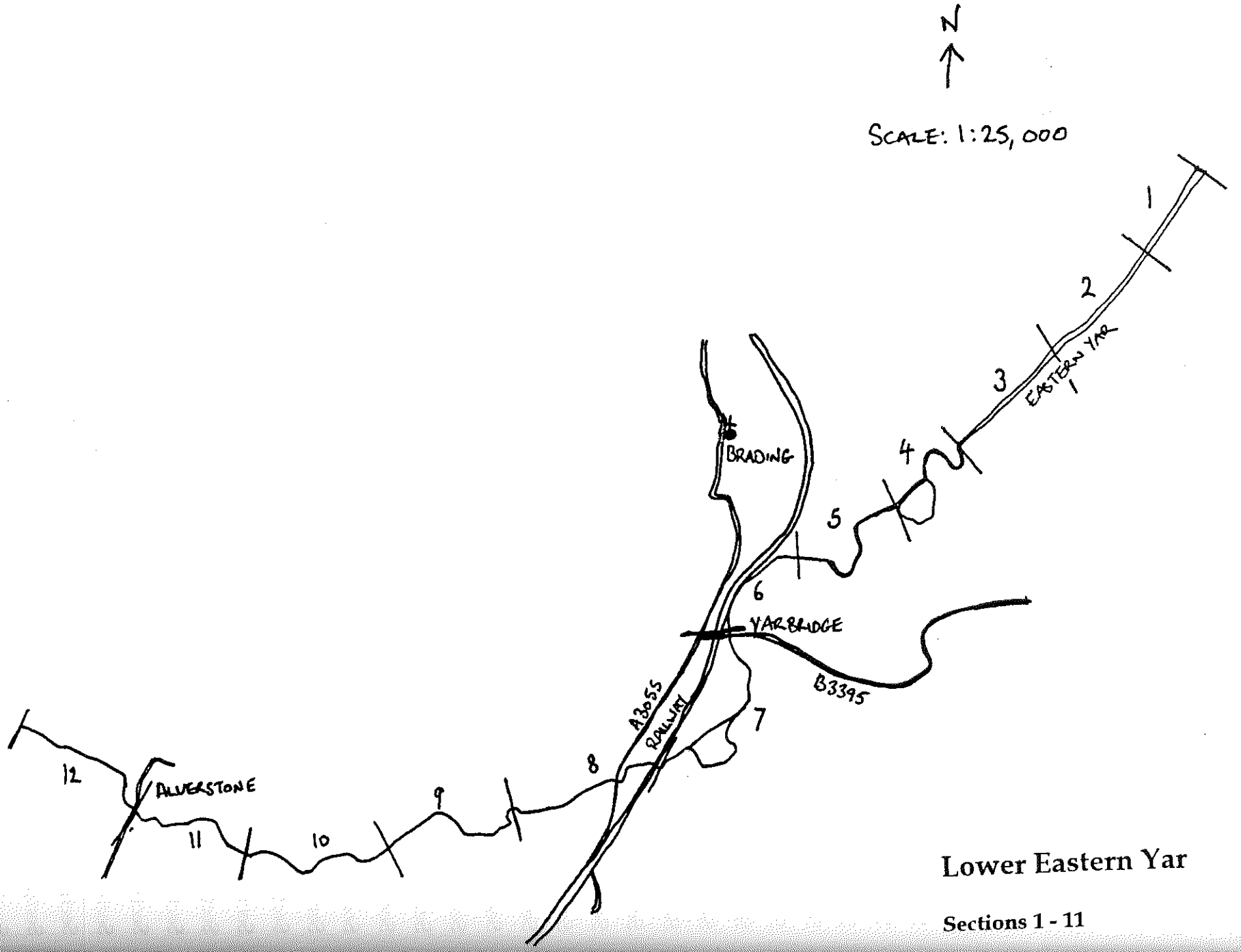
Isle of Wight River Corridor Survey, 1996; Eastern Yar

Produced for the Environment Agency (Southern Region)
by the Hampshire and Isle of Wight Wildlife Trust

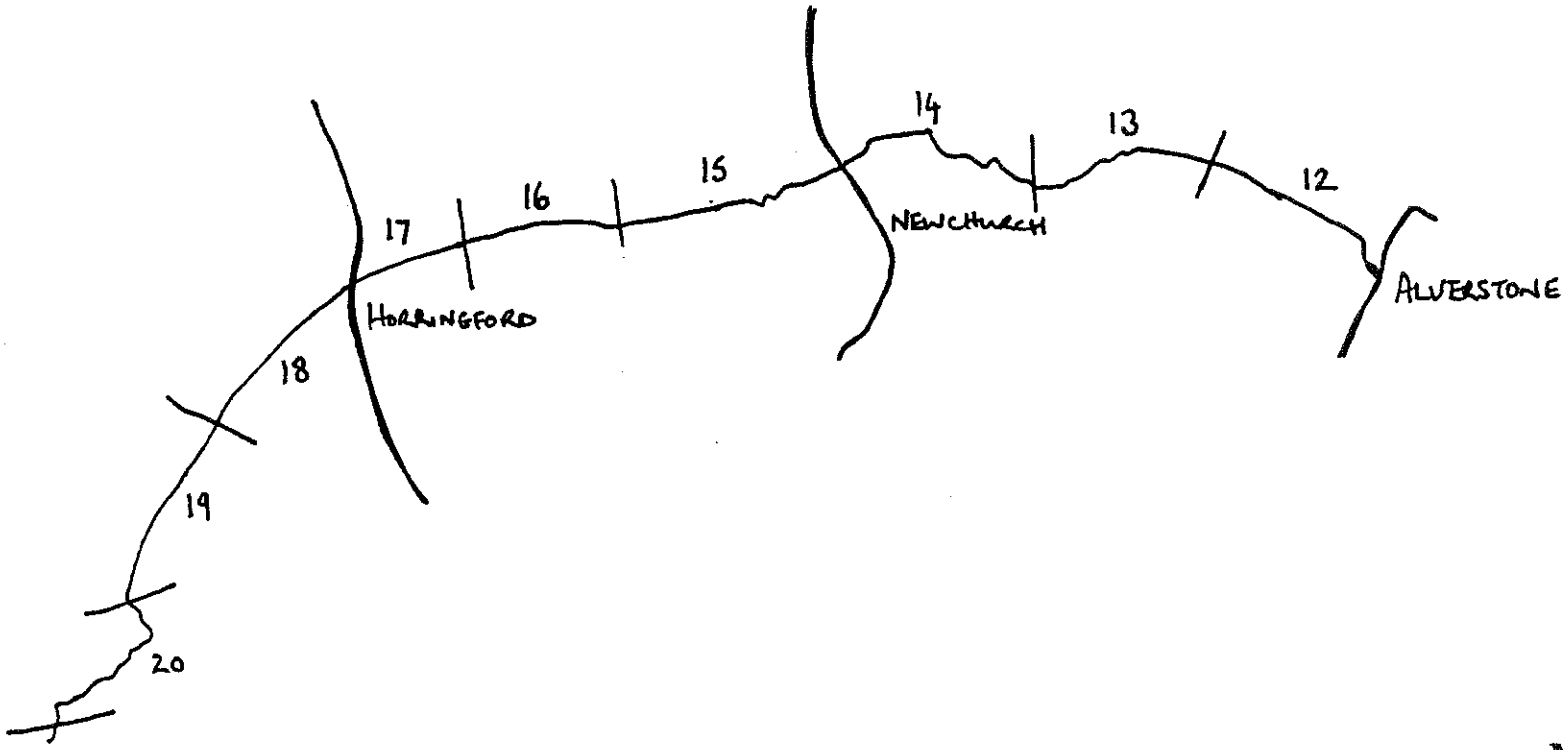
Editor: Jonathan Cox

Survey team: Anne Riley, Philip Wilson, Pru Palmes, Judith Baker, Sarah Parris
September 1996



Lower Eastern Yar

Sections 1 - 11



Mid Eastern Yar

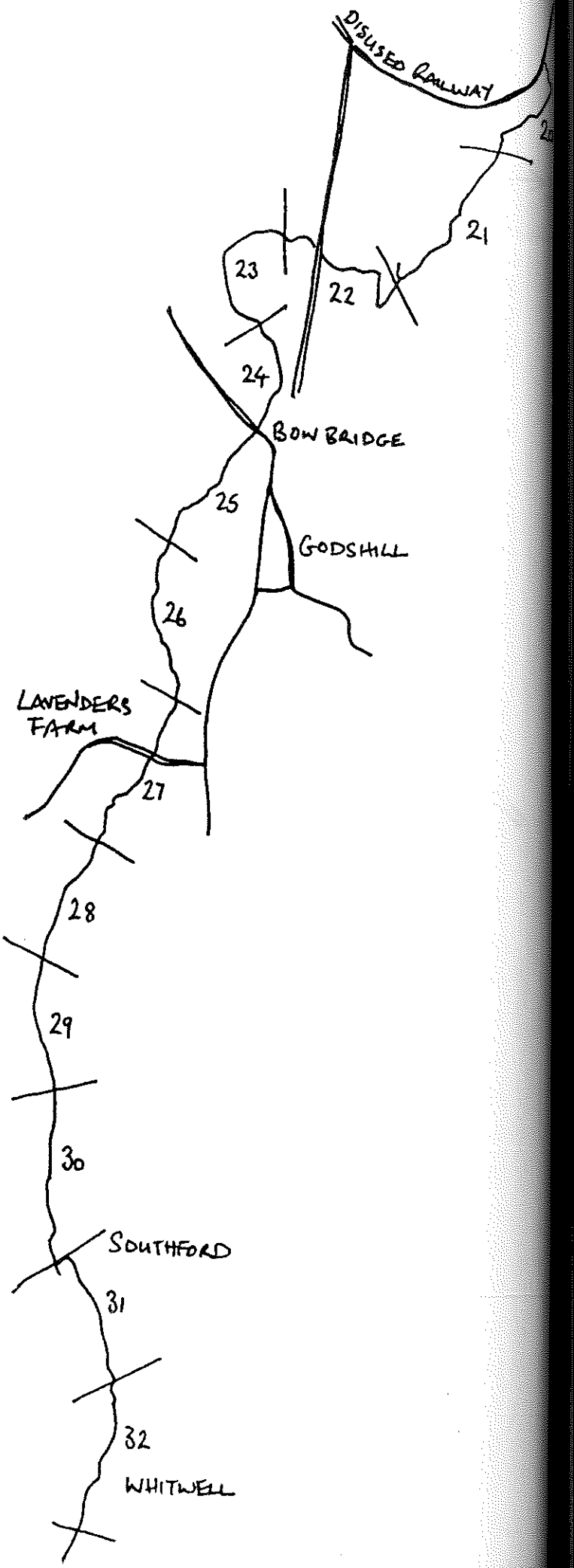
Sections 12 - 20

Upper Eastern Yar

Sections 21 - 32

N

SCALE: 1:25,000



Eastern Yar

Summary description
For the purpose of this description the Eastern Yar has been divided into three:

1. The upper Eastern Yar runs from the source at Whitwell to Redway.
2. The Mid Eastern Yar runs from Redway to Alverstone Weir.
3. The Lower Eastern Yar Runs from Alverstone Weir to Bembridge tidal outfall.

These broad divisions reflect the different geomophological phases of the river.

Upper Eastern Yar
This stretch of the river is 9.5km long and the main channel is joined by seven tributaries at various points along its course.

The river rises at the junction of the Upper Greensand and the Gault but flows for most of its course across Lower Greensand. For the first 3km the river flows through a gentle rounded valley. This valley lies at the foot of Stenbury Down (205m). When the river enters the Ferrunginous Sands the rounded hills give way to steep bluffs which enclose the narrow river flood plain in a steep sided valley.

For much of its course the Upper Eastern Yar flows through a natural looking channel with many meanders, pools and riffles and localised rapids and chutes. However, the channel is significantly recessed into the flood plain and there is little out of bank flooding. This lowering of bed levels is the result of past river engineering, either within the section or resulting from headward erosion from bed lowering further downstream. Bed levels may be raising naturally as a result of less intensive dredging in recent years.

As the river runs through the sub-urban area of Whitwell, the gentle slopes of the valley sides support a mix of land-uses comprising urban, arable, improved and semi-improved permanent pasture. This is the most obviously engineered stretch of the Upper Yar.

Further downstream, the river has cut a narrow and steep sided valley as it flows over the Ferruginous Sands. The land either side of this narrow valley is predominantly under arable cultivation. However, the valley itself remains largely under semi-natural vegetation comprising a mix of unimproved wet grassland, swamp, fen and carr woodland.

Due to the often heavy shading and possibly the recent history of regular river engineering, there was little aquatic vegetation in the Upper Yar. Only in one section of the Upper Eastern Yar was any aquatic vegetation recorded (section 31).

Throughout much of the river little or no emergent vegetation was found as the stream bed was heavily shaded by overhanging trees and scrub. Where gravels and silt shallows were well illuminated they supported Fools water cress *Apium nodiflorum*, Brooklime *Veronica beccabunga*, Horsetails *Equisetum* spp, Water cress *Rorripa nasturtium-aquaticum* and Water mint *Mentha aquatica*. Where the stream ran over deeper sands and silt Branched bur-reed *Sparganium erectum* and Great willowherb

Epilobium hirsutum were dominant with the local occurrence of Common reed *Phragmites australis* Water figwort *Scrophularia aquatica* and Floating sweet-grass *Glyceria fluitans.*

Bankside vegetation consists of a narrow belt of scrub woodland for much of the river. The principle components are Grey willow *Salix cinerea,* Alder *Alnus glutinosa* Pedunculate Oak *Quercus robur* and Bramble *Rubus fruticosus* agg. Banks free of scrub tend to support a typical weedy flora of disturbed land dominated by Nettle *Urtica dioica* and often with Comfrey *Symphytum officinale*

Mid Eastern Yar

This stretch of the river is 5.25 km long and is joined by 10 tributaries at various points along its course.

The Mid Eastern Yar flows across peat and alluvium over Ferruginous Sands. The Ferrunginous Sands are overlain by scattered deposits of plateau and terrace gravels. The steep sided narrow valley described in the Upper Yar gives way to a valley of between 200 and 400m wide.

The entire Mid Eastern Yar has been heavily modified by river engineering. The complex meanders of the original Eastern Yar, which flowed in channels close to the surface, have been replaced by a recessed, often linear, trapezoidal channel. Many of the old meanders remain on the surface of the adjacent flood plain.

Aquatic vegetation remains sparse in the Mid Eastern Yar with occasional Starwort *Calitriche stagnalis* and very locally Horned pondweed *Zannichellia palustris* and Curled pondweed *Potamogeton crispus* (sections 15 and 16).

Marginal vegetation develops in the less heavily shaded section of the river where silt and gravel bars develop. This is almost always dominated by Branched bur-reed *Sparganium erectum* occasionally a more diverse wetland flora develops with soft rush *Juncus effusus,* Comfrey *Symphytum officinalis,* Water figwort *Scrophularia aquatica,* Hemp agrimony *Eupatorium cannabinum,* Meadow sweet *Filipendula ulmaria,* Water cress *Rorippa sp,* Hemlock water-drowpwort *Oenanthe crocata,* Redshank *Polygonum sp.* and locally Marsh marigold *Caltha palustris.*

Bank vegetation consists of a mosaic of Willow/Alder woodland, Bramble scrub or ruderal/rich fen species such as Nettle *Urtica dioica,* Meadow sweet *Filipendula ulmaria* and Comfrey *Symphytum officinale.*

For much of its course the Mid Eastern Yar flows alongside a disused railway track. Land use in the flood plain of the Mid Eastern Yar consists mainly of improved pasture and arable, although patches of more species rich semi-improved wet grassland and Alder/Willow carr remain in places.

Lower Eastern Yar

This stretch of the river is 8km long and is joined by 17 tributaries at various points along its course. Only two of these are true tributaries rising from springs and running most of their course through distinct independent channels. One of these true

tributaries, Scotchells Brook, is described separately in this survey. The remaining tributaries are derived from cut-off branches of the main river channel and drains that have been cut to feed into these.

At Alverstone Weir the river runs across Ferruginous Sand, after 1km it enters a complex of beds running through the Cretaceous sequence, to a river gap in the chalk ridge at Yarbridge, and so then into Bembridge Marls via Reading and Bagshot Beds. The valley and thus the channel is dominated by a combination of silts, sands and peat.

Crossing predominately reclaimed tidal lands, the river valley of the lower Eastern Yar is broad without any significant gradient. On either side of the flood plain, the land rises sharply to form distinct hills.

The channel and course of the Lower Eastern Yar has been determined by the river engineering. The entire stretch has been modified by straightening and dredging. Throughout its course the river flows in a recessed channel, the water being at least 1m below the adjacent bank level.

Aquatic vegetation is scarce in the main river channel of the Lower Eastern Yar although Yellow water lily *Nuphar lutea* occurred quite frequently between Yar Bridge (Brading) and Great Sluice (Bembridge). This is its only location on the Isle of Wight. Elsewhere patches of Starwort *Calitriche stagnalis* and Curled pondweed *Potamogeton crispus* were recorded. Old meanders in the flood plain adjacent to the river supported a far richer aquatic flora. This needs further survey to fully evaluate.

As with most of the Eastern Yar, marginal vegetation is dominated by Branched bur-reed, although Common reed and Reed canary grass are also frequent.

The river banks are often over grown with Willow/Alder scrub or ruderal/tall fen species.

Adjacent land use is dominated by a mix of improved and semi-improved pasture, although significant areas of semi-natural vegetation remain. These consists mainly of Reed bed and unimproved wet grassland.