ENVIRONMENT AGENCY

**Our Ref :** SV/2006/009257-2/1
**Your Ref :** APP/W1850/C/06/2005983

**Date :** 20 March 2006

The Planning Inspectorate
Temple Quay House
2 The Square
Temple Quay
Bristol
BS1 6PN

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**F.A.O: Mr E. Burnett**

Dear Sir

**ERECTION OF POLYTUNNELS AT LAND AT PENNOXSTONE COURT, KINGS CAPLE, HEREFORDSHIRE HR1 4TX**

I refer to the letter from Herefordshire Council which was received on 13 March 2006.

It is understood that an Enforcement Notice was lodged by the Council on the basis of a breach of planning control for the erection of polytunnels, for the protection of soft fruit on the land, without planning permission. It is noted that an Appeal has since been lodged to be decided on the basis of Inquiry. Further to the discussion with Mr E. Burnett (Case Officer), of the Planning Inspectorate, on 15 March, we would like to make the following comments on the above, on the basis of a written statement. The following is submitted for the consideration of the Inspector as part of the Inquiry.

**Fluvial Flood Risk:**
The site lies at the edge of the historic floodplain (1947 event) of the River Wye. I have enclosed a copy of the historic map, for your information. It is understood that the historic floodplain tracks alongside the western edge of the site, along the 40 metre contour line. The site also lies adjacent to the *indicative* high risk Flood Zone 3 (1% annual probability floodplain).

To clarify the extent of 1% (high) flood risk, plus 20% climate change, to the site, we would expect the submission of a Flood Risk Assessment (FRA) including a topographical survey, to demonstrate the modelled 1% flood level, plus climate change (for the River Wye). For ease, in the absence of a hydraulic model, the applicant may wish to use the historic floodplain level of 40.0m AOD, plus 200mm (to account for climate change), given that the 1947 event is considered to be in the order of a 1 in 100 year return period.

In policy terms, we would not wish to see polytunnels on land which falls within the 1%, plus climate change (20%) floodplain, as polytunnels would be likely to effect flood storage and flows. There may also be an increased risk of flooding elsewhere if polytunnels are washed

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out during a flood event, with the potential for blockages downstream.

In strict policy terms, were the FRA to confirm in fact that the site is within the high risk, 1% floodplain, plus climate change allowance, Table 1 of PPG25 would advise that only 'essential' development should be permitted, and only where an alternative lower risk location is not available. Also, where exceptionally development is permitted, it should be provided with the appropriate minimum standard of defence and should not impede flood flows, or result in net loss of flood storage. We are not aware that the 'essential' nature of this location has been considered.

**Surface Water Flood Risk:**
The majority of the site appears to be located in Flood Zone 1, based on the Agency's Flood Zone map (copy enclosed). In terms of sites in Flood Zone 1, it should be noted that the primary flood risk issue generated by most new development is the risk posed to others by **surface water runoff**. Development within this category can generate significant volumes of water. The impact and risks posed by this will vary according to the characteristics of the development itself i.e. the scale of impermeable surfacing and of the catchment concerned i.e. catchment size, distance from local watercourses, capacity of local watercourses, gradient, soil type etc.

PPG25 - Development and Flood Risk, at paragraph 60, notes that the requirement to assess the flood risks posed by development includes an assessment of the run-off implications of development appropriate to the nature and scale of that development. In some cases, the risks will be small and the assessment will be correspondingly simple, in others the assessment will need to be more detailed reflecting greater risks, as is the case with this application due to the size of the area under consideration. Paragraph 60, also states that failure to submit an FRA "may lead to delay in determining the application and could, in some cases, be a reason for refusal".

On the precautionary approach as advocated in PPG25, and in the absence of a FRA to demonstrate that the site does not impact on flood storage, flows or exacerbate flooding elsewhere, it is offered that the development cannot be deemed acceptable in principle.

During an extreme rainfall event we believe that there could be considerable overland surface water flow from the polytunnels, where the rainfall exceeds the soils infiltration capacity. This surface water will find its own overland route to the receiving watercourse (in this case the River Wye) and subsequently increase the flood risk to the immediate site and to third parties elsewhere. We would therefore expect to see an FRA submitted to address the increase in impermeable area on the application site.

**General Requirements of a FRA:**

Paragraph 20 of PPG25 (Development and Flood Risk) states that those proposing particular developments are responsible for:

- "providing an assessment (Flood Risk Assessment) of whether any proposed development is likely to be affected by flooding and whether it will increase flood risk elsewhere and of the measures proposed to deal with these effects and risks; and

- satisfying the local planning authority that any flood risk to the development or additional risk arising from the proposal will be successfully managed with the minimum environmental effect, to ensure that the site can be developed and occupied safely."

The FRA would also need to include:

* Surface water flow calculations for the 100 year storm event, assuming the soil is at saturation point and there is no evaporation (winter conditions).

* Topographical survey of the whole site showing surface water flow routes from the polytunnels to the receiving watercourse.

* Surface water discharging from the proposed polytunnels must be limited to the Greenfield Runoff Rate. (There is a Greenfield Run-Off Restriction of 10 l/sec/ha.). We would request that detailed calculations are submitted, to show the Greenfield Runoff Rate has been met together with proposed mitigation methods to control the surface water runoff.

**Additional Informatives:**

Surface water run-off should be controlled as near to its source as possible through a sustainable drainage approach to surface water management (SUDS). This approach involves using a range of techniques including soakaways, infiltration trenches, permeable pavements, grassed swales, ponds and wetlands to reduce flood risk by attenuating the rate and quantity of surface water run-off from a site. This approach can also offer other benefits in terms of promoting groundwater recharge, water quality improvement and amenity enhancements. Approved Document Part H of the Building Regulations 2000 sets out a hierarchy for surface water disposal which encourages a SUDS approach.

Further information on SUDS can be found in PPG25 paragraphs 40-42, PPG25 appendix E, in the CIRIA C522 document Sustainable Urban Drainage Systems-design manual for England and Wales and the Interim Code of Practice for Sustainable Drainage Systems. The Interim Code of Practice provides advice on design, adoption and maintenance issues and a full overview of other technical guidance on SUDS. The Interim Code of Practice is available on both the Environment Agency's web site at: www.environment-agency.gov.uk and CIRIA's web site at www.ciria.org.uk

It is suggested that surface water may be re-used as part of a scheme to limit run-off, either through a water balancing feature (for re-use on the site) or other suitably agreed method, in the interests of water resource minimisation, water quality and flood risk prevention.

It is trusted the above assists in consideration of the appeal.

Yours faithfully

**JUSTIN BURNETT**
**Team Leader Severn Area Planning**
Please ask for : Mark Davies - 01743 283405

CC: Herefordshire Council - Southern Division
CC: Mr N J Cockburn

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# Flood Zone 3 (1% annual probability flooding) and Historic Map

## Land at Pennoxstone Court, Kings Caple, Hereford

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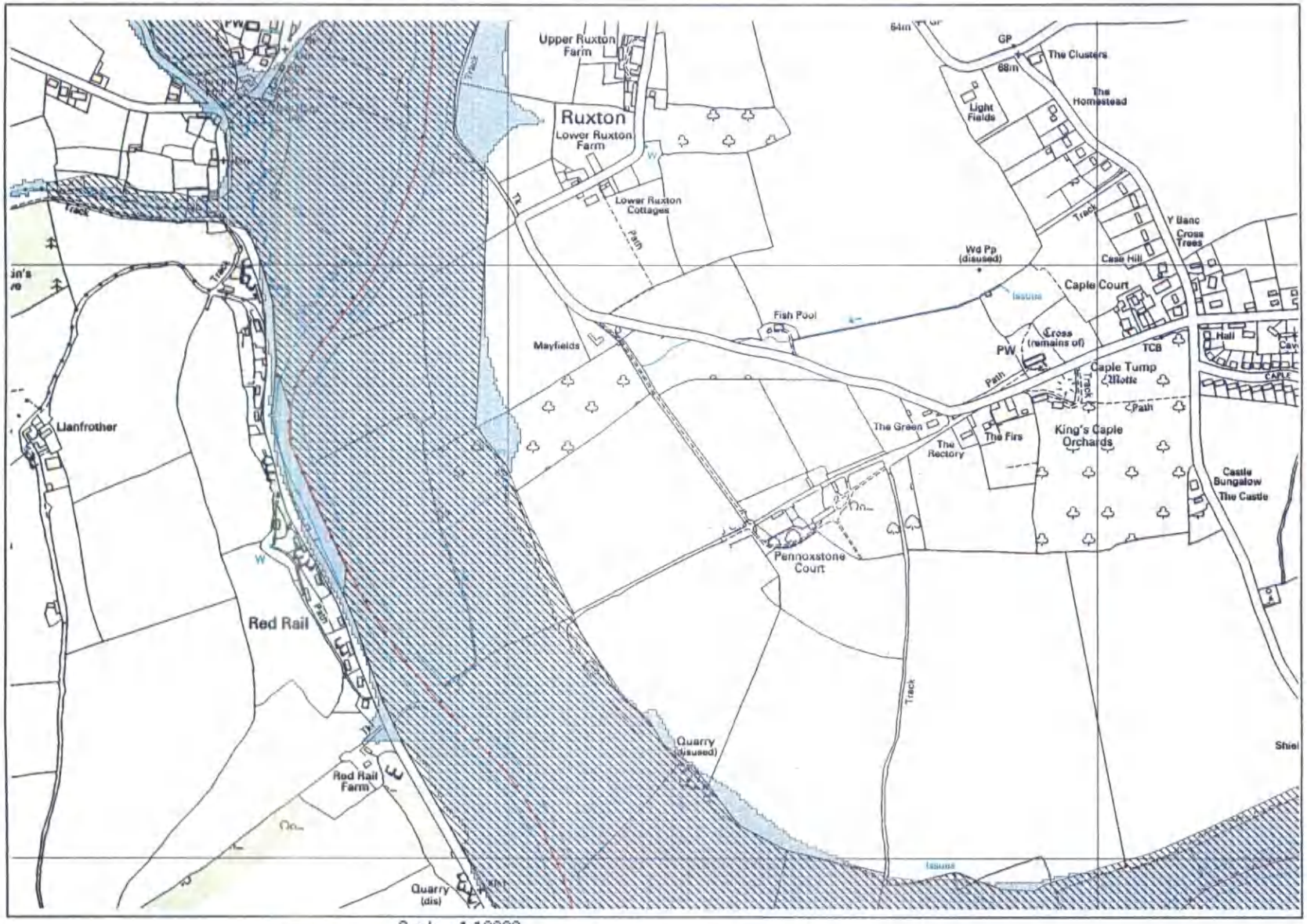


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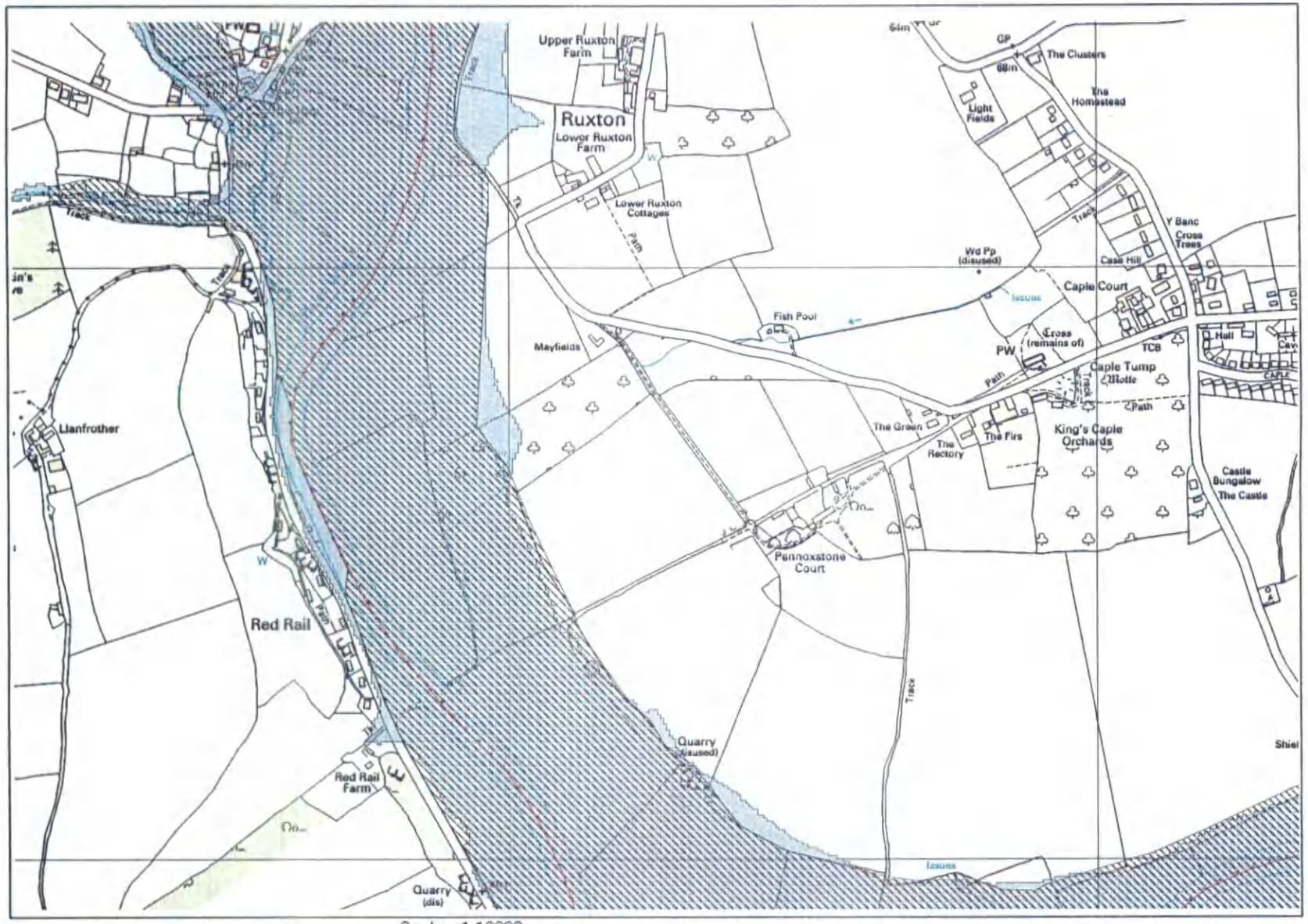


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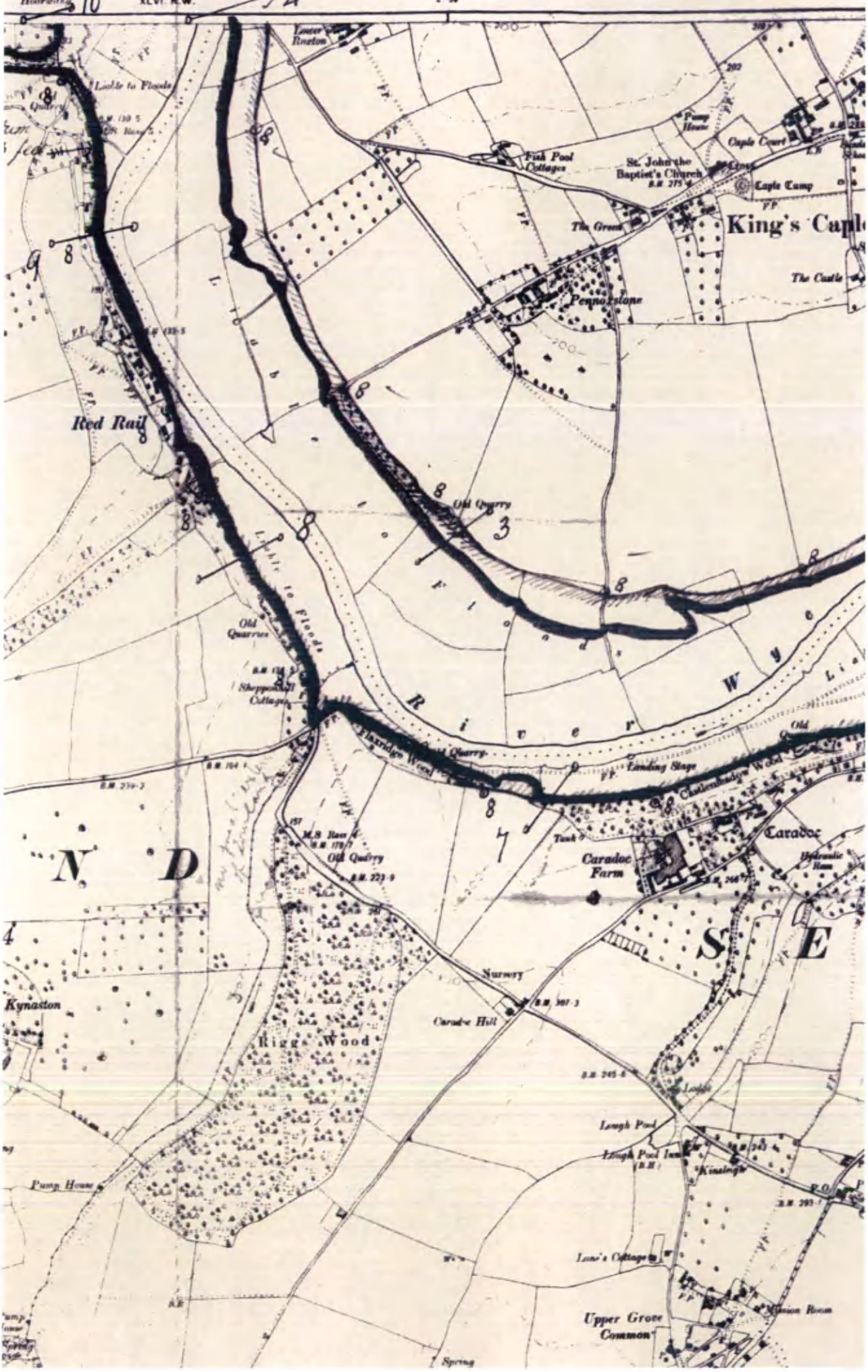

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