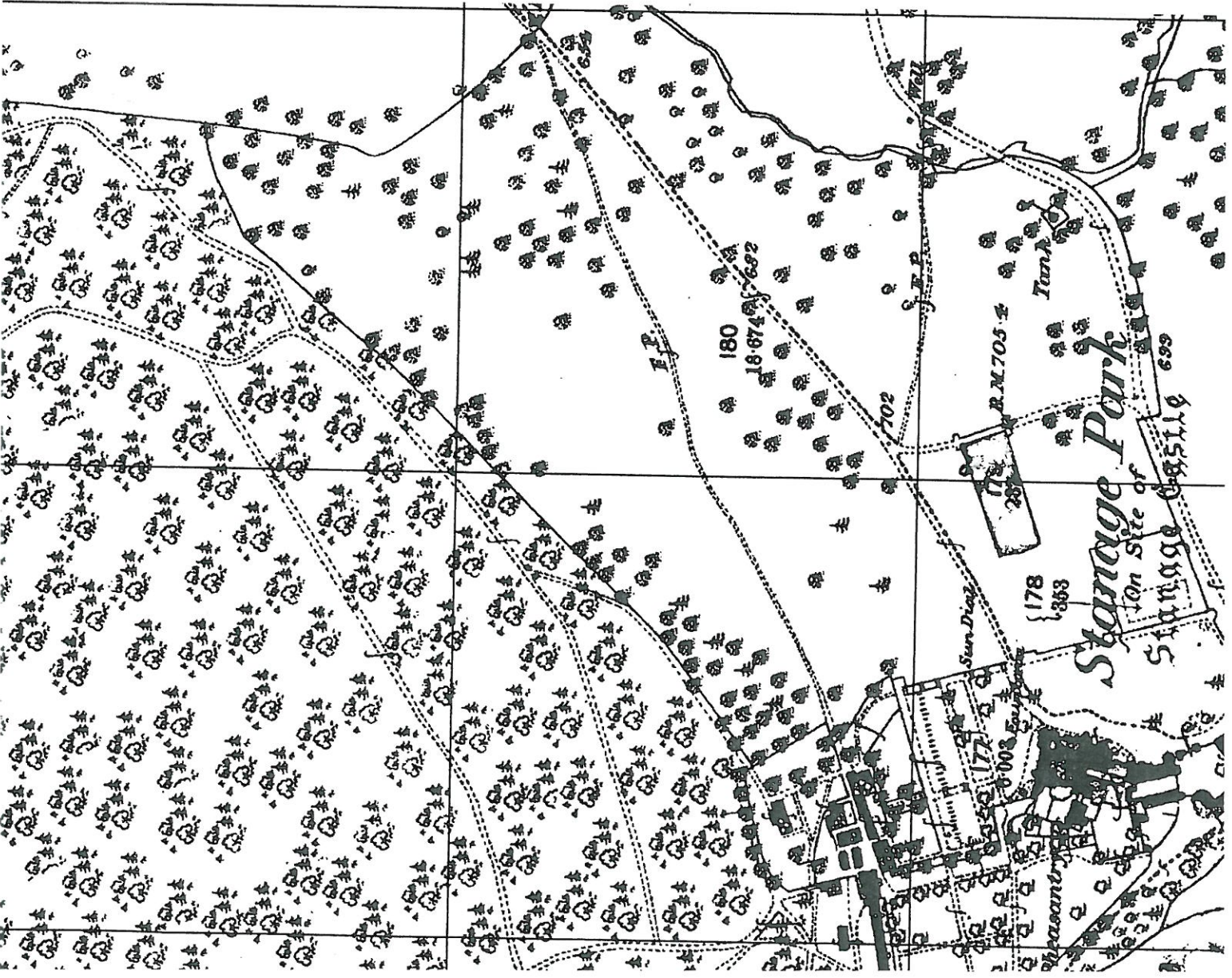


STANAGE PARK, KNIGHTON, POWYS
 OUTLINE BRIEF AND SPECIFICATION FOR REINSTATEMENT OF ORNAMENTAL LAKE



STANAGE PARK, KNIGHTON, POWYS
OUTLINE BRIEF AND SPECIFICATION FOR WORK IN
RELATION TO THE SILTED UP LAKE TO BE EXECUTED AS PART OF A
GLASTIR AGREEMENT

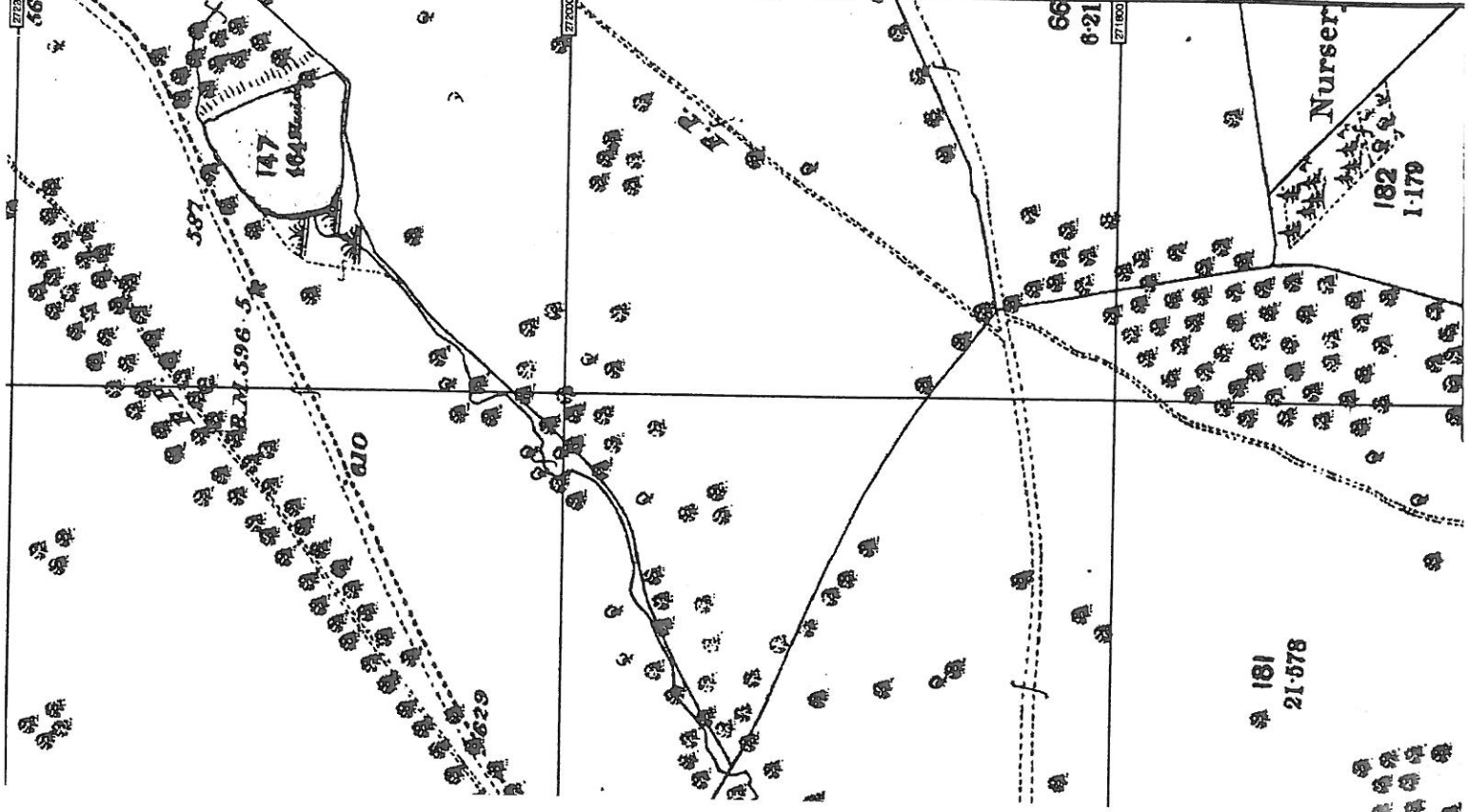
1.0 Background

- 1.1 Stanage is a castellated house set amongst extensive and intact picturesque parkland laid out by Humphry Repton at the beginning of the 19th Century. The site had been occupied by an earlier house and, perhaps, designed landscaping. There are also formal gardens and a Victorian arboretum
- 1.2 The main house faces eastwards in an elevated position concealed from view. It is accessed by two drives. The west drive descends down a valley with a stream and woodland towards Knighton. The east drive descends down a more open valley with a stream towards Brampton Bryan. The lake lies halfway along the east drive as the valley starts to narrow
- 1.3 Stanage Park is designated as a Grade I Historic Park and Garden and the lake is identified as a specific element in the listing description
- 1.4 The purpose of the lake appears to have been ornamental as there is another lake identified as the fish pond at the top of the west drive near the house
- 1.5 The lake is now silted up and there is a breach in the dam and a leak in the south overflow.
- 1.6 The lake may predate the Repton landscaping

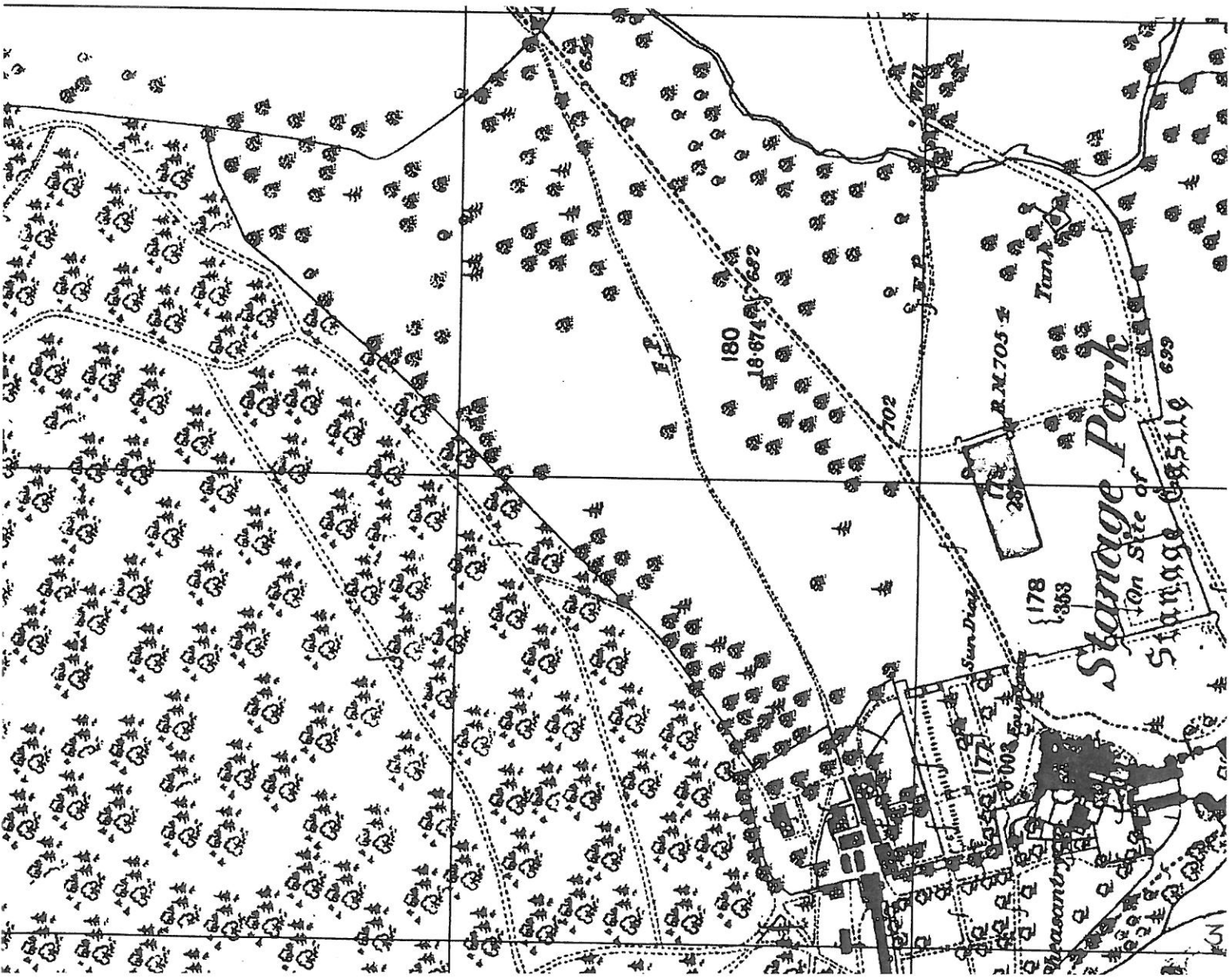
2.0 Background

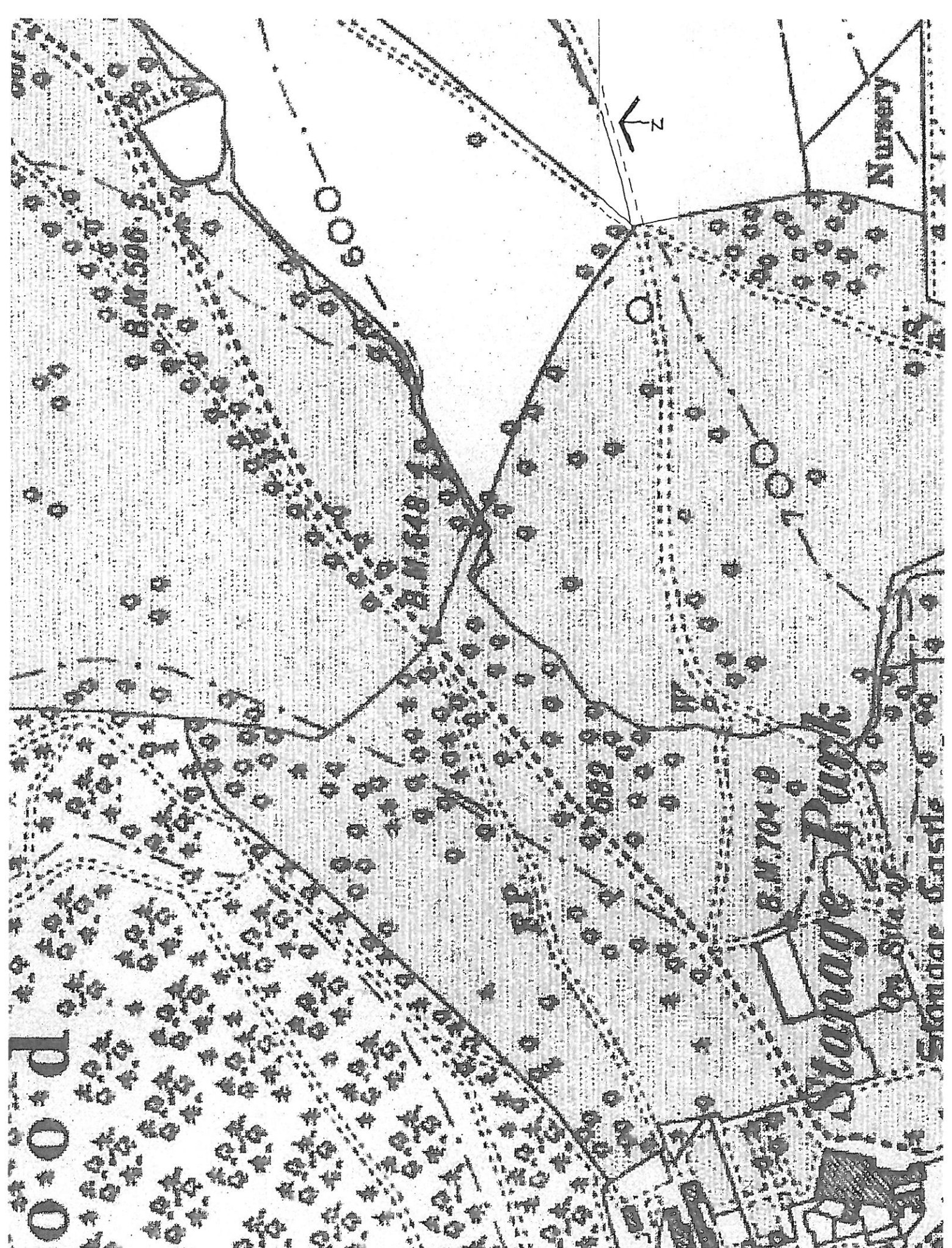
- 2.1 The original lake was 50 metres wide at the east dam narrowing to 20 metres at the west end and is 40 metres long.
- 2.2 The stream enters near the south west corner of the lake. The 1889 OS map shows it discharging from the north end of the dam but by 1902 it is shown as discharging from the south end where the present modern concrete block overflow now stands
- 2.3 A sluice is marked on the 1889 map and remains exist in the form of the top of 3 No timber posts and a section of clay pipework visible in the dam breach
- 2.4 The dam is of rammed earth construction. The depth of the sluice invert below the top of the dam is 1.8 metres and the depth of the overflow pipe invert below the top of the dam is 0.8 metres. The original depth of the water at the dam can therefore be assumed to have been about 1 metre. The maximum height of the dam on the downstream side is about 4.5 metres

- 2.5 The top of the dam is about 1.7 metres wide with a number of malus trees growing out of the top and three poplars growing out of the east face of the dam towards the north end
- 2.6 Drawing 4530/3 has been prepared showing the general alignment of the dam, a cross section at the sluice and details of the overflow

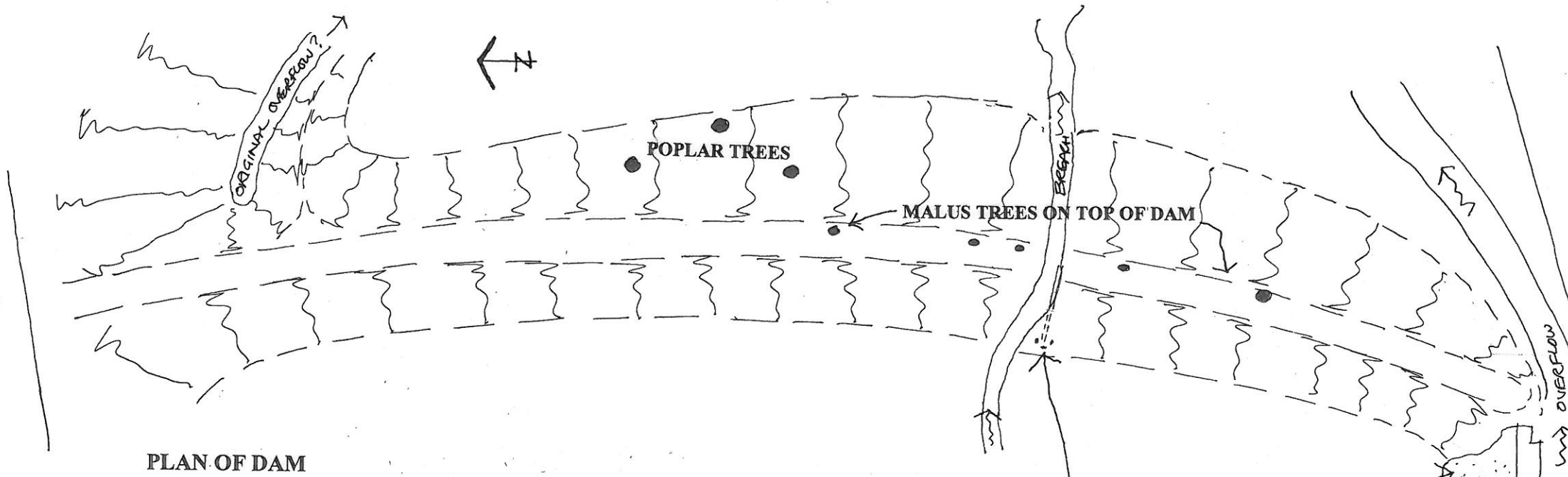


1889 OS PLAN

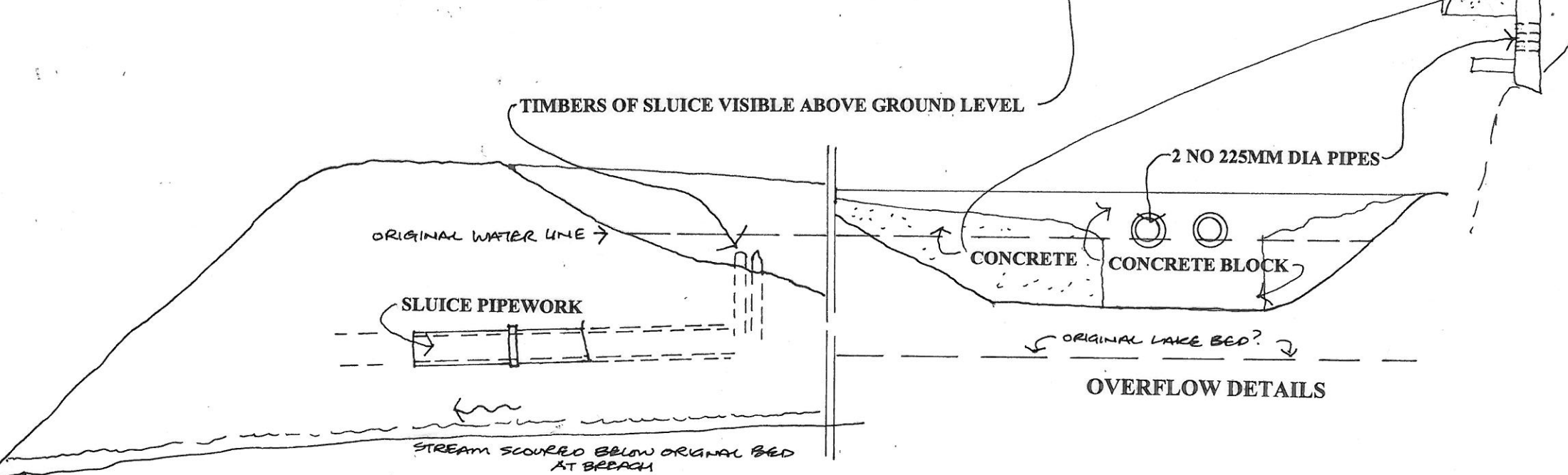




1902 OS PLAN



PLAN OF DAM



TIMBERS OF SLUICE VISIBLE ABOVE GROUND LEVEL

2 NO 225MM DIA PIPES

CONCRETE CONCRETE BLOCK

OVERFLOW DETAILS

SECTION THROUGH SLUICE REMAINS

5



4530 Stanage Park – Lake





←
SLUCE



4530 Stanage Park Lake – Dam & Sluce



4530 Stanage Park Lake – Lake Overflow

3.0 Condition

- 3.1 The lake is entirely silted up and the stream meanders through the boggy ground which has a variety of grass, sedge, reeds and bog plants together with the stumps of self seeded shrubs and trees
- 3.2 The dam is largely intact and stands to its original height. However it has been breached due to water undermining the sluice pipework so that the stream now flows 600mm below the sluice invert. It is extremely likely that the stream has eroded through any clay lining to the lake at this point. Tree roots have also invaded the dam structure and wind forces on the trees will weaken the dam structure as they grow taller.
- 3.3 The concrete block overflow structure is in poor condition. The blocks at the base of the outlet channel are disintegrating but the upper blockwork is relatively sound. The two 225mm diameter concrete pipes are inadequate to accommodate sudden downpours. Water has eroded under the blockwork at the east end of the overflow structure. Larger volumes of uncontrolled overflowing water at this point have deeply eroded the bank and the south end of the dam
- 3.4 The silting of the lake has occurred over time. Unlike at the fish pond, there appears to be no provision for slowing down the streams flow prior to entering the lake to enable silt to be deposited so that it can be removed at regular intervals

4.0 Recommended Works

- 4.1 Engage a Conservation architect and engineer with experience of working on earth dams and ornamental historic lakes to design, specify, tender and oversee the repairs and act as CDM co-ordinator
- 4.2 Carry out a topographical survey, then carry out archaeological investigation using coring to establish the depth of the lake, the nature of its construction and its historic development. Core samples should be subject to carbon dating and microscopic biological and non biological analysis
- 4.3 Archaeologically excavate the sluice structure to inform the repair strategy
- 4.4 Archaeologically investigate the north end of the dam for any evidence of an overflow structure
- 4.5 Clear the vegetation and archaeologically examine the south overflow for any evidence of an earlier structure
- 4.6 At the same time an ecological appraisal will be undertaken by others based on CIEEM Guidelines. This will involve a desktop Data Search, Phase I habitat survey, identified and mapping invasive weeds, protected species assessment, habitat descriptions and target notes to identify areas of concern.