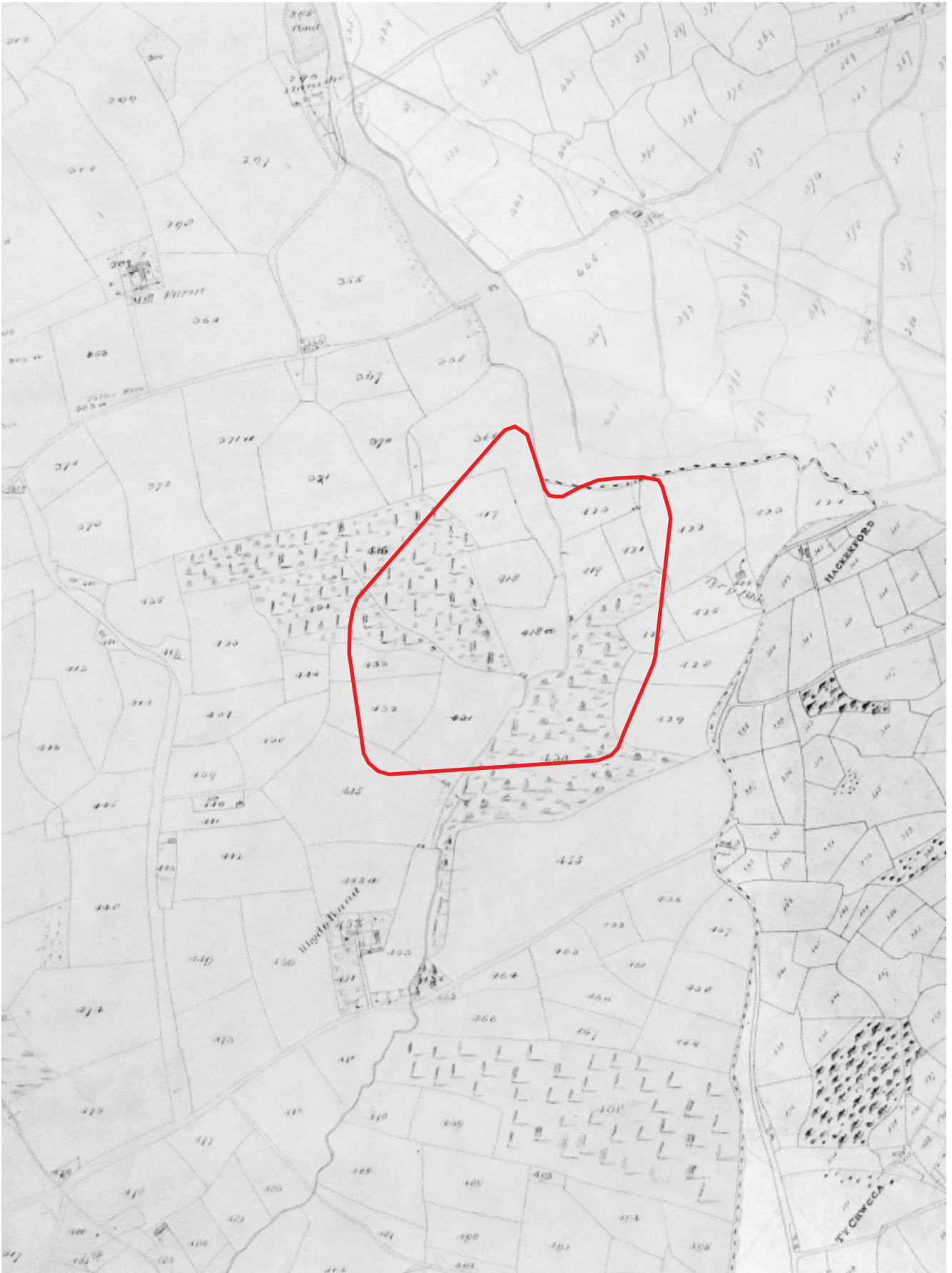


Appendix 4: Historic maps and drawings



NOTE: Red line in this Technical Appendix indicates the line of embankment for Llanishen Reservoir only.



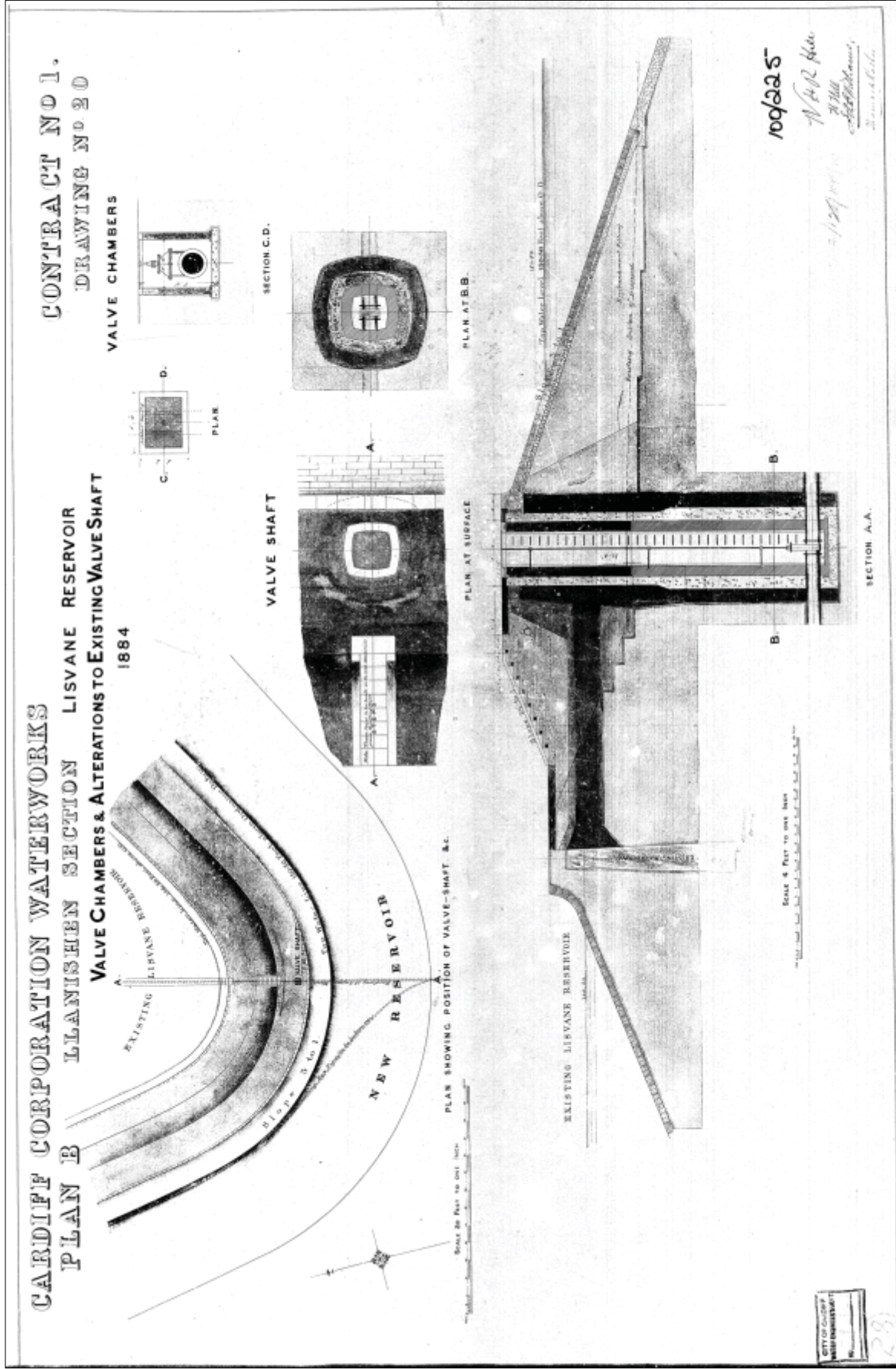
NOTE: Red line in this Technical Appendix indicates the line of embankment for Llanishen Reservoir only.

Appendix 4.2: 1845 Tithe Map

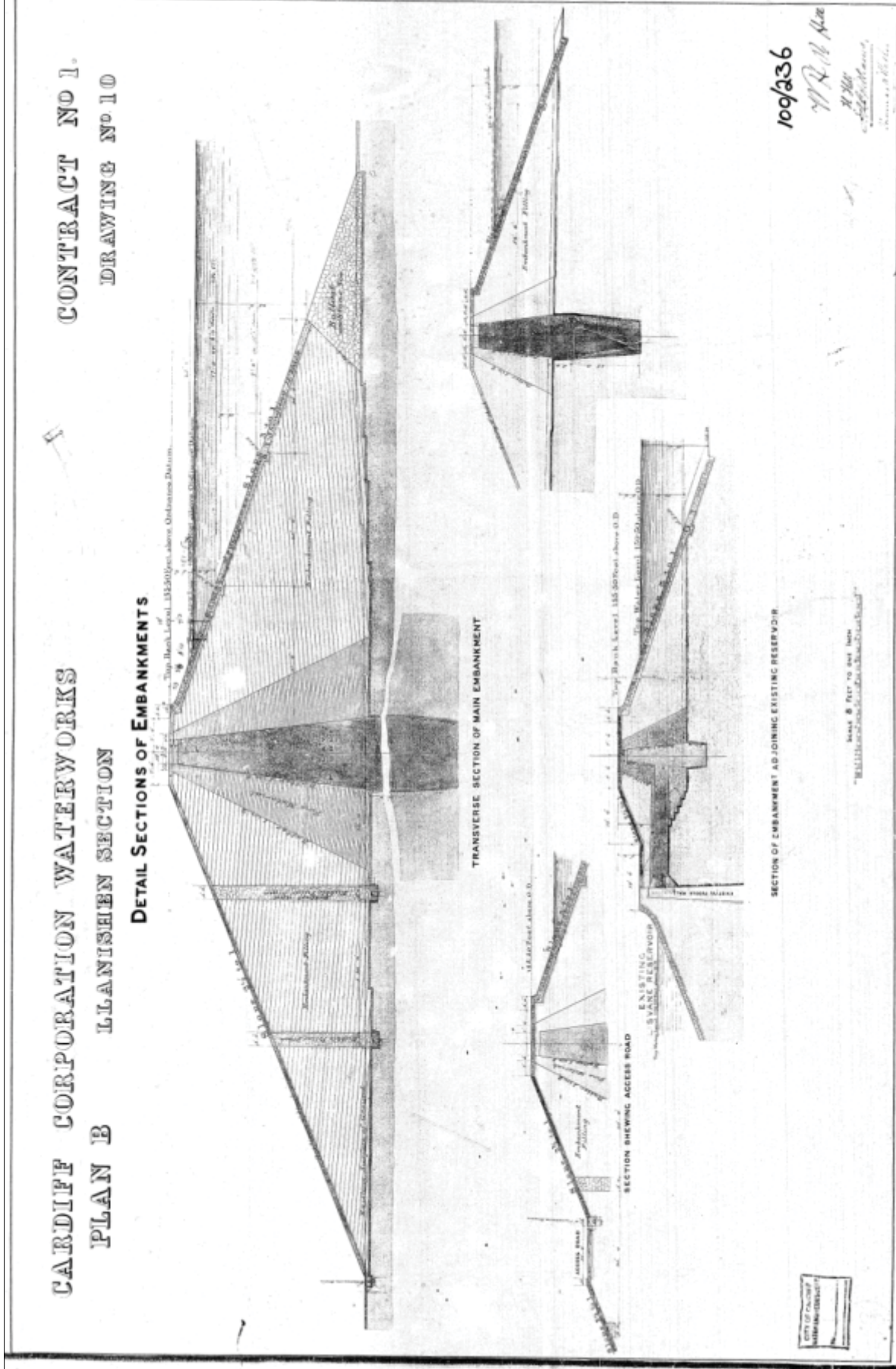


NOTE: Red line in this Technical Appendix indicates the line of embankment for Llanishen Reservoir only.

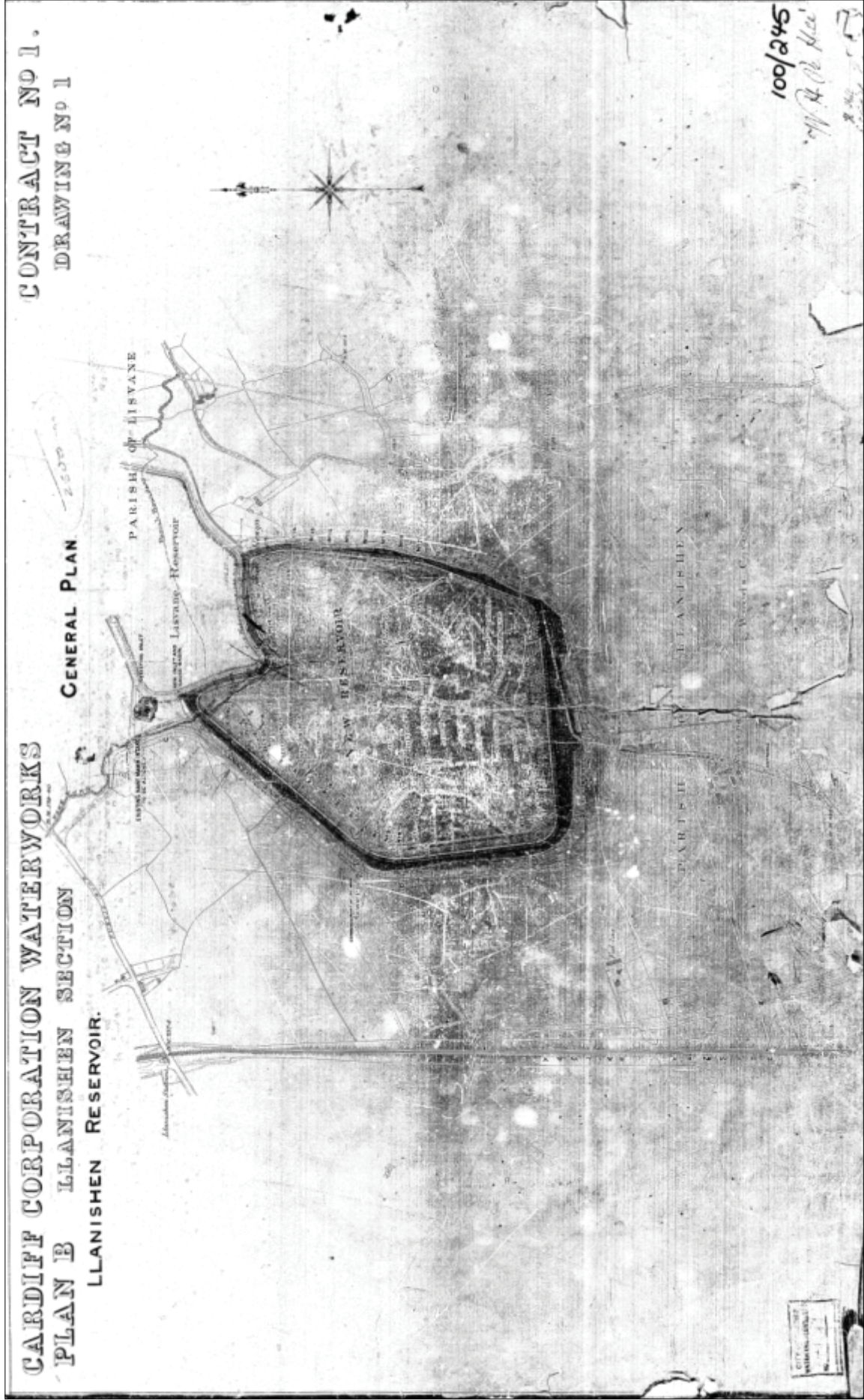
Appendix 4.3: 1875 Ordnance Survey map



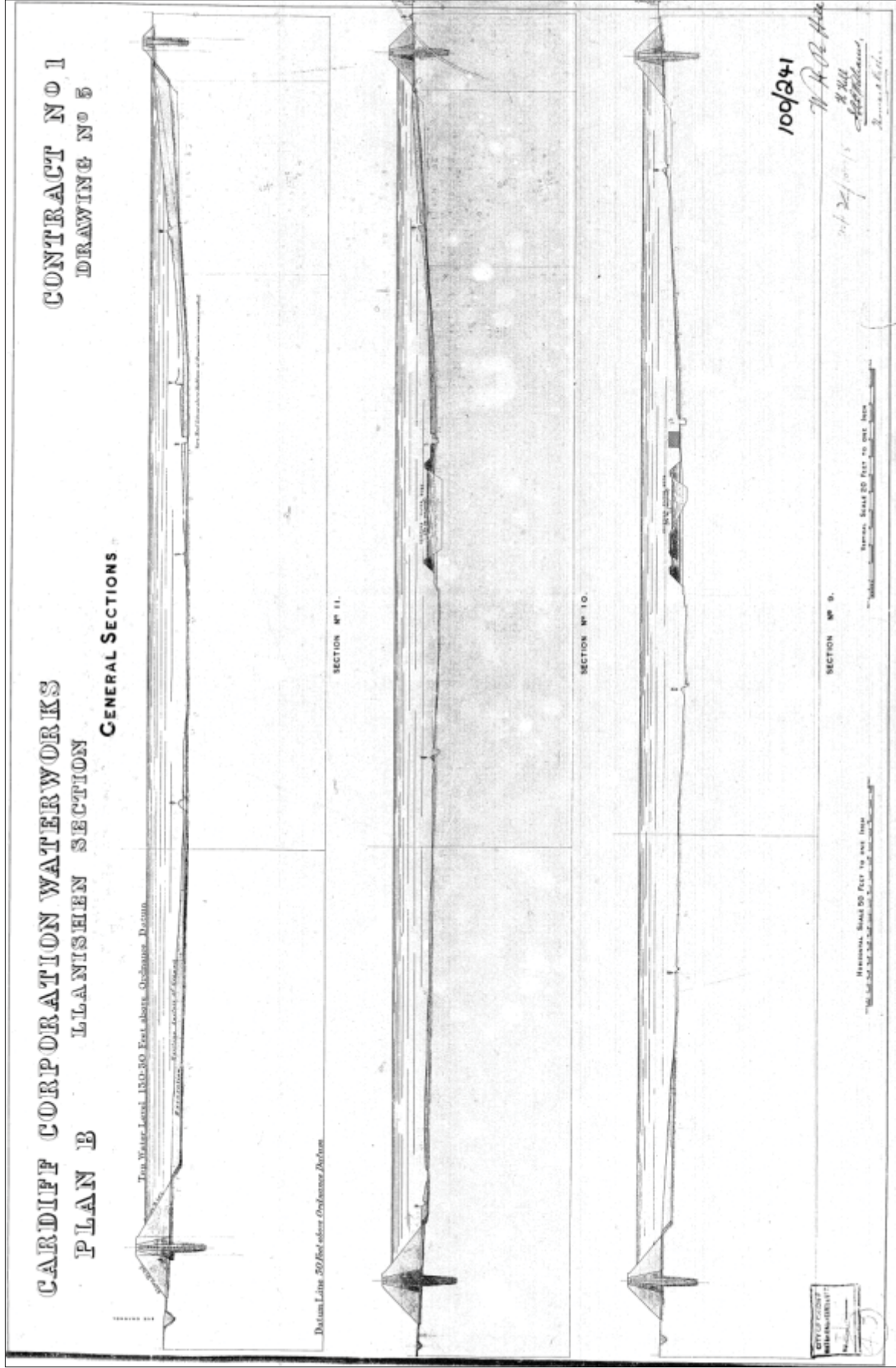
Appendix 4.4: 1884 - Section through embankment dividing Lisvane and Llanishen Reservoirs



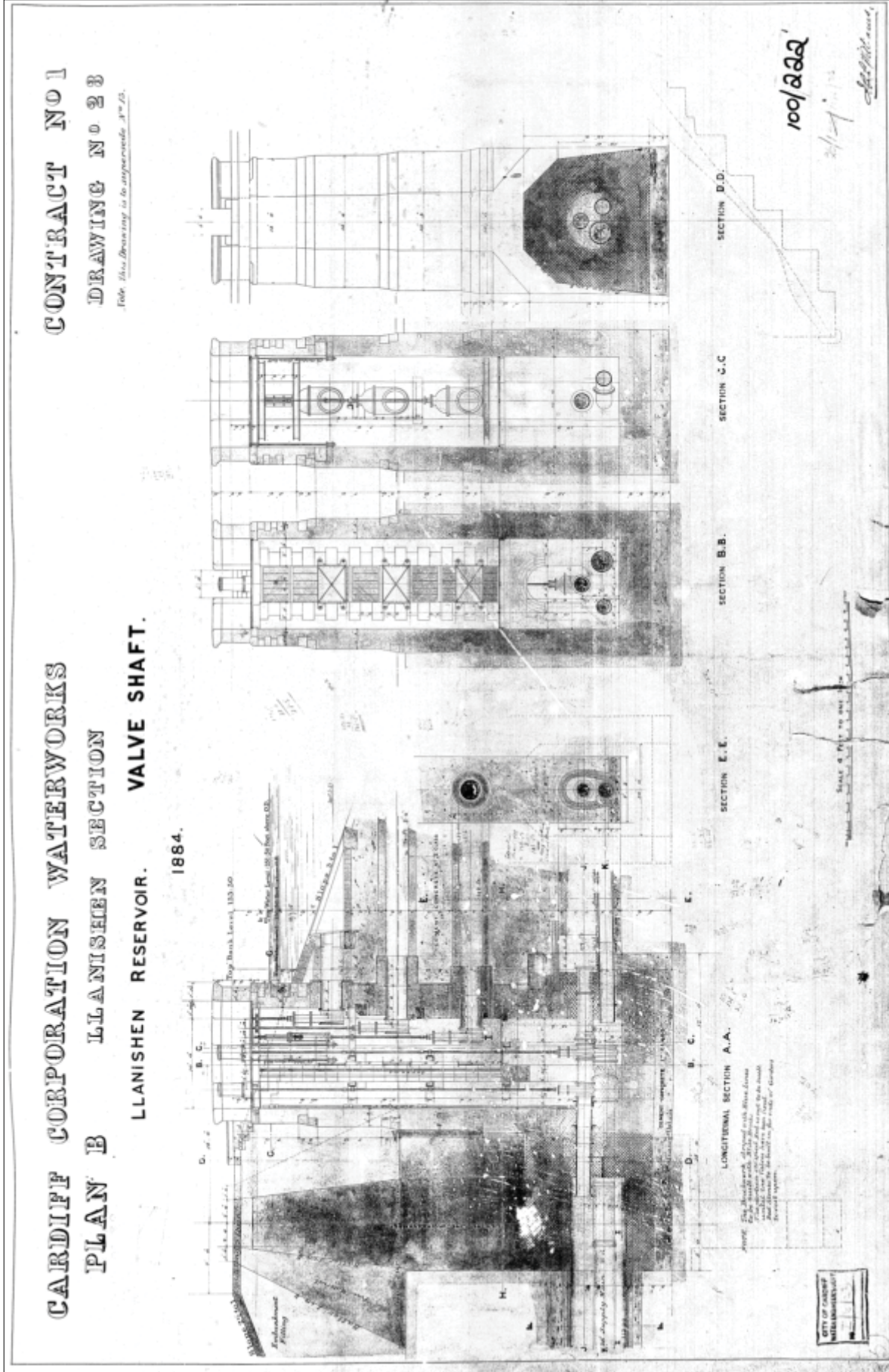
Appendix 4.5: 1884 - Sections through main embankment



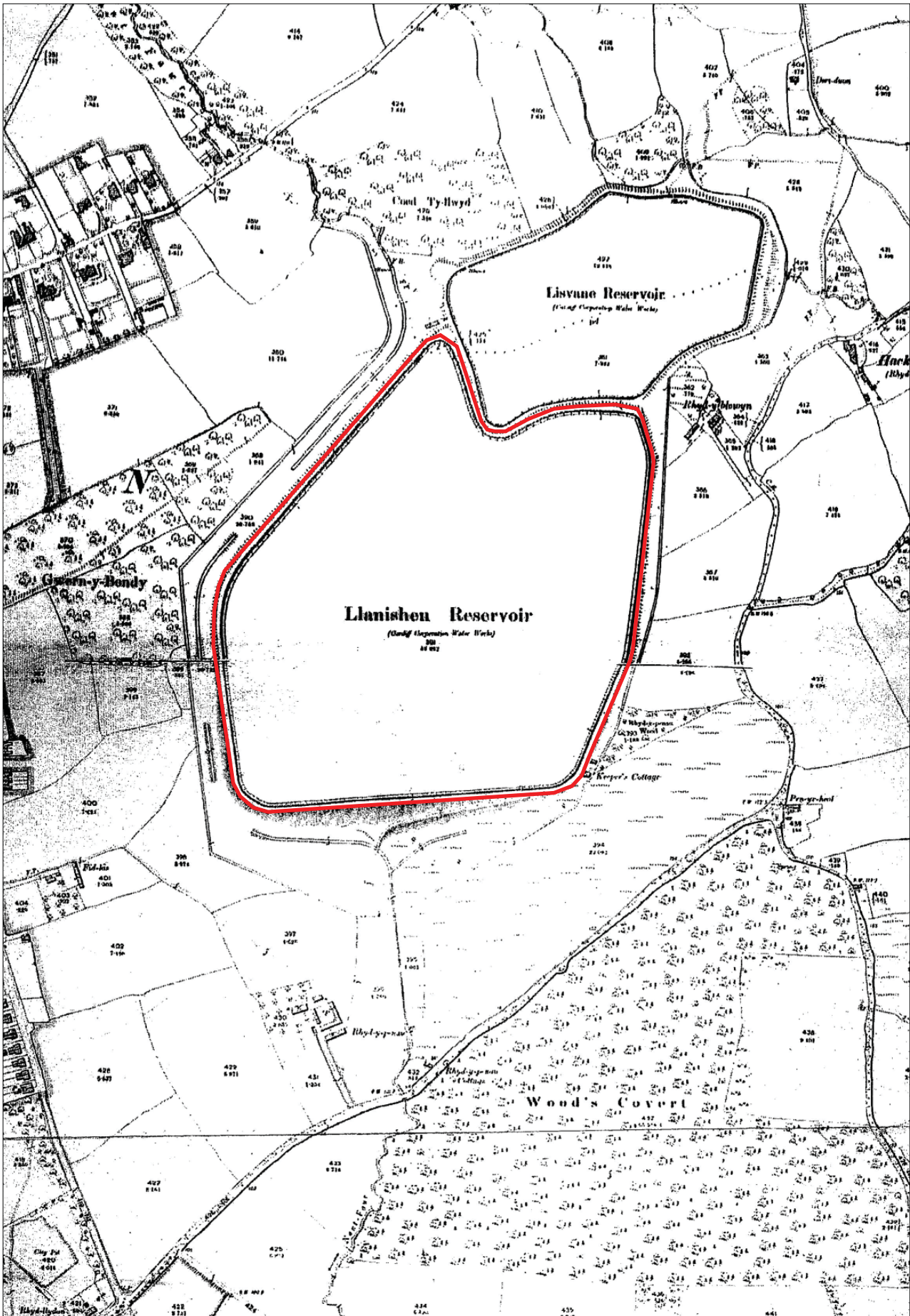
Appendix 4.6: 1884 - plan of new reservoir showing location of sections



Appendix 4.7: 1884 - Sections 9 - 12, west to east across the planned Llanishen Reservoir

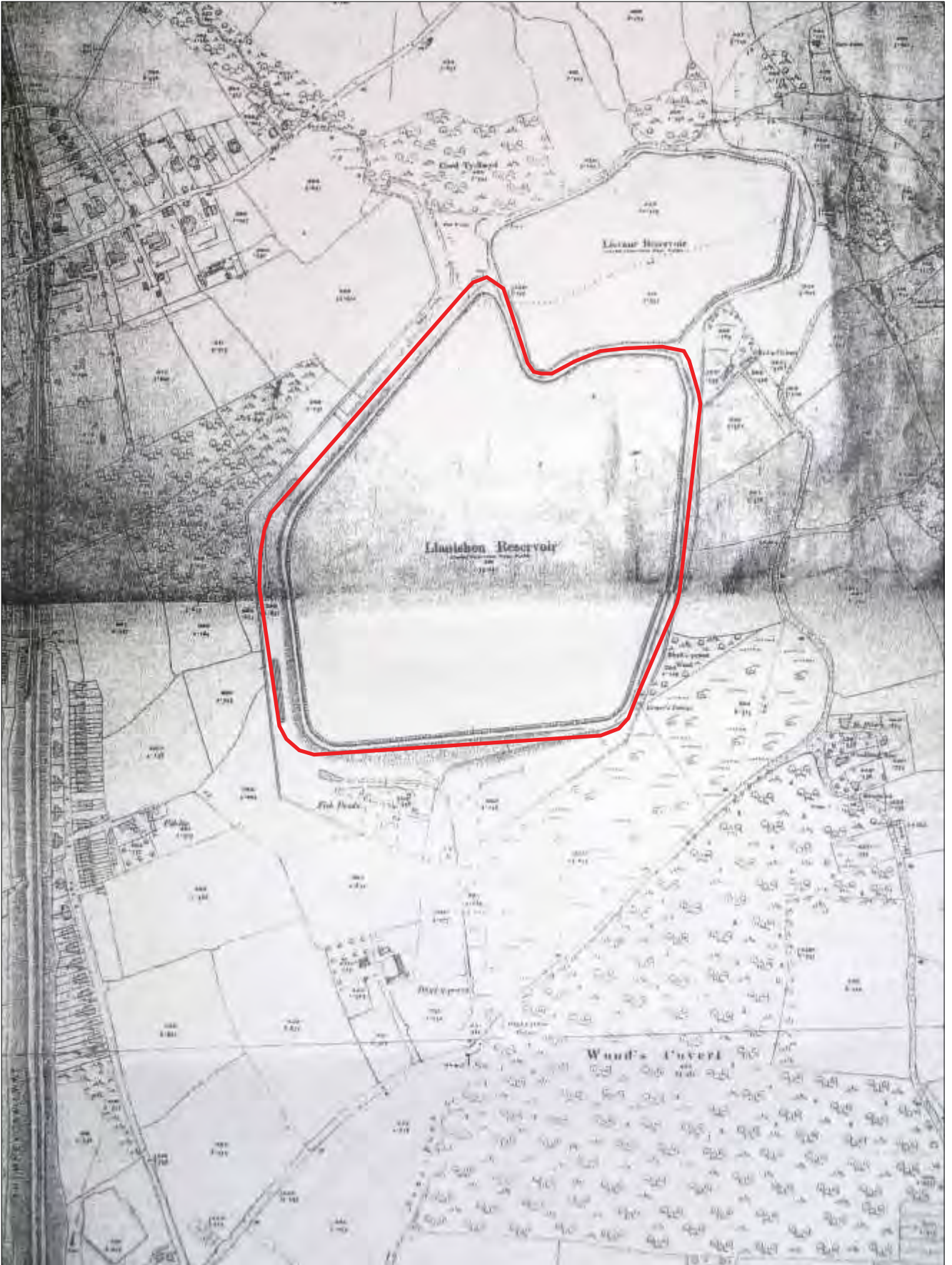


Appendix 4.8: 1884 - revision of outlet valve shaft design



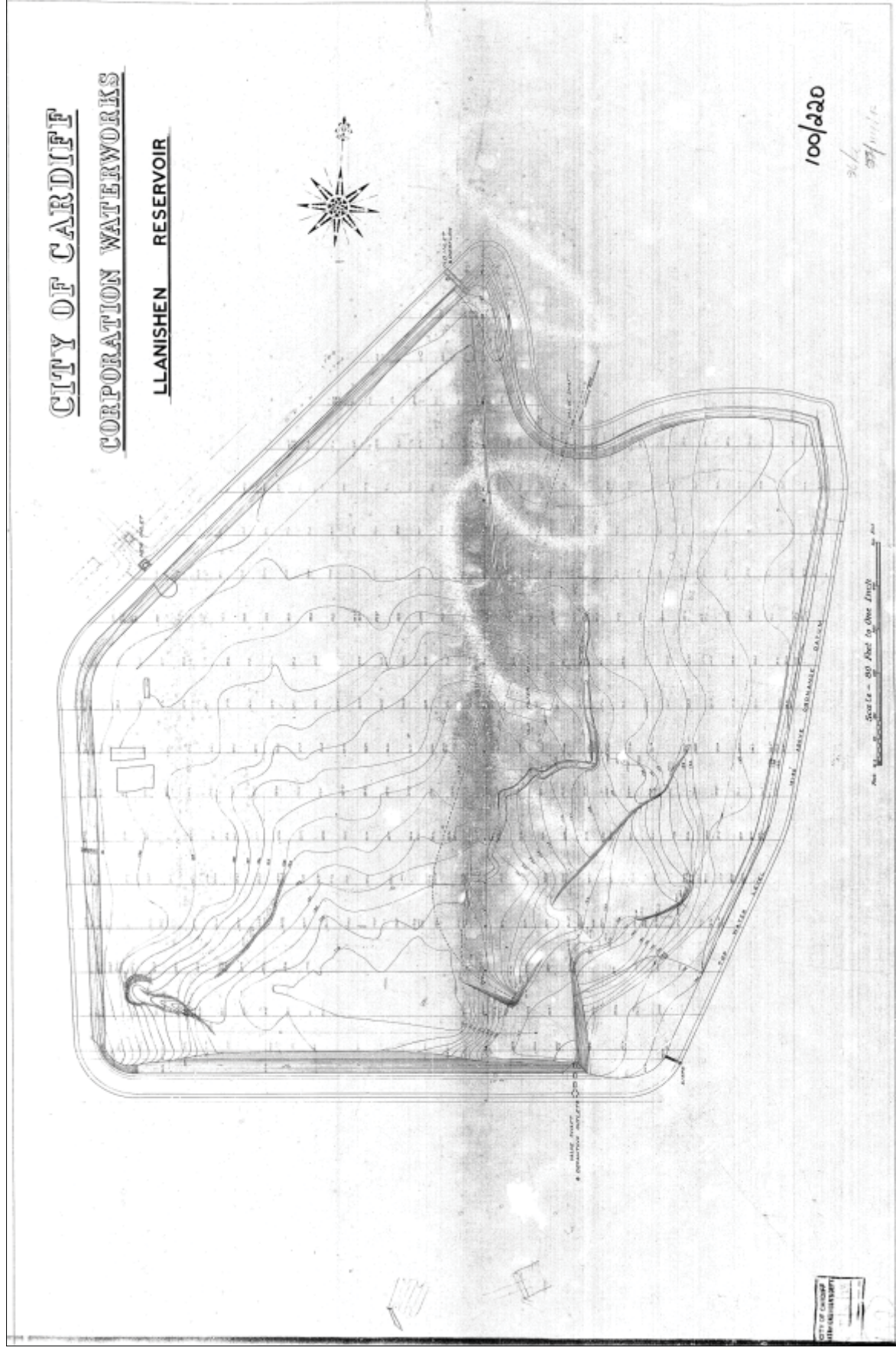
NOTE: Red line in this Technical Appendix indicates the line of embankment for Llanishen Reservoir only.

Appendix 4.9: 1900 Ordnance Survey map

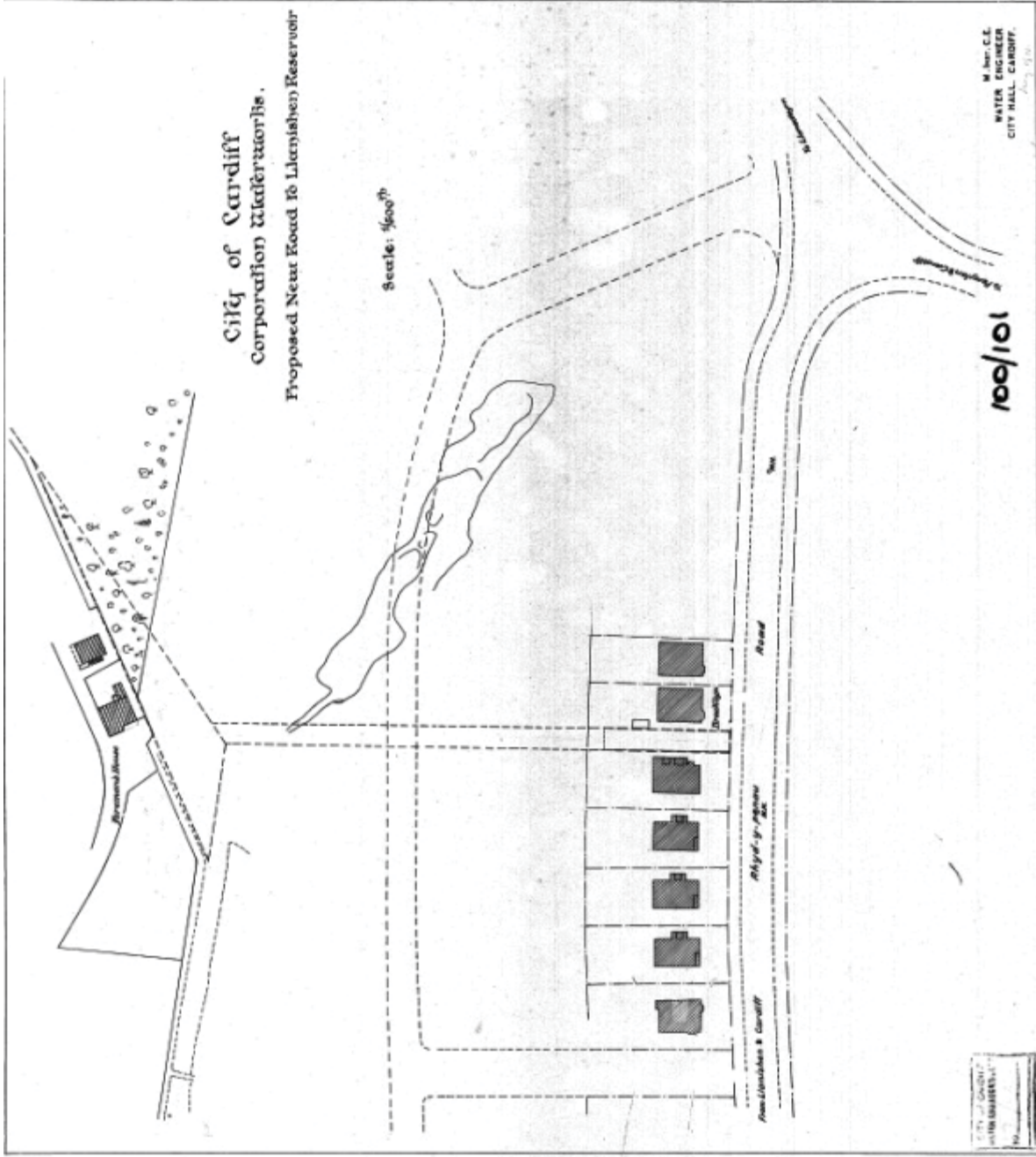


NOTE: Red line in this Technical Appendix indicates the line of embankment for Llanishen Reservoir only.

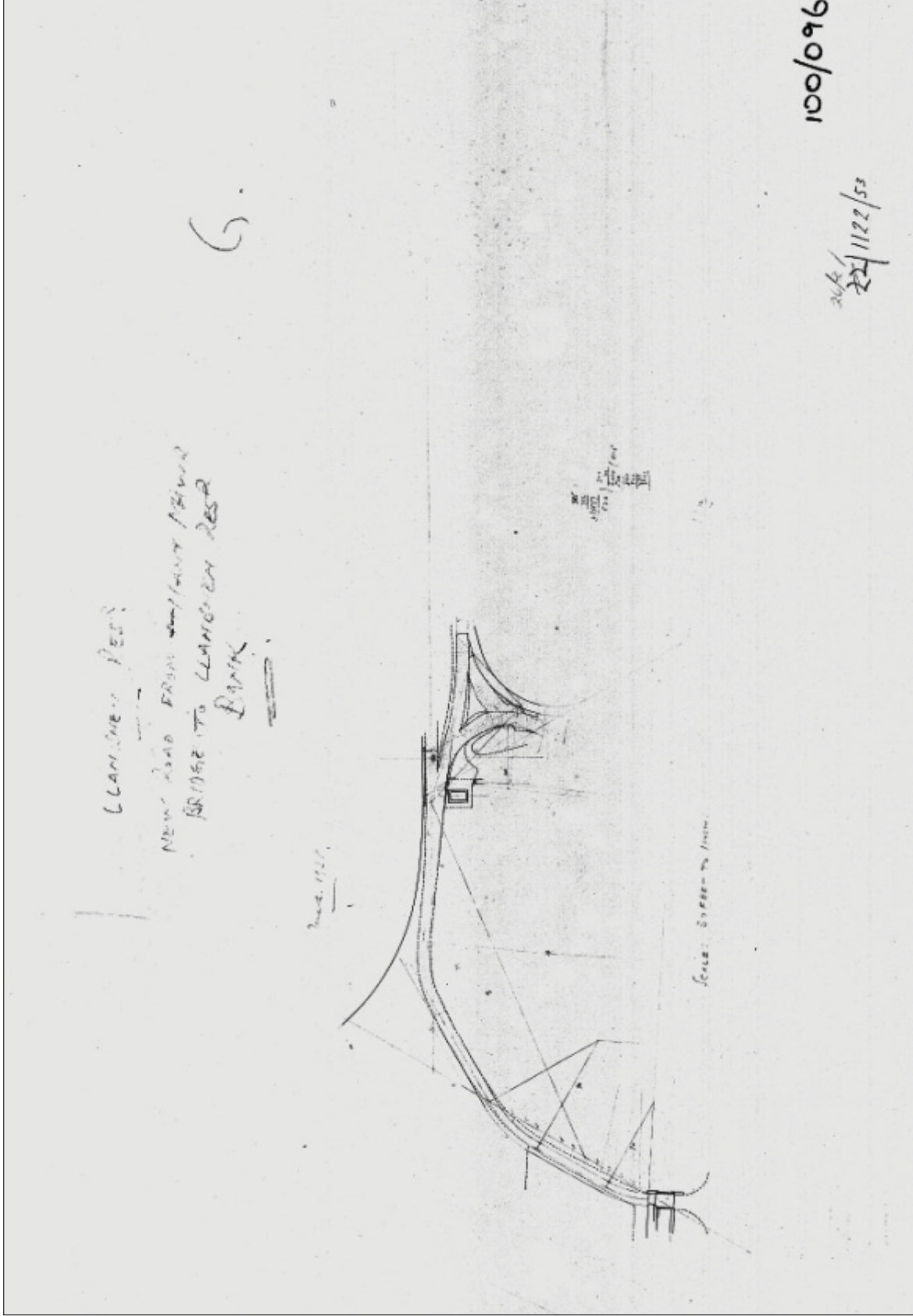
Appendix 4.10: 1920 Ordnance Survey map



Appendix 4.1.1: c.1930s plan showing new inlet and screening chamber



Appendix 4.12: 1932 plan showing new access road from Rhyd-y-penau Road

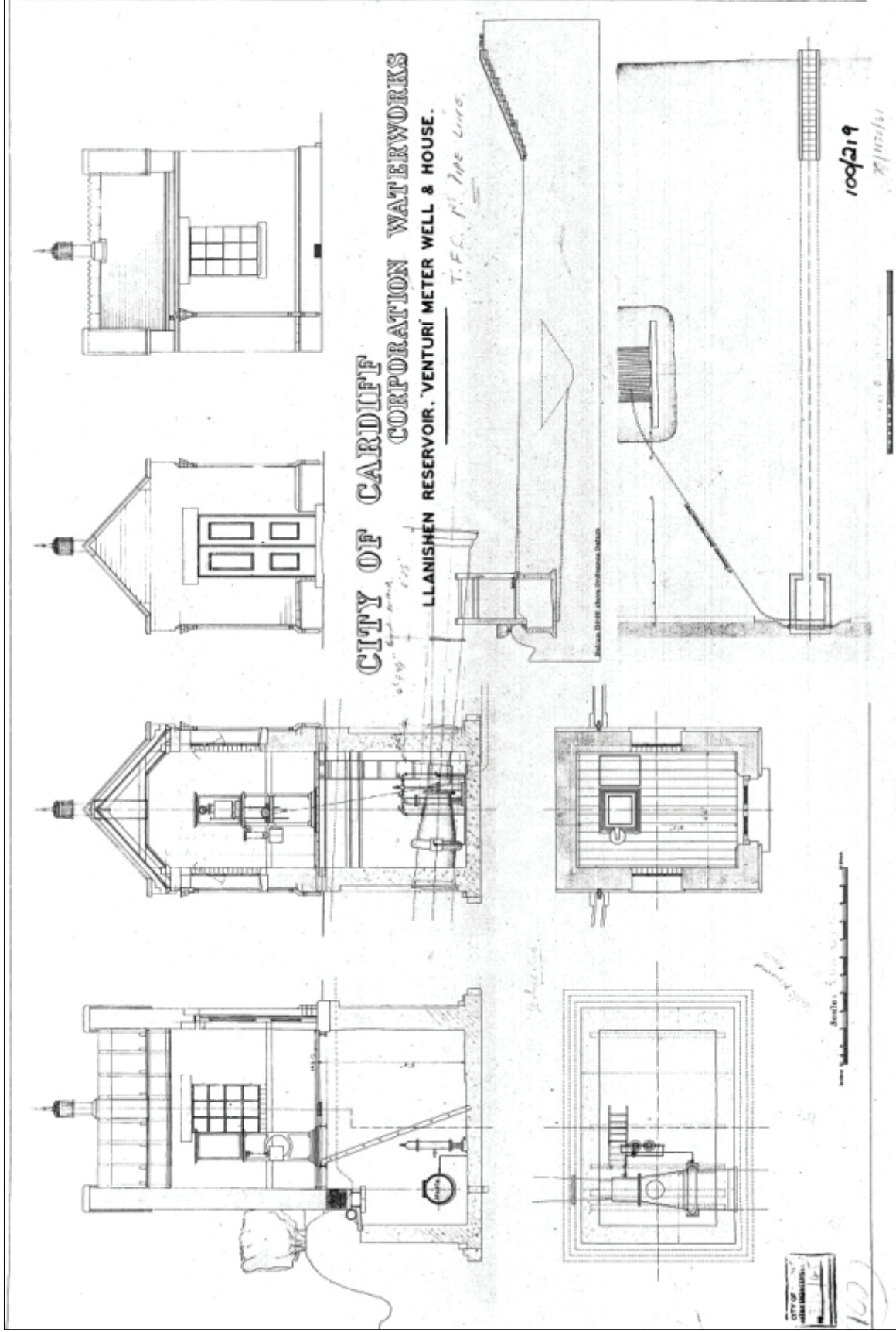


Appendix 4.13: 1935 plan showing new access road and bridge across the Nant Mawr to the northwest of the site



NOTE: Red line in this Technical Appendix indicates the line of embankment for Llanishen Reservoir only.

Appendix 4.14: 1946 Ordnance Survey map



Appendix 4.15: 1948 Venturi meter well and house

Appendix 5: Photographs



Appendix 4.1: Llanishen Reservoir from the west



Appendix 4.2: Llanishen Reservoir from the southeast



Appendix 5.3: General view of the stone facing to the inner slope of the northern embankment



Appendix 5.4: Detail of original inflow, spillway and overflow, view to the west



Appendix 4.5: Detail of valve gauges over original valve shaft, view to the north



Appendix 4.6: Three tier decanting culverts in southern embankment, view to the southeast



Appendix 4.7: Southern opening of the Nant Mawr discharge culvert



Appendix 5.8: Confluence of the Bye Channel (left) and the Nant Mawr discharge culvert



Appendix 4.9: c.1920s inflow tank, view to the southeast



Appendix 4.10: 29" inlet pipe, view to the north



Appendix 5.11: 1930s inlet showing Cipoletti Weir and rudimentary spillway protection



Appendix 5.12: Entrance to scouring culvert, view to the east



Appendix 5.13: Western edge of raised platform in the southeast corner, view to the north



Appendix 5.14: Former Venturi meter well house, view to the northwest



Appendix 5.15: Damaged facing and kerb around concrete jetty and boat slipway, view to the north



Appendix 5.16: Damaged upper kerb adjacent to the inserted access ramp



Appendix 5.17: Hole in stone embankment facing, view to the northeast



Appendix 5.18: Concrete patch to stone embankment facing, view to the northwest



Appendix 5.19: Inserted concrete cased inflow pipe, view to the north



Appendix 5.20: Incised water level markers on original stairs, view to the east



Appendix 5.21: Bye Channel showing stone weirs, view to the west



Appendix 5.22: Preserved tree stumps, view to the southwest



Appendix 5.23: Nant Mawr channel, view to the north



Appendix 5.24: Brick lined former filtering bed, view to the southeast



Appendix 5.25: Brick floor surface adjacent to the Nant Mawr channel, view to the south



Appendix 5.26: Infilled cut feature close to the former filtering beds, view to the northwest



Appendix 2: Llanishen Reservoir Dam List Description

Llanishen Reservoir Dam

Listed Building Reference: 87591

Co-ordinates: 318632,181463

Grade: II

Locality: Llanishen

Date Listed: 24/07/2009

Council: Cardiff

Date Amended: 24/07/2009

National Park: No

Location

To the east of Llanishen, accessed via a track running SE from the B4562, some 0.5km east of Llanishen station.

History

Llanishen Reservoir forms part of the nineteenth century water-supply system for Cardiff. Supply was first in the hands of a private waterworks company who constructed a reservoir at Lisvane in the 1860s, but the Cardiff Borough Council assumed responsibility for the growing town's water supply in 1878, and commissioned a survey by its own engineer, John Avery Williams, to identify a suitable and sufficient water supply for the town. His report was presented in 1881, and the Taff Fawr scheme was the option favoured by the council. Early plans for Llanishen reservoir (also by J.A.Williams) pre-dated adoption of the scheme, but construction went ahead on the basis that it would be an integral part of it, as a storage reservoir receiving water impounded in the upper Taff valley. Llanishen was the first of the four reservoirs which comprised the scheme to be built, and construction began in 1884. It served as the primary source of water for Cardiff during construction of the Taff Fawr reservoirs, then began receiving water from the first of these in 1891.

Interior

Exterior

The flat lowland site of the Llanishen reservoir necessitated a continuous encircling dam, enclosing an area of 238,000 square metres, almost a mile in length. Like the other reservoir dams of the scheme (Cantref, Beacons and Llwyn Onn), it uses a clay core and mass earth bund construction with sloping embankments. The inner embankment is faced in pitched stone, and the other embankment is turfed. The inlet gauge chamber from the Taff Fawr and the outflow control valve platform are faced in rusticated ashlar with heavily dressed plinths, string courses and copings. Similar dressed stone is used on



the Nant Fawr by wash channel and spillway, the culvert exits, the stepped weir and scour tunnel exit.

Reason for Listing

Listed as an integral part of the nineteenth century water-supply system for Cardiff. Together with structures associated with the impounding reservoirs in the upper Taff, the Llanishen Reservoir represents a major Welsh civic engineering scheme which has survived virtually intact.