

2. AN OLD ICE-HOUSE IN MIDLOTHIAN.

In 1929, when it produced the *Inventory of the Ancient Monuments of Midlothian and West Lothian*, the Royal Commission on the Ancient Monuments of Scotland was limited by a terminal date of 1707, and structures of the later eighteenth century could consequently not be included. This limitation having now been modified, the Commissioners have decided to publish a description of an interesting old ice-house which survives in the grounds of the Moredun Institute (Animal Diseases Research Station), Gilmerton. The following notes have accordingly been prepared for the *Proceedings* on their instructions.

The Commissioners are indebted to Dr J. Russell Greig, Director of the Moredun Institute, for having drawn their attention to the ice-house before its entrance was built up as a measure of security.

The ice-house is situated about 275 yards west-south-west of the Institute, on land formerly belonging to the estate of Moredun, earlier known as Goodtrees. It has been sunk into the top of the steeply sloping east bank of that part of the Burdiehouse Burn which is locally called Moredun Burn, some 80 yards north of the bridge on the road to Hyvots Bank Farm; this site providing ready drainage, as only a short length of drain was needed to reach an outlet on the slope above the burn. In its construction a hole, sufficiently large and deep to contain the structure, was excavated in the bank; and inside this the ice-house was built in the form of an inverted and truncated cone crowned with a domical roof and having at its bottom, below the level of the truncation, a shallow pit (fig. 1). After the completion of the structure the excavated earth was replaced, for insulation, covering the top of the dome; and further protection from the sun would have been obtained if the site was planted with trees, as it is at present.

Access to the interior is gained by a short double-doored passage leading horizontally into the bank and having its floor level with the springing of the dome. The front of the entrance-passage is constructed of dressed masonry, and is finished on top by a flat coping which projects 3 inches from the face and is wrought on its outer edge with a small cavetto and fillet. Here the short length of the side walls exposed outside the mound shows a thickness of 1 foot 3 inches, but the thickness of the rest of the walling of the passage and that of the chamber is not ascertainable.

The entrance-passage, which is slightly decentred from the axis of the chamber, averages $7\frac{1}{2}$ feet in length, $3\frac{1}{2}$ feet in width, and is $6\frac{1}{2}$ feet in height to the crown of a segmentally-arched roof of brick. A door has been provided at either end,

and at the entrance there is a step-down of 9 inches to the main floor, which ends abruptly on the rim of the deep ice-chamber.

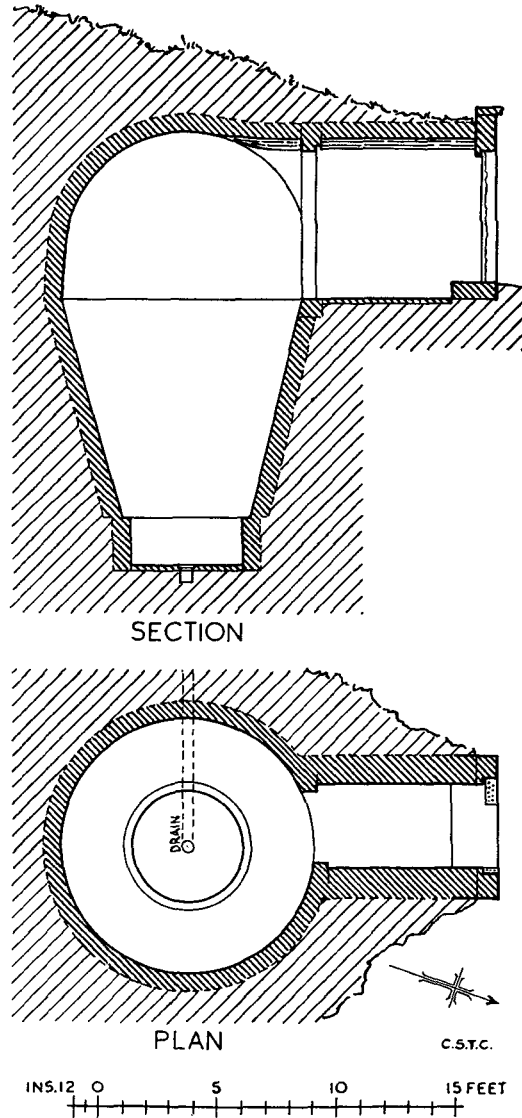


Fig. 1. The old ice-house at the Moredun Institute, Gilmerton.

The doors have been contained within a stone framework of giblet-checked rybats and lintels and have been hung on crook-and-band hinges, as is shown by the crook still existing in the northern check of the inner opening. The outer doorway is contracted by a comparatively modern rubble infilling. Elsewhere the walls of passage and chamber are of brick construction, and it is impossible

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to say whether or not they are double, containing an air-space, as seems to have been commonly done for the sake of improved insulation.

The dome of the chamber rises 7 feet above the springing level. The conical portion below tapers from an extreme diameter there of $10\frac{1}{2}$ feet to one of 5 feet 4 inches in a vertical depth of 9 feet. Here a scarcement 4 inches in width further contracts the diameter of the cylindrical pit to 4 feet 8 inches, the depth of the pit being 2 feet. The total height of the whole structure is thus 18 feet. In the bottom a closed stone-built drain, approximately 7 inches square and covered at its inlet in the centre of the floor by a circular grating, runs out west-south-westwards, presumably to discharge on the face of the bank above the burn.

The method of using an ice-house of this type was apparently as follows.¹ On the scarcement was placed a slatted floor covered with straw or heather, through which water from the melting ice above could seep down and escape through the drain. The pit below would thus have provided an insulating air-pocket, and drainage was an important feature as water accumulating here would have acted as a conductor of heat. On the floor ice or snow was piled, well pounded and packed, to the height of the entrance-passage, and a layer of straw or reeds was inserted, for further insulation, between it and the walls of the chamber. The whole mass was finally made more compact by throwing water over it; and the process was completed by the provision, on top of the ice, of a floor of loosely laid boards covered with about 6 inches of tan, sawdust or straw. The floor being thus on a level with the entrance-passage, the domed portion remained free to serve as the cold-storage chamber. It is said that an ice-house prepared in this way could be kept in use for a year.

It is interesting to know that ice-houses for "the storing of ice for ice-creams, etc." were much in vogue at the end of the eighteenth century. This may be inferred from the extracts of the minutes of the Edinburgh Town Council recorded in the late Mr C. B. Boog-Watson's MSS. preserved in the Edinburgh Public Library, from which the following examples are taken.² (a) Tack to Wm. Trotter mt. [merchant]; piece of ground for the erection of an ice house for storing ice for ice creams etc. at North Lochside . . . according to plan 23 feet by 19 feet. Feu 1/- yearly. (9/11/1768.) (b) Steele and Finch, confectioners, allowed to build an ice-house on N.S. [north side] Caltonhill, 24 feet by 18 feet. (7/11/1770). (c) George Montgomery, grocer, Princes Street, craves leave to build an ice-house at the foot of Calton Hill, near that of Steele and Finch and of the same size. Allowed. 2/6 yearly rent. On the road to Greenside. (d) For John Dunn, part of lands of High Riggs, of common property of the road leading from Mr. Moncrieff's ice-house, etc. (11/8/1790.) (e) £40 granted to Trotter and Maxton, confectioners, North Bridge, towards building a new ice-house in place of one at the Mound. . . . (13/2/1793.) (f) Valuation of ice-house and rabbit-house at Bellevue, viz. £25 and £20 respectively. (4/11/1807.)

The ice-house that has just been described has a somewhat late appearance, and is presumably no older than the period of the foregoing Town Council minutes.

Goodtrees Estate was in possession of Sir James Stewart of Kirkfield and Coltness and his descendants from the middle of the seventeenth century until about the year 1755. It was then sold to Mr Mackenzie of Delvine, who occupied it for fourteen years. In 1769 it was purchased by Baron David Stewart Moncrieff, who changed the name to Moredun after the name of a hill on his father's estate,

¹ Cf. Thomson's *Gardener's Assistant*, ed. Thomas Moore, 1881 (Blackie & Son), pp. 533-5.

² Vol. 12, pp. 42, 43.

the Barony of Moncrieff, in the county of Perth.¹ In all probability it was during his proprietorship, which lasted throughout the closing years of the eighteenth century, that the Moredun ice-house was erected.

C. S. T. CALDER.
A. GRAHAM.