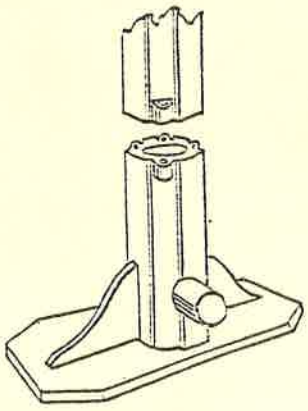
95/2

Stanhope Properties

Oxford Rewley Road (L.M.S.) Station
Investigation of foundation structure

THE COLUMNS.

The iron columns are from designs by Sir Charles Barry; and consist of four raised fillets upon a circular column, and although of great strength have a remarkably light and elegant appearance. The columns and their bases are cast in separate pieces of from 15 to 24 feet in length, for the obvious convenience of casting, and the lower joint of the column is a short length of 3 or 4 feet, according to the level of the ground, with the base plate attached. This fitted, and the accuracy of the level again tested, the superior column was fixed on it; havnig accurately set up the base and bottom joint, or socket, as it may be termed, the lower columns, 18 fee. 8 inches high, are fixed upon them bybolts and nuts; then a con-



Oxford Archaeological Unit
April 1995

The Oxford Rewley Road (L.M.S.) Station

Investigation of foundation structure

1. Introduction

At the request of Railtrack and Stanhope Properties, an investigation was carried out on the foundations of this 1851 Grade II* listed structure of Fox, Henderson & Co..

As is well known, the former railway terminus is a pre-fabricated structure of cast-iron modules with timber infill panels. No information was available concerning the composition or arrangement of the foundations and in order to determine whether they were the same as those shown on published drawings of the Crystal Palace, trial excavations were carried out between the 27th and 28th of March, 1995.

2. Geology

Several trial trenches were cut, as shown on the plan at A, B, C, and D. At the depths excavated, no stratification was apparent, trench A being located in a zone of rubble and sand infill, consistent with its paved environs and excavations at B-D rapidly encountered disturbed grey and ochre coloured clays. These clays are consistent with those found during excavations on the site of the adjacent LMS coal yard, where it was found that the natural gravel deposits had been covered with a 1-2 metre layer of clay, probably during levelling preparatory to the laying-out of the station c.1850.

3. Columns

At each point investigated, the supporting columns were of identical composition:- Hollow cast-iron tubes (doubling as rainwater down-pipes) consisting of four raised fillets upon a circular column of approx. 8 inch (200mm) diameter. Each terminates in an integral cast flange 2⅜ (60mm) thick with four bolts, hidden by a cast-iron decorative base/cover moulding.

4. Foundations

4.1 *Trench A*: The column under investigation here is the one original support remaining of the porte-cochère. Prior to excavation the flange and foundation were completely hidden by a two part square base moulding with eliptic sides as shown. The lifting of a small broken concrete paving slab allowed a shallow excavation which revealed the flange, bolted (by four bolts with 1½ inch (38mm) square heads and nuts) to an identical flange on a round cast-iron foundation column of approx. 8 inch (200mm) diameter. This was followed downward to a depth of 350mm with no apparent variation.

4.2 *Trench B*: This column is in the core of the station itself and supports one of the primary transverse roof girders. It is located on the interface between the

stone paved passenger concourse and the western wing, which has a ventilated timber floor. Unlike the external columns, this one, as with the other internal columns, terminates in an octagonal eliptic decorative base/flange cover moulding. Fortunately, the floorboards adjacent to this column had rotted away and the void beneath was accessible.

It is apparent that the joists of the timber floor of the west wing are supported on engineering brindle/blue Staffordshire brick piers, whilst the perimeter of the concourse is supported on a wall of these same bricks, corbelled out at the top in the manner of railway platform edging. The column is supported on neither the wall nor pier, but instead is flanged, as at A, to a cast-iron foundation column. This was followed down into the clay to a depth of 1750mm below the flange and probing another 200mm revealed no change.

4.3 *Trench C*: This column again supports a primary roof girder, and is located in the present north wall of the Tyre Centre currently occupying the premises. It marks the original northern extent of the passenger concourse, beyond which were once located the buffer stops and platforms. The newer breeze block wall to the east (post-dating closure as a station) and the older engineering brick to the west, obscure most of this column in section. Excavation soon revealed the platform surface and a depression marking the site of the sole-plate of the platform side screens. The usual flange detail was also revealed however, with the top of the foundation column disappearing downwards into the brickwork of the platform. Further excavation only revealed more brickwork. It would appear that the brickwork to the west of the column, and that of the platform are of the same phase.

4.4 *Trench D*: This column is one of those incorporated into the walls of the wings of the building. The timber infill panels of these wings are supported on waist-high walls of engineering brick, the decorative base/flange cover sitting on a projecting plinth of the same brick. Excavation revealed only a narrowing of the brick plinth, however this would appear inconsistent with it being a load-bearing foundation, and it is possible that the usual foundation column is contained within.

5. Conclusion

Although some unexpected discoveries have been made, it is not certain what conclusions can be drawn. However, it seems that:

1) the visible columns are flanged and bolted to supporting hollow columns below ground which are plain cast-iron flanged pipes of approx. 200mm in diameter.

2) the foot of one of these had still not been reached 2000mm below internal floor level.

3) these foundation columns probably appear throughout the concourse area, and may be present in the wings, though this is yet to be proved.

4) these columns probably acted as rainwater downpipes and are connected to drains.

It may be speculated that:-

1) If, as seems likely, these columns acted as downpipes, unless each leads to its own separate soak-away, the foot of each should be at a similar depth (allowing for fall).

2) A storm drain or sewer should be present either integrally with, or adjacent to, a foundation for the columns, at some depth >2metres below the floor. It seems likely that there are substantial remains well below ground level, and further work may be needed to understand this aspect of the historic building.

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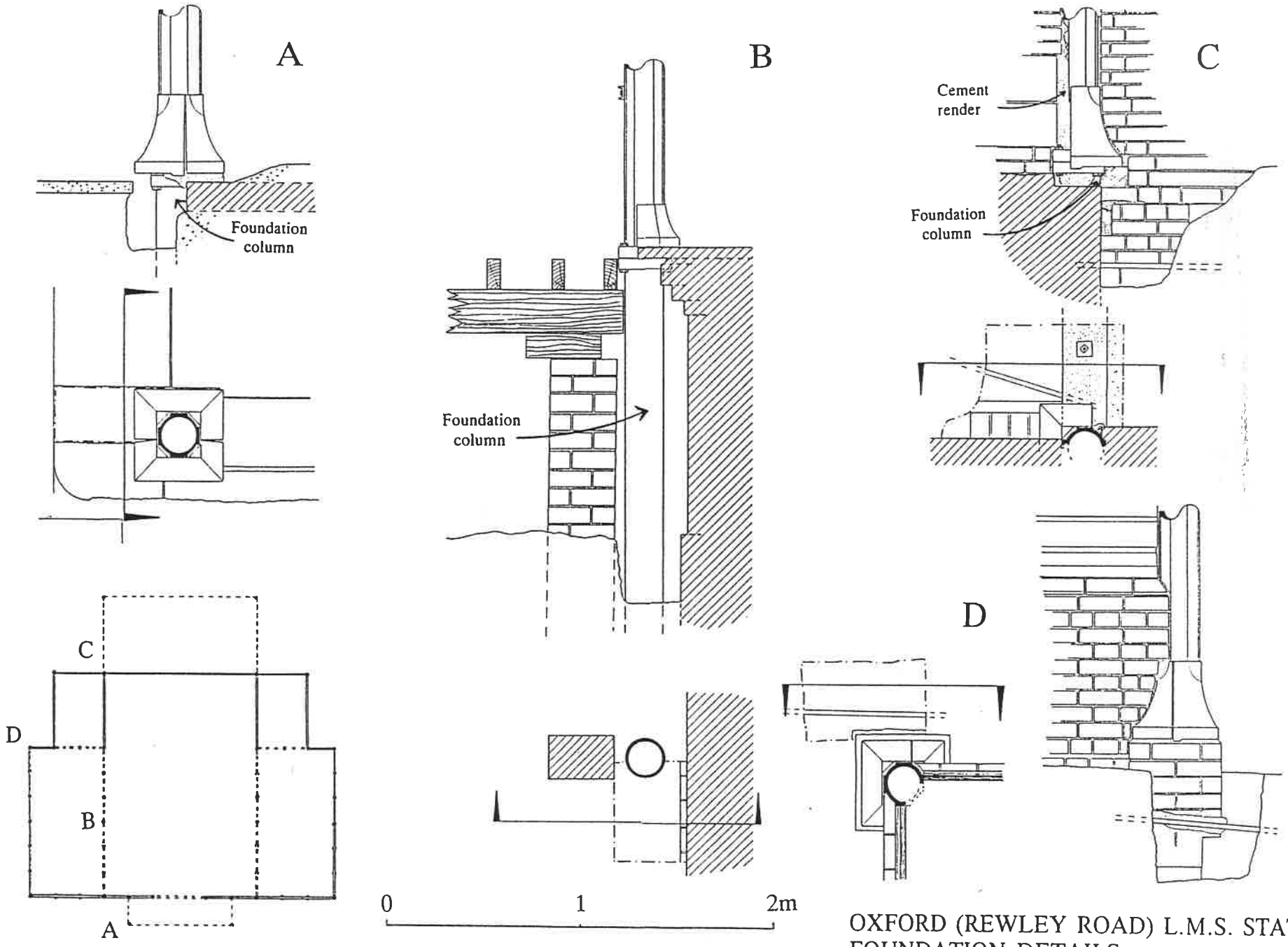

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