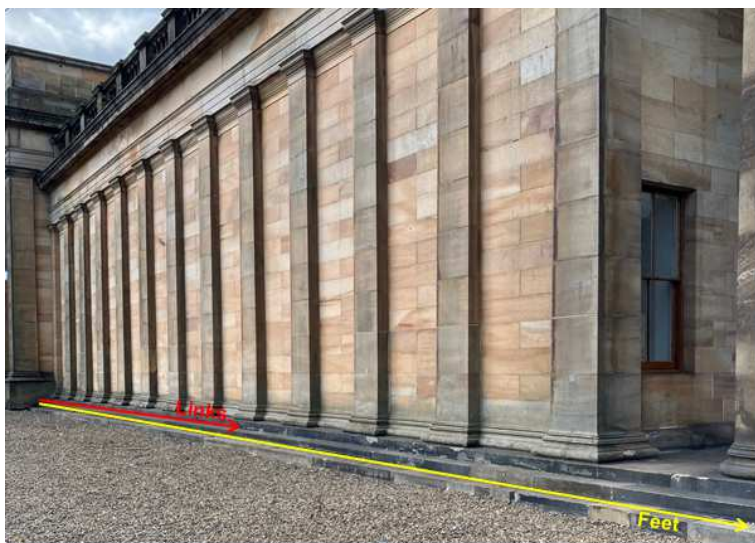


Calibration of Land Chains in Edinburgh

During the mid 1970s whilst working with Lothian Regional Council I was told by a civil engineering colleague that the base of the National Gallery of Scotland building in Edinburgh had plates embedded in the masonry to allow surveyors to calibrate the lengths of their land chains. These plates (presumed to be brass) may date back to the nineteenth century. On 28 May 2025, I visited the Gallery armed with a 100 ft Gunter's chain to record the current state of the plates.

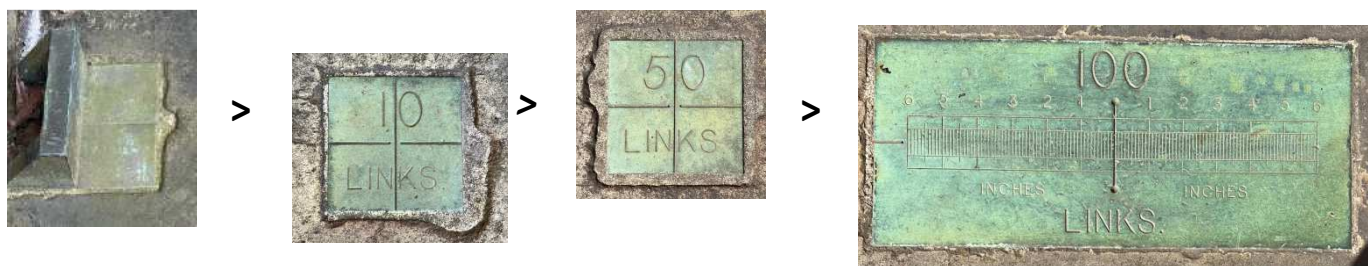
They are located on two steps of the stereobate below the stylobate at the north-east side of the building. On the higher step, the plates are set out in links to 100 and on the lower step they are set out in ft to 100. They are graduated from the centre of the side of the building running from left to right increasing in distance to the north-east corner (as shown in photograph above).

At the start there are plates on both steps with upstands to locate the tension handle of the chain. In the photograph on the right the tension handle for a 100 ft chain is shown in position.



Links

The links are graduated in units of 10 to 100 (see examples below). The 100 link marker shows 6 inches on either side of 100 link marker graduated in tenths of an inch presumably allow the calculation of a correction factor.



Feet

The feet are graduated in units of 1 ft to 10 ft and thereafter in units of 10 ft to 100 ft (see examples below). There is no 100 ft plate as it appears a replacement masonry block has been introduced there without replacing the plate. It may be that the 100 ft plate was similar to that for the links.



Because the chain was laid out without any tension and with some of the links being bent, it was measuring "short". Note the distinctive tags attached to the chain to assist users read the distance.

David McGuigan
28 May 2025