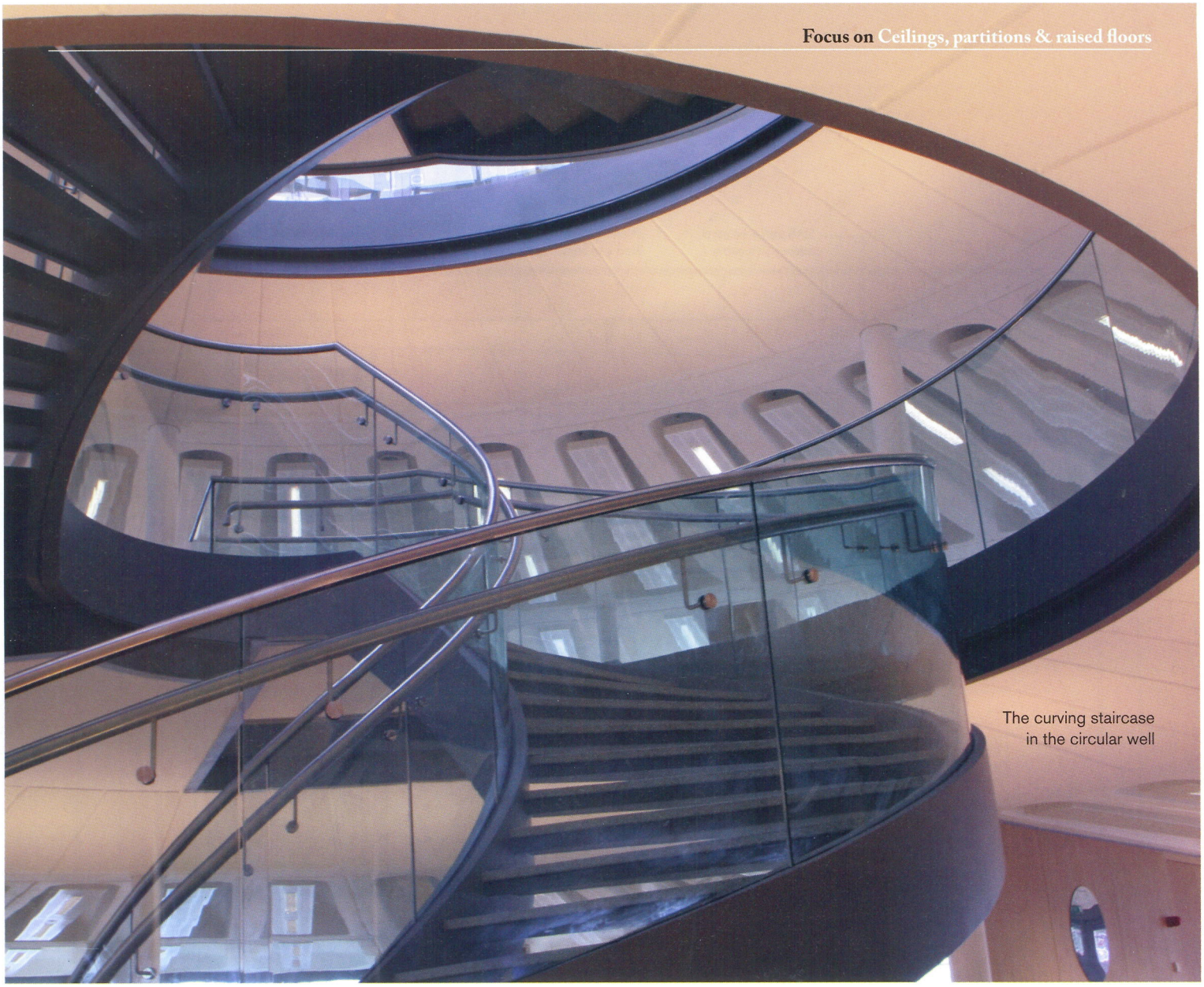


The curving staircase in the circular well

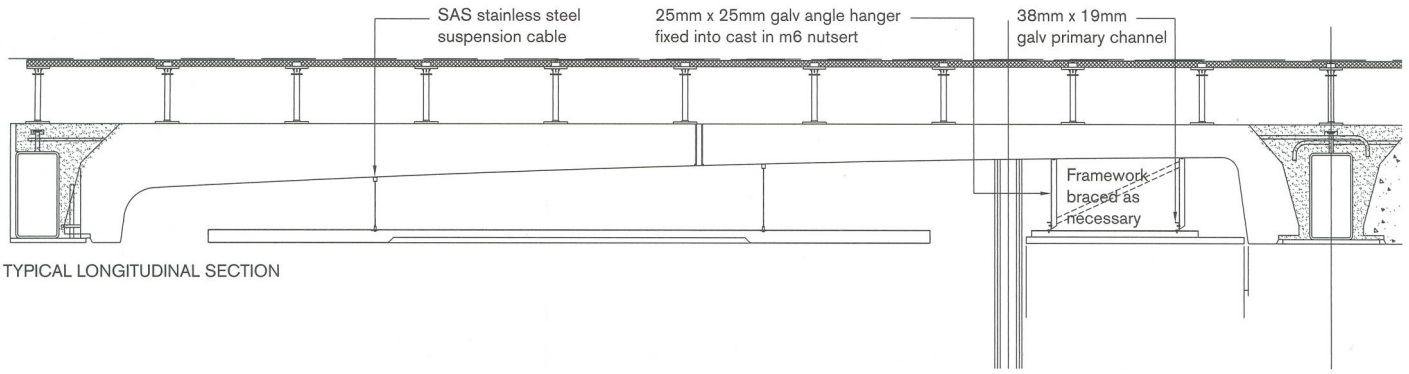
LIGHT THE WAY

Narrow acoustic lighting rafts reveal tapered coffers in the concrete ceiling of Scott Tallon Walker's office building on Ireland's east coast, says *Kaye Alexander*

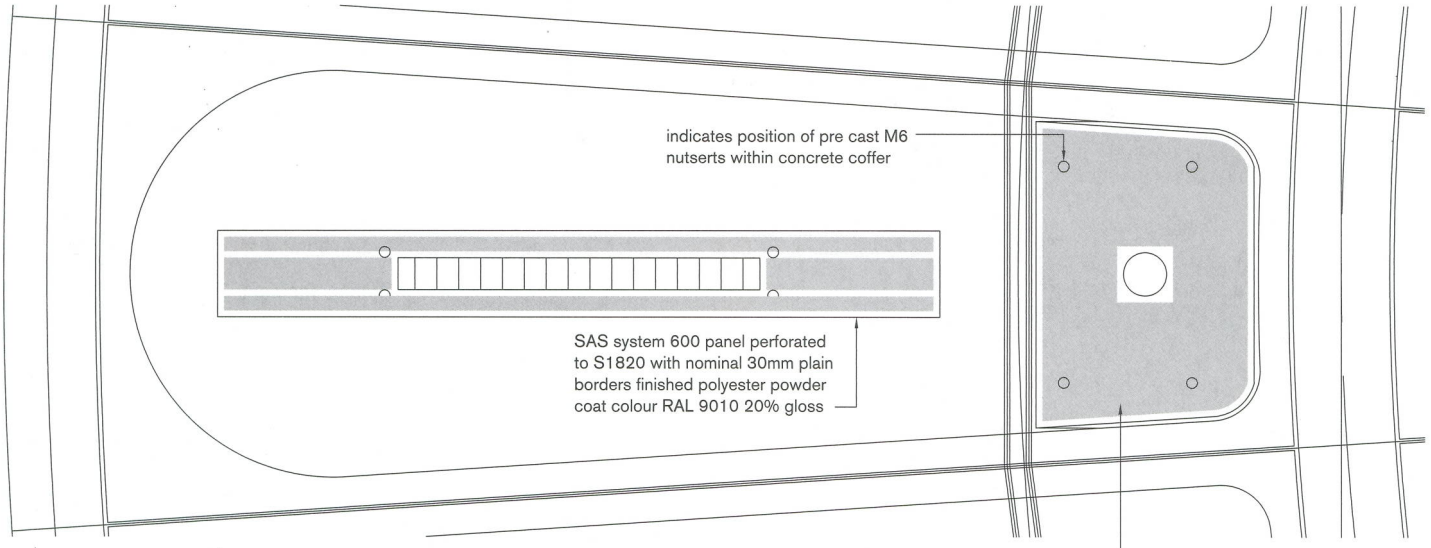
The circular form of Scott Tallon Walker Architects' new headquarters for the Commissioners of Irish Lights (CIL) was inspired by the client's role as the General Lighthouse Authority for all of the Republic of Ireland. The ethos of the organisation – to deploy modern technologies in providing aides to navigation and the marine industry – is also reflected in the architecture of the building, sited in Dun Laoghaire on the east coast of Ireland, just south of Dublin.

The open-plan, three-storey administration building is linked to a rectangular workshop structure and is lit naturally by a lantern in the centre of the building. Radial, tapered coffers in the concrete ceilings fan around this form, which house System 600 acoustic lighting rafts by SAS International (Enquiry 1600).

'The narrow System 600 panel was selected primarily to support the artificial lighting, >>



TYPICAL LONGITUDINAL SECTION



PART REFLECTED PLAN RAFT TYPE A

Acoustics in the space were a concern because of the concrete coffers

but the perforated raft promotes acoustic absorption on both sides as well,' says Cathal McGuinness of SAS, who has been involved with the project from an early stage. Acoustics in the space were a concern, because the concrete coffers could potentially reflect and reverberate sound within the depressions. However, this problem was easily solved the System 600 rafts, and the benefits of the strategy outweigh the complications.

The ceiling structure was chosen because the exposed soffit allows the thermal mass of the building to be exploited. Free air movement over the exposed surface means 25W/m^2 of cooling can be achieved while also reducing capital and installation costs. The narrow rafts were ideal because they maximise the exposed area of concrete and reveal the coffers as a feature.

The System 600 rafts are suspended on wires and, as the coffer sections were precast off-site, clear 20mm holes had to be cast in through which the wires could be strung and secured by a 50mm square washer. 'We wouldn't normally use this fixing method as it is exposed to tampering, but a 50mm screed was laid on top to give the ceiling integral structural strength, so they are effectively cast in,' says McGuinness.

The suspension wires are adjustable from below in a system developed with the architects especially for the project. ■