

The rest of the constructional work was concerned with extensive repairs to the auditorium front-of-house areas and dressing rooms.

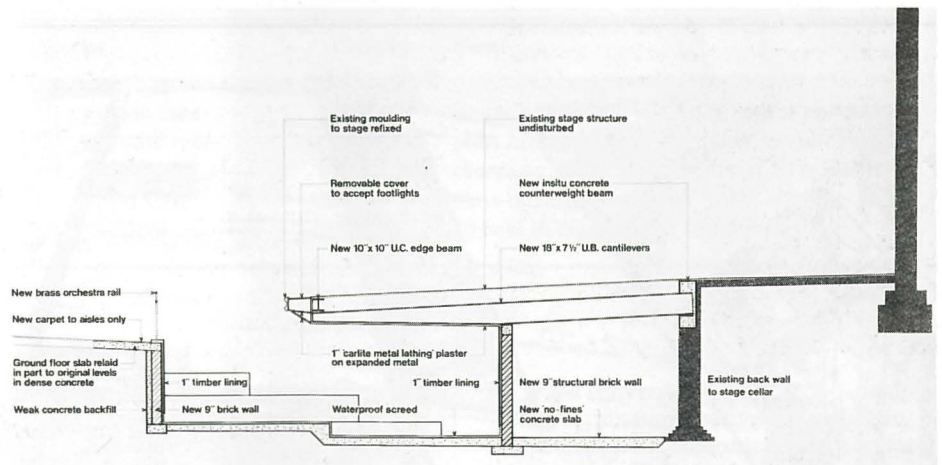
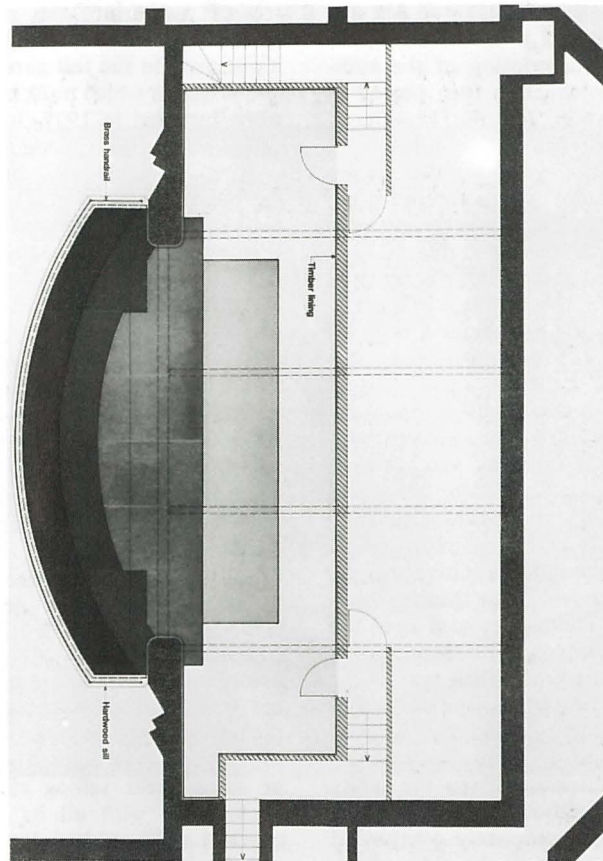
The whole of the electrical installation was renewed and in the auditorium new positions for modern stage lighting were introduced and appropriate decorative light fittings were reinstated throughout the building. On stage there is a choice of lighting controls, either the reconditioned Grand Master of the 1930's or the opportunity to connect into a portable modern memory system.

A new heating system was designed using the old radiators. The Cost Plan did not allow for any major mechanical ventilation in the auditorium so the original natural ventilation system was reinstated by restoring the gas fired sunburner in the centre of the dome. This was dismantled, cleaned, modified for North Sea gas and put back into service under the guidance of Brian Benn of Theatre Projects Consultants Ltd. and in the inspiration of Terence Rees author of 'Theatre Lighting in the Age of Gas'. It is now controlled by a modern electronic system from the restored projection box. A new mechanical ventilation system, with the necessary sound attenuation, was provided in the orchestra pit.

An appreciable amount of research was done in arriving at a scheme for the decorations, and restoration of the furnishings. There were many descriptions in the Technical Press of 1903 which describe the house as being in cream, gold and blue, and with more detailed descriptions in the Local Press of striped seating coverings and blue silk curtains to the boxes. A real breakthrough, however, was the discovery in one of the boxes of a pale grey-blue carpet, with a darker blue classical motif which fitted descriptions given by local people who still remember the house when it was first opened. This carpet proved to have been made by a firm in Brighouse who undertook to weave a new carpet to the identical colour and pattern on an old loom of 1907.

All the seating, apart from the fixed gallery benches, was removed and either replaced with restored seats of the period or with the removed seats restored and recovered. The seats were covered with a velvet fabric, chosen to match the dark blue of the carpet. Existing brasswork was restored where possible but a new brass orchestra rail was designed together with new brass restor rails at the ends of the aisles and gangways. The existing tabs were vacuum cleaned in position and fit quite well with the new colour scheme. In the foyer, the ceiling pictures were cleaned and old wallpaper removed to expose the original white marble of the walls and staircase. Pale blue wallpaper was used in the panels which had originally been covered in pale blue silk.

Matcham was no purist where architectural style was concerned and juxtaposed classical and art nouveau forms with enormous confidence and panache. All the stained glass panels and windows were restored and their combination with classical forms can be seen in the upper circle and dress circle bar. Although in a



## PLAN & SECTION OF NEW ORCHESTRA PIT

somewhat sorry state, the original 'Mackintosh' like sofas in the upper circle saloon have been retained.

Acoustic measurements taken in October 1977 indicated a powerful direct sound with a very good distribution throughout the house. For such a small intimate compact auditorium, the reverberation time of 1.1 secs. is quite high. The restoration of the auditorium attempted to keep this to a maximum by limiting the carpet to the aisles and using a weave with an absorbency coefficient of only 0.2. The big challenge was to produce a pit which would provide a natural balance between the stage and the pit sound and, at the same time, provide a comfortable acoustic for the orchestra,

especially those under the stage. As yet, no measurements have been taken but conductor, orchestral players, singers and audience seem impressed with the acoustic performance of the house. In wandering around the Opera House during the second performance of Lucia the sound was powerful, even and clear, but perhaps the violins could have done with a little more shine.

The author is a partner of Arup Associates responsible for the reconstruction and restoration of the Buxton Opera House.

*A technical note on the back-stage areas by Iain Mackintosh of Theatre Projects Consultants Limited appears overleaf. — (Ed.)*