In January 1982, the Department of Antiquities of Jordan invited the directors of various archaeological institutions who had worked or were working in Jordan, to contribute professional teams to the Jerash International Project.

Since the occupation by Israel in 1967 of the West Bank Holy sites, including the old city of Jerusalem, the Roman city of Jerash had become the second most important archaeological site (after Petra) in touristic terms, for Jordan's economy.

It was therefore felt necessary by the Jordanian Government to make a concerted effort to fully document the site, clear and excavate where necessary, and most importantly, consolidate the standing ruins, with the aim of fulfilling Jerash's potential as an international tourist destination.

The author, as architect for the combined Australian, British and American teams, worked on the north theatre at Jerash for the first year of the project. The Australian team was led by Alan Walmsley, the British by Julian Bowsher, and the American by Vincent Clark.

The north theatre (168-230 AD) is one of three Roman theatres at Jerash, the others being the earlier and considerably larger south theatre adjacent to the Zeus temple, and the later, much smaller theatre at the Birketain springs.

The north theatre is located just south of the north decumanus, west of the north tetrapylon. It is oriented with its diameter and the north wall of the stage building parallel to the north decumanus, which widens out to form a small piazza to the north of the theatre. (Refer to glossary of terms.)

Between the north wall of the stage building and the piazza there is a portico of which the engaged columns at each end and the first column from the east are still standing. When work began, the lower cavea of the auditorium was almost completely buried, as was the stage and most of the stage building.

Previous work on the theatre comprised a report by G. Schumacher published in Zeitschrift der Deutschen Palastina Vereins, Vol XXV, 1902, in which he gave a plan and section of the theatre; and some clearance and consolidation work carried out by G. Horsefield in 1925. Schumacher's plan is puzzling, as it indicates ten scalaria in the lower cavea and shows the piazza to the north of the theatre as being completely walled off from the street.

Horsefield's work was designed to make the structure safe, and included the wall and pier constructed in masonry and concrete across the internal passage just east of the central vomitorium (Figure 1), and the blocking up of the next vomitorium to the east.

The first step for the new project was to fully document the extant structure, including recording the positions of all the fallen stones. A full measured survey of the theatre was carried out, together with a photographic survey and a detailed structural report of necessary repair and consolidation work. It was necessary to excavate in certain areas in order to understand the building, its sequence of construction and the history of its occupation, before general clearing could take place. The British team excavated the external vomitoria, internal passage and paradoi, the Americans excavated the stage and stage building and established the level of the orchestra, and the Australians, who
were already working on the north tetrapylon and north decumanus, excavated the portico area. By the time general clearing began, it was possible to make the following observations about the theatre.

The upper cavea of eight rows of seating is divided into eight cunei by seven scalaria. No trace remains of the two further scalaria which probably existed at the extreme east and west ends of the upper cavea (Figure 2). The lower cavea has fourteen rows of seats (Schumacher showed only eight), divided into four cunei by five scalaria.

The praecinctio is marked by a vertical wall 2.74 metres high to the top of the cornice, punctuated by twelve shell-headed niches in groups of threes between five vomitoria. The central niche of each three is semi-circular in plan, those either side are rectangular. Dowel holes in the praecinctio sill (Figure 3), opposite the small pilasters either side of the niches, and a corresponding hole in the soffit of one of the in-situ cornice blocks indicate that small columns once existed all around the praecinctio. Fragments of small columns were found during later clearing.

Inscriptions found in the auditorium and portico areas indicated that there were two phases of construction of the theatre. One found in the auditorium indicates that the theatre was built as an odeion, and ties in with one over the central doorway in the north wall of the stage building which establishes its date as 168 A.D.

A number of inscriptions carved in various places on the seat stones of the lower cavea (Figure 4), have been interpreted as denoting the names of various municipal groupings, indicating that the odeion perhaps doubled as a council chamber at that time.

Figure 1: Horsefield's pier at external vomitorium No. 5.
Figure 2: Jerash North Theatre, plan.

Jerash North Theatre
Plan at 1:200. SMB.
0 1 2 3 4 5 10m

Historic Environment, 1V, 4 (1985)
Other inscriptions found in the portico area form part of the one on the standing portico architrave and can be dated to 230 A.D.

Several factors in the construction of the auditorium indicate that it was built in two stages and had some alterations made to its original form. It is possible that the additions and alterations were made at the time of the later inscription.

It appears that the theatre in its original function as an odeion existed only to the height of the top of the praecinctio cornice, and that the upper cavea and internal vaulted passage which supports it were added later. A significant point about the design of the theatre which reinforces this theory is the nature of the praecinctio. In fact, the top row of seats of the lower cavea acts as the curved cross-aisle or diazoma, in lieu of a specific zone (Figure 5). It can be seen in other theatres which have a praecinctio, such as the theatre at Amman, and the south theatre at Jerash, that the cross-aisle width approximately equals the height of the praecinctio wall, so as to fulfill Vitruvius's rule that a line drawn from the lowest to the highest seat will touch all the top edges and angles of all the seats, thus allowing clear passage for the voice.(1) At the north theatre this is not the case. The praecinctio wall is unusually high, due to the need for head clearance through the doorways of the internal vomitoria, and the thickness of the lintels. Such an elaborate praecinctio wall of niches and columns is unlikely, and it seems much more probable that this was designed originally as the finish to the top of the odeion.

The extreme west vomitorium is almost complete, with lintel and architraves still in place. Steps lead up from just inside the doorway to the south to vie access to the upper cavea. As this is the western-
most vomitorium there are no steps on the other side of the doorway to the north, and this is mirrored in the extreme eastern vomitorium. The intermediate three vomitoria however have steps leading up either side.

The five internal vomitoria give access to a passage varying in width from 2.3 metres to 2.7 metres running right around the theatre beneath the upper cavea. This passage is approximately at praecinctio sill level from the west around to the internal south-east vomitorium when it then slopes down to pass beneath the vault of the parados. There is no visible evidence of a second floor level at this end of the passage. Excavation has shown that steps began to descend from about one metre north of internal vomitorium no. 2 (elements are numbered on the plan from east to west). However this means that external vomitorium no. 2, occurring halfway along this descent and with its sill level, was not accessible from the passage. The internal passage in fact descended to the floor level in the parados and continued on towards the street which runs parallel to the diameter of the theatre to its north—the north decumanus. The passage is closed off above the vaulted entrance to the parados by a masonry wall 1.4 metres thick. This extends up above the floor level in internal vomitorium no. 1, blocking it and therefore making this a blind doorway in the second phase of the theatre.

Three external vomitoria give access to the internal passage around the western half of the theatre. The passage ends at a blank wall three metres north of the western-most internal vomitorium. Adjacent to the vomitorium is a small compartment approximately three metres by one and a half metres, in which it can be seen that the north wall of the vomitorium has been rebuilt on its north face and is supported on a relieving arch spanning the parados vault beneath. This can be seen as a further indication that the upper cavea is a later addition.

The west parados gives access both to the stage and the orchestra from a passage to the north which may also have extended to the street north of the portico area. However whereas the passage north of the east parados continues the alignment of the internal passage, here it is set to the east.

Excavation in the internal passage, east of the central vomitorium showed foundation walls on a slightly different curvature alignment than the walls above. Again this may be another indication that the vaulted passage and upper cavea are a later addition to the original structure.
On top of the exterior wall of the theatre are a series of special structures designed apparently to take the supports of a roof or awning to the theatre. These comprise a series of large blocks aligned parallel to the stage building (Figure 6.) A recessed space is formed by stones rebated to give an overhang at the top in front of each structure. If the blocks were bases for awning supports, the space was probably designed to house the machinery - winch, reels etc. - necessary to haul in the velarium when not in use. However it might alternatively have housed the foot of a large timber roof truss. The maximum span between structures is 50 metres.

M A Sisson noted these blocks in 1924,(2) and suggested that they were sinkings for roof trusses which would have spanned the theatre parallel to the stage building, and that the timber for such trusses could have come from Gilead's oak forests. Some evidence apparently exists to suggest that the odeion of Herodes Atticus at Athens (A.D. 161) was roofed in timber.(3) The maximum span across the diameter there was approximately 70 metres. There were no internal supports to the roof.

In the north theatre at Jerash the existence of several shallow round holes averaging 20cm in diameter in seat stones of both the upper and lower cavea, forming straight lines parallel to the diameter of the auditorium, suggests that there were internal supports. Alternatively they, together with pairs of square holes in the praecinctio sill beneath niches 2 and II, and plastered stone blocks either side of

Figure 6: Base stone for the awning or roof supports.
Figure 7: Clearing the auditorium.

The central scalarium in the lower cavea, may be connected with a velarium winching system (see Figure 4).

Excavations of the stage and stage building have exposed the scena frons. The stage floor was apparently timber, supported on beams recessed into the base of the scena at the rear and the pulpitum at the front. The central doorway in the north wall of the stage building has been blocked, perhaps at the same time as the building of the upper cavea, and has a fresco painted on the side facing the audience.

Excavations in the portico area have revealed an elaborate architectural treatment of the north face of the stage building. Assuming the design is symmetrical, it can be seen that the central doorway, (blocked) is flanked on either side by arched niches similar to the ones in the two end walls of the portico. Two side doors give access to the back stage passage, these are not opposite the hospitalia in the scena frons but further to the east and west. Pilasters between the niche and side doors terminate on a moulded base of depth and profile identical to the portico column bases.

The portico paving extends to the stylobate of the colonnade from where a flight of four steps descends to a landing 1.5 metres wide. Evidence of a balustrade along the edge of the landing, although there are more steps descending from it, perhaps indicates a change in use of the original structure which may be linked with the other alterations, i.e. the blocking of the central doorway and the addition of the upper cavea, perhaps suggesting that there was a need for crowd control once the odeion became a theatre.

Since there is no evidence to suggest that the portico and its colonnade were not built at the same time as the stage building, it seems likely that the inscription on the architrave of the colonnade dating to 230
A.D. may be found to refer to the addition of the upper cavea and other renovations to the theatre.

By the end of the first year of the project, the auditorium was cleared to exposed ten rows of seats in the lower cavea (Figure 7). The areas of tumbled stones in the upper cavea had been cleared and the vault beneath partially consolidated. Work is now proceeding on the restoration of the praecinctio wall and upper cavea. It is expected the project will be completed by the end of 1987.

REFERENCES


GLOSSARY OF ARCHITECTURAL TERMS

Cavea: The curved part of the theatre in which spectators sat; a tier of spectators' seats.

Cunei: The wedge-shaped section of rows of seats in a theatre.

Decumanus: A principal cross street running east-west at right angles to the Cardo, or main north-south street.

Hospitalia: On the stage, the two entrances on right and left for strangers.

Odeion (Odeum): A public building designed for musical performances.

Orchestra: The paved, usually semicircular area between the stage and the auditorium of a Roman theatre.

Parados: An entrance passage either side of the stage leading to the orchestra and separating the stage building from the auditorium.

Praecinctio: The broad landing running around the theatre between each tier of seats.

Pulpitum: The wall below the front of the stage.

Scala ria: The flights of stairs or steps separating sections of seating.

Scena frons: The wall at the back of the stage containing the principal entrances onto the stage.

Stylobate: The base of a row of columns.

Tetrapylon: A four-way gate placed to mark the crossing of the main north-south street with an east-west street.

Velarium: A covering, screen or awning stretched above the theatre to keep off the sun.

Vomitoria: The entrances to the theatre which lead to the places where the people sat.