Annex VIII – Geological study

ARCHITECT & CIVIL ENGINEER

ST. GEORGE
QAWRA SEAFRONT
QAWRA SPB 05
MALTA

Ref.: SIM\SM96

Date:- March 25, 1996
Project:- Proposed Underground Car Park
Site:- Mosta - Behind Parish Church.

Site Investigation

A total of seven boreholes were drilled at the positions indicated on the attached sketch. Four holes were drilled in the road which is at the back of the church and the other three holes were drilled in the road parallel to it but on the other side of the garden.

Drilling was carried out on March 22 and 23, 1996 using a 3 1/2" Halco rotary driller and all holes were carried down to a depth of 20m below existing road surface. Drilling was continuously monitored and the type of material drilled was noted throughout the whole depth of each hole.

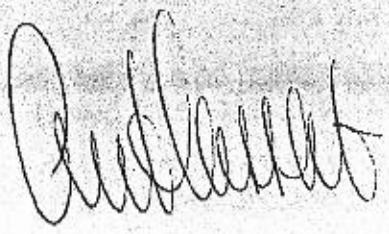
In all boreholes, the road surfacing was underlain by a thin layer of base course which has a thickness of about 1m in boreholes Nos. 1 and 2 and a thickness of about 0.5m in the remaining boreholes. In each case, the base course is underlain by about 3m of relatively hard lower coralline limestone which becomes softer with depth. This material is described as second quality hard stone. Although drilling was stopped at 20m below road level, lower coralline limestone should continue to unspecified depth.

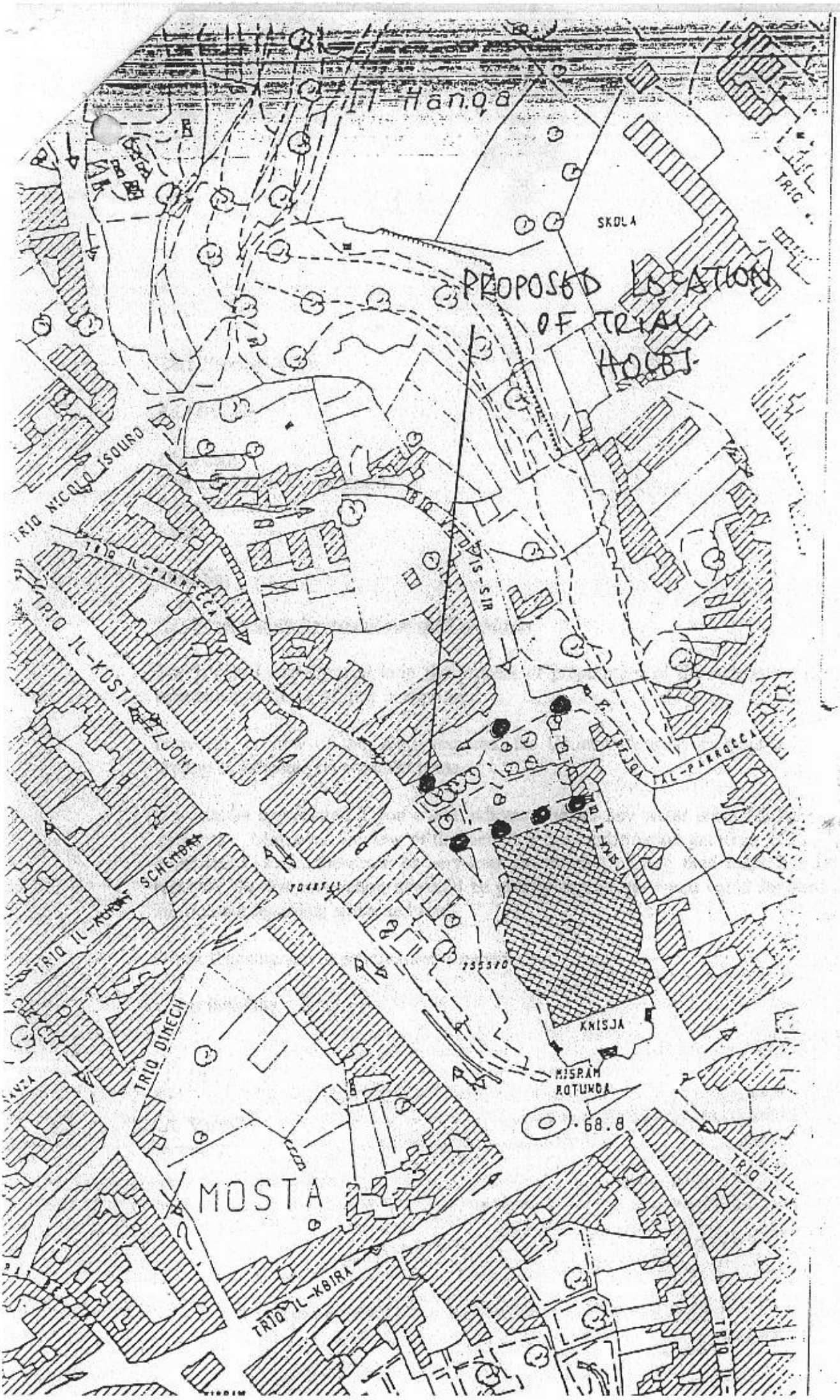
All the holes except hole No 3 were in intact rock. A fissure which was probably filled with soft material and water was encountered in hole No 3 at a depth of about 4m below road surface and continued to a depth of 2m. (At times water squirted out of the hole due to air pressure build up while drilling). No cavities or water were encountered in the other holes.

Conclusion

The site investigation carried out indicates that the proposed excavation will be in solid rock which is lower coralline limestone - mainly of second grade quality. It should prove relatively easy to excavate in this type of rock using heavy equipment. In such a material it is possible to encounter fissures and cavities which may be filled with softer material as has already happened in borehole No 3. People in the area mentioned the presence of a large underground cistern below the garden. Its position and dimensions were however not indicated. This together with the position of all underground electrical cables should be established prior to commencing excavation works. It is also strongly suggested that because of the proximity of buildings, all excavation works should be monitored and carried out under supervision. Other problems envisaged are the disturbance and inconvenience that will be caused to people in the vicinity.

The allowable bearing capacity of this material, where intact, can safely be taken at 180 T/m^2 .




PROPOSED LOCATION
OF TRIAL
HOLE.
SKOLA
TRIG.
MOSTA
KNISJA
MISRAH
ROTUNDA
68.8
TRIQ IL-KBIRA
TRIQ DIMECH
TRIQ IL-KOSTITUZZJONI
TRIQ IL-PARROCCA