

New Rapid Bay Jetty

Reference Geotechnical Investigation / Trial Piling

1. INTRODUCTION

It is proposed to construct a new jetty immediately to the east of the existing Rapid Bay Jetty. The new structure will provide pedestrian access to deep water for recreational divers, anglers and tourists.

The existing Rapid Bay Jetty is located at the township of Rapid Bay, approximately 100 kilometers south of Adelaide on the Fleurieu Peninsula. The current jetty was constructed in 1941 by BHP Pty Ltd for the purpose of shipping limestone from the adjacent quarry to Whyalla. Adelaide Brighton Cement later used the jetty for the same purpose, with the last shipment occurring in 1991.

The proposed structure will consist of evenly spaced twin pile bents (approximately 25), supporting a typically 3.6m wide precast concrete deck. Piles are to be raked transversely at 1 to 5. In addition, a number of longitudinally raked piles will be required, the exact number of which is subject to final design. The nominated piles are 610 diameter x 12.7 mm steel tubes. Reference is made to the attached drawing No. 2-6763 Sheet 20.

Connell Wagner is currently undertaking the design of the jetty for the Department for Transport, Energy and Infrastructure.

2. GEOTECHNICAL SUMMARY

The geotechnical investigation undertaken has been in the form of interpreting and plotting boreholes that were conducted in 1938 for the existing Rapid Bay Jetty. These records indicate that rock is likely to be present at shallow depths. Rock is expected at approximately 150mm depth for the first 200m from shore (approximately from bent 1 to 15). Beyond this point (bents 15 to 25) rock is expected to be encountered at approximately 1 to 2m depth. The material overlaying the rock generally consists of gravel with clayey sand or silty sand. The proposed new jetty is likely to sit in the Forktree Limestone sequence unit which belongs to the Normanville Group.

Further historical information regarding piling of the existing jetty revealed that *"The presence of bedrock close to the surface of the seabed slowed progress for the first 183m as drilling and blasting was required before timber piles could be driven into the seabed"*.