



CASE STUDY >

HUNTER WATER WYEE WWPS

PROJECT OVERVIEW

The Wyee township is located approximately 40 km southwest of Newcastle, in the south-western end of Lake Macquarie.

The Hunter Water Corporation Wyee Transfer Scheme aims to provide reticulated sewer services to the township of Wyee. The transfer scheme is designed to transport sewerage from the Wyee township to the Dora Creek Waste Water Treatment Facility.

SCOPE OF WORK

Diona Pty Ltd were awarded the construction contract for Wyee Transfer Scheme Stage 2A by Hunter Water Corporation (HWC)

RSGx were engaged by Diona to provide overall management of the detailed design up to the Issued for Construction (IFC) stage. RSGx provided the detailed civil & structural design and coordinated the design management with Star Electrical and Aquatec Fluid Systems for the Wyee 1 and Wyee 4 wastewater pumping stations.

RSGx picked up from previous design work done by Stantec and Aecom to complete the final detailed design including, but not limited to, process, hydraulic, civil, structural, mechanical, electrical & controls, telemetry, consultation, survey, geotechnical and services design.

SOLUTION

RSGx employed a comprehensive suite of Building Information Modelling (BIM) software to facilitate the creation of both 2D and 3D designs, culminating in the production of Industry Foundation Class (IFC) drawings. The utilization of 3D modelling enabled the optimization of the routing of subsurface electrical conduits and utilities, while minimizing conflicts with existing underground services. In addition to the aforementioned services, RSGx also provided:

- A comprehensive site layout, incorporating a wide range of essential services such as power, earthing, control, communications, drain lines, and dosing lines, as well as isolation pits and water supply.
- A detailed 20-meter antenna pole footing design, complete with finite element analysis of anchor bolts.
- Design calculations and created drawings for the tank and switchboard concrete slabs
- A hydrological study and hydraulic design for the stormwater system.
- A hydraulic design of a water main upgrade to bring potable water to the Wyee 4 site, and provided preliminary designs for trenchless contractors to utilize.

ACHIEVEMENTS TO DATE

RSGx's exceptional engineering expertise and unparalleled project management capabilities were instrumental in the successful completion of the Wyee Transfer Scheme Stage 2A project. Engaged by Diona Pty Ltd, our firm provided overall management of the detailed design up to the Issued for Construction (IFC) stage. Utilizing BIM software, we created both 2D and 3D designs, and optimized the routing of subsurface electrical conduits and utilities. Our team adhered to the project timeline and efficiently managed the submission of all engineering documentation.

Furthermore, our dedication and expertise in various designs such as the 20-meter antenna pole footing design, and the hydrological study and hydraulic design for the stormwater system, enabled the successful completion of this project. Our ability to pick up from previous design work done by other firms and complete the final detailed design is a testament to our firm's proficiency and technical expertise. We take pride in our exceptional engineering skills and project management capabilities that were instrumental in the successful execution of the Wyee Transfer Scheme Stage 2A project.

In close collaboration with Diona and Hunter Water, RSGx diligently adhered to the project timeline, and efficiently managed the submission of all engineering documentation through Hunter Water's Oracle Aconex system.

CLIENT

DIONA/HUNTER WATER

SERVICES PROVIDED

CIVIL DESIGN AND ENGINEERING
DESIGN MANAGEMENT

SCOPE

DETAILED CIVIL DESIGN OF 2
WASTEWATER PUMPING STATIONS,
AND OVERALL ENGINEERING DESIGN
MANAGEMENT

INDUSTRY

WASTEWATER

LOCATION

WYEE, NEW SOUTH WALES



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