



Hydraulic Services

Waste Water Management Report

The Boathouse

Governer Phillip Park, Palm Beach NSW 2108

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1 Introduction

1.1 Background

Blue Pacific Constructions, have commissioned Adcar Consulting Pty Ltd (the Hydraulic Services Consultant) to prepare a Waste Water Management Report for the existing commercial development at The Boathouse – Governor Phillip Park Palm Beach NSW. The report is to discuss future updates to the premises and outline the compliance of the proposed redevelopment.

1.2 Aims

The aim of this Waste Water Management report is to provide an outline of the proposed Waste water services issues associated with the Development Application, specifically including the following;

- Site disposal and connection of the Sanitary Drainage
- Site disposal and connection of the trade waste drainage system.
- Compliance with Northern Beaches Council DCP and Stormwater Drainage Guidelines

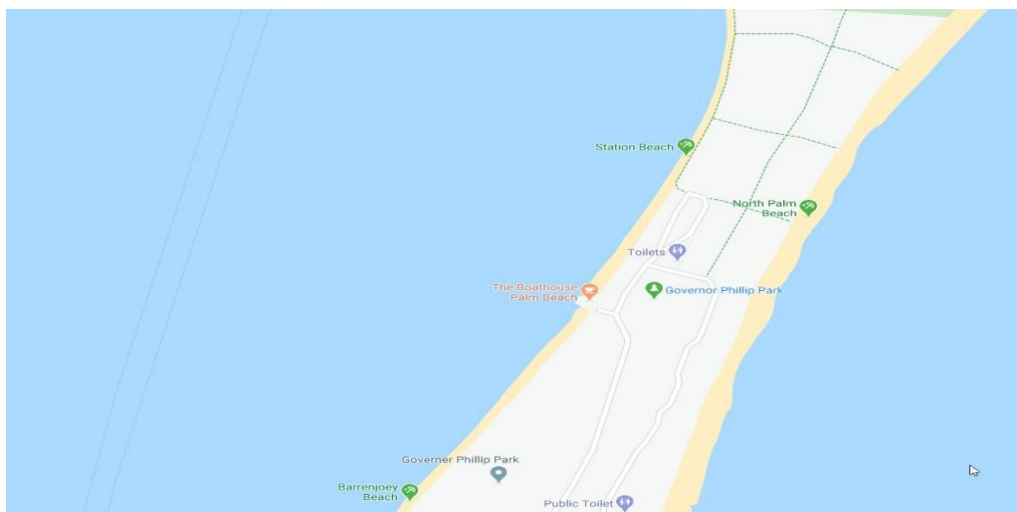
The study has been prepared in accordance with :

- Australian Standards – AS 3500.2 – Sanitary drainage
- Sydney water Design Guiltiness
- Northern Beaches Council Requirements

1.3 Location

The site is located on the western side of Palm Beach known as “The Boathouse” at Governor Phillip Park Palm Beach NSW with the vehicle access on South along the existing driveway and into a council owner carpark facility.

The site has an existing office /restaurant building, and has a total area of is 1887m².





1.4 Proposed Development

The proposed development incorporates the demolition and reconstruction of the existing building to suit the owners needs and create a building that suits the natural surroundings. The new construction is to be “eco-friendly” and be constructed so as not to affect any of the existing trees around the site. The site will be designed with new services and connections such as sanitary drainage services, trade waste drainage and sanitary rising mains.

1.5 Briefing Documents

The engineering elements considered in this report have based or taken into consideration the following documents:

- Northern Beaches Council Development Control Plan.
- Ecological Consultants Australia – Reports
- Arboriculturist reports
- Coastal engineering reports
- Development Application architectural drawings
- Sydney water “Hydraplot”
- Sydney water Sewer Service Diagrams

2 Existing Site Waste Water Services

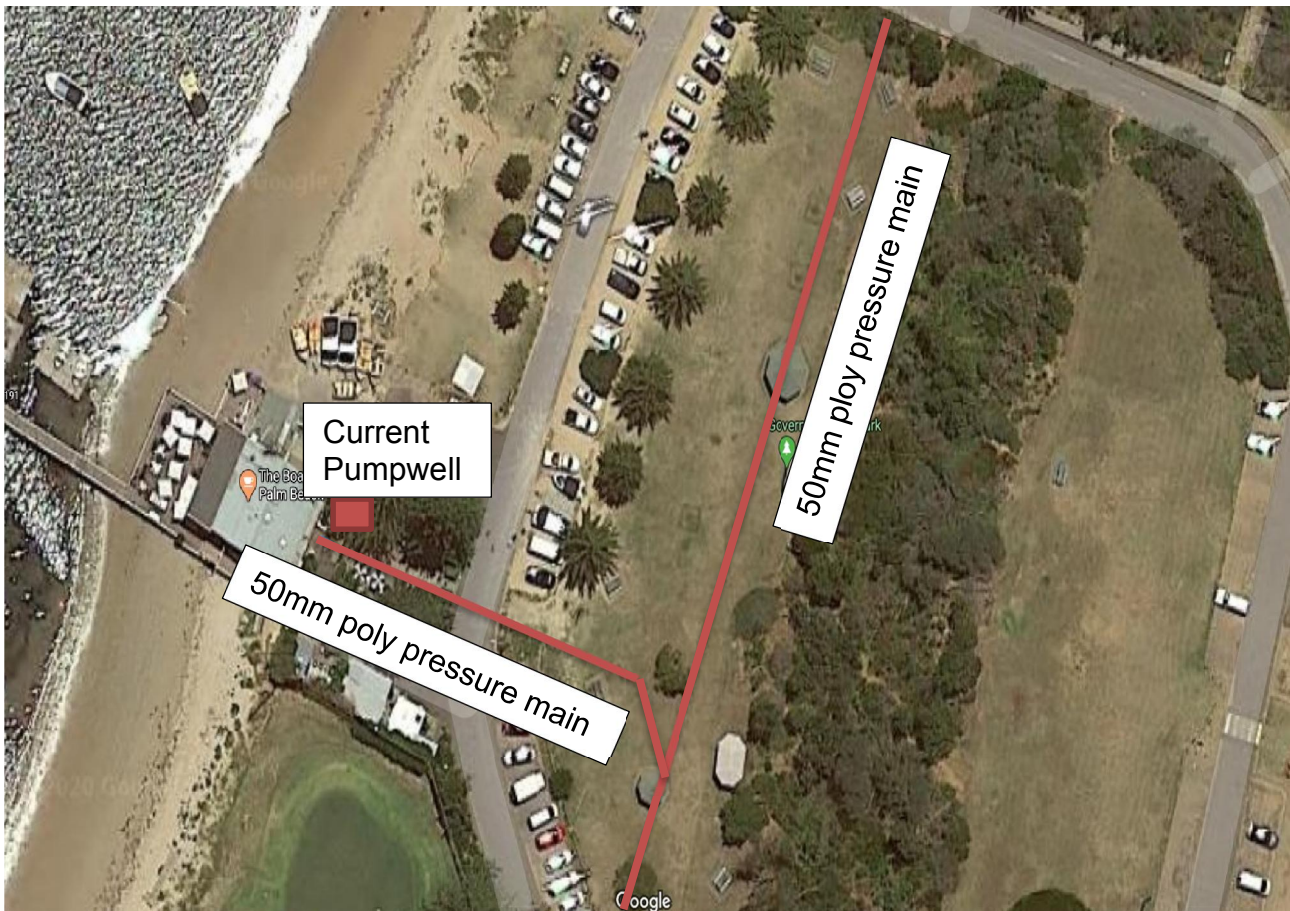
2.1 Sanitary Drainage

The existing site sanitary drainage is connected to all the existing fixtures and fittings to AS 3500.2 and drain to an existing 400ltr inground sanitary pump out. The 50mm sewer rising main is installed inground through the center of the site and is connected to the existing Council owned 50mm sanitary rising main located within Governor Phillip Park.

2.2 Trade Waste Drainage

The existing site trade waste drainage is connected to all fixtures and fittings as required by AS3500.2 and to Sydney Water Trade waste guidelines. The trade waste drainage is connected to an existing inground grease arrestor located outside the existing kitchen area. This system is installed and maintained to Sydney waters "Waste Safe "requirements.

2.3 Aerial Site Map



Location of existing sewer rising main through reserve.

3 Proposed Site Waste Water Services

3.1 Sanitary Drainage

The new sanitary drainage system is to be connected to all new fixtures and fittings within the new building in accordance with AS3500.2. The sanitary drainage is installed within the joist space below the floor and drain back to the inground drainage provisions. The sanitary drainage line is connected to a new sewer pump station installed within a site protection well. The pump station is provided with 2 x macerator pumps linked via a number of float valve to run on a duty stand-by application. The 50mm sewer rising main runs across the rear of the new amenities block to the site boundary. The sewer rising main continues across the driveway in-ground and connects to the existing 50mm pressure main within Governor Phillip Park. The drainage from the new amenities area also drain to the new inground sewer pump station. The sewer pump station is sized to hold an additional 1-day storage in the event of a failure. A spare macerator pump is to be keep onsite within a storage area for emergency purposes. Should the 2 x sewer pumps fail, a maintenance plumber is able to source and install a new pump quickly to minimize downtime and service outage. The 2 x pumps are to be rated at 2 L/s @ 10 M/head each pump. (This includes the spare site pump). The location of any new excavation for sanitary drainage trenches have been coordinated with the ecological report and the arborist report to ensure any existing trees are clear of the proposed works. The height of the new sewer pump station is to be set at RL: 2.900 as per instructions by the coastal engineer.

3.2 Trade Waste Drainage

The new trade waste drainage system is to be connected to all new fixtures and fittings within the new building in accordance with AS3500.2. The trade waste drainage is installed within the joist space below the floor and drain back to the inground drainage provisions. The trade waste drainage line is connected to a new 2,000 ltr inground grease arrestor installed within a site protection well.

This system is to be installed and maintained to Sydney waters "Waste Safe" requirements.

All floor waste outlets are to be provided with basket trap outlets along with basket arrestors installed with the plug and waste of sinks within the main kitchen area. The location of any new excavation for trade waste trenches have been coordinated with the ecological report and the arborist report to ensure any existing trees are clear of the proposed works. The height of the new grease arrestor is to be set at RL: 2.900 as per instructions by the coastal engineer.

The current system is installed to Sydney water requirements and approved as been operational in an approved manner.

On completion of the new works, the owner will enter into a new "waste safe" approval system with Sydney water and continue to maintain the program and maintenance schedule to ensure the correct discharge of trade waste from the site.

3.3 Site Protection Well

It is proposed to construct a site protection well for the new grease arrestor and the sewer pump station. This will be by way of a new concrete base/slab below ground complete with water tight



upstand walls to an RL of 2.900. The grease arrestor and pump station are to be installed within the well and tied down using stainless steel straps to prevent any uplift due to the adjacent tidal waters. The grease arrestor and the sewer pump station will be backfilled with 10mm blue metal to maintain support around the units. A new 450mm square stormwater pit will be provided with a submersible pump to remove any run-off stormwater that may enter the well. The stormwater rising main will then connect via the adjacent stormwater discharge pit inground.

The site protection well has been designed as a precautionary measure over and above the standard requirements. The well has also been provided to accommodate the discussion of clause C2.10 and Clause C5.8 within the pre DA review.

4 Site Waste Water Services Description

4.1 Sanitary Drainage

Adcar Consulting has made application to Sydney Water through the online “Tap-In” Portal. Through this portal we have requested the Sewer Services Diagrams that locate the approved house drainage plans within a property.

The application number for this sewer service diagram is:

Application Number: 910066

The sewer service diagram shows the area on the northern side of beach road.

See attached the Sewer Service Diagram – “Sewer Service Diagram -Palm Beach”

Appendix A:

The attached sewer service diagram has been gazetted and approved by Sydney Water and Pittwater Council in 1993.

The documented and approved house drainage service shows connection to the North Palm Beach Surf Life Saving club along with a separate Kiosk building that shows a gravity drainage connection to the Sydney water main located in Beach RD.

The site also shows a record of a private rising main through the area that provides connection to the 2 x amenities blocks and a connection to “Aquatic Airways”.

The “Aquatic Airways” building is now known as “The Boathouse”.

The current sewer rising main is a 50mm pressure rising main that is of sufficient size to discharge waste water from the premises to the authority gravity sewer main.

It is our opinion that “Sydney Water” and “Pittwater Council” through approval of the attached Sewer Service Diagram and the documented Rising Main are aware of the required sanitary drainage connection to “The Boathouse building”

The existing premises drains waste water to a grease arrestor external to the building and then into a sanitary pumping facility. During the new upgrades to the building we intend to provide a new trade waste treatment system with a modern grease arrestor with approval from Sydney water that will allow the trade waste water to be treated to a higher quality than the existing system. Once the waste water is drained from the grease arrestor it will discharge into a new on-site pumping facility that will be designed to hold a maximum of 24-hour storage to prevent surcharge in the event of a breakdown. The tank has been sized to allow for the peak holiday demand over the Christmas period for approximately 2432 litres per day. Allowing for 24-hour storage as a safety factor, the proposed tank will be a 5,000ltr



inground sanitary pump out system. Consideration has been given to a management plan in the case of a break down and is as follows:

- Tank is constantly pumping into the rising main once the float switch is activated
- 2 pumps in place within the tank to work on a duty/stand-by basis.
- Should a duty pump fail the secondary high-level pump will still be able to maintain a discharge rate into the rising main and the alarm will notify the owner of any problems. This will allow time to call a plumbing contractor to repair the issue.
- 1 spare pump is to be held in storage should both pumps fail. This will allow a plumbing contractor to replace the pump quickly without the need to source a new pump from a supplier.
- The sanitary pump station can hold 24-hour storage should all pumps fail. This is to allow a timeframe for a contractor to be notified and attend the site.
- A warning light and an audible alarm is to be provided at the pump station control panel that will notify the owner once a failure occurs.
- Due to the location, the availability of a plumbing contractor can attend the site quickly to make any required repairs. A list of local maintenance plumbers shall be provided with the pump control panel to allow for a quick call out.

A great deal of consideration has been proposed when sizing and selecting equipment for the proposed upgrade to protect the environment and the neighbouring facilities. The site is a well-known local landmark and is planned ensure that all safety procedures are check off and complied with to protect the environment.

A potable cold water hose tap will be provided at the corner of the building adjacent to the boat ramp. This is to allow for a potable fresh water rinse to any of the smaller "Tinnie" trailer boats in the area. The hose tap is to be provided for rinsing of saltwater from the small watercraft and shall not be used for washdown. Signage shall be provided to stage "FRESH WATER RINSE ONLY – NO SUDS". Maintenance of watercraft outside of these parameters can be provided at a local service centre located at North Avalon. This will ensure that our local waterway and environment is kept clean for patrons to enjoy the restaurant and views over Pittwater.

5 Waste water Treatment

5.1 Proposed method of treatment

This report proposes that the waste water treatment using a NSW Health accredited (or equivalent) Macerator Pump well and Septic/collection Well.

A rising main is proposed to traverse through the site and make connection to the authority sewer main.

6 Reference documents

6.1 Coordinated external services

The proposed new Boathouse design has taken into consideration the affects of the existing landscape and ecology in the area. Design and co-ordination have been discussed and altered to suit the requirements for other areas.

The consultant involved in the coordination are listed below:

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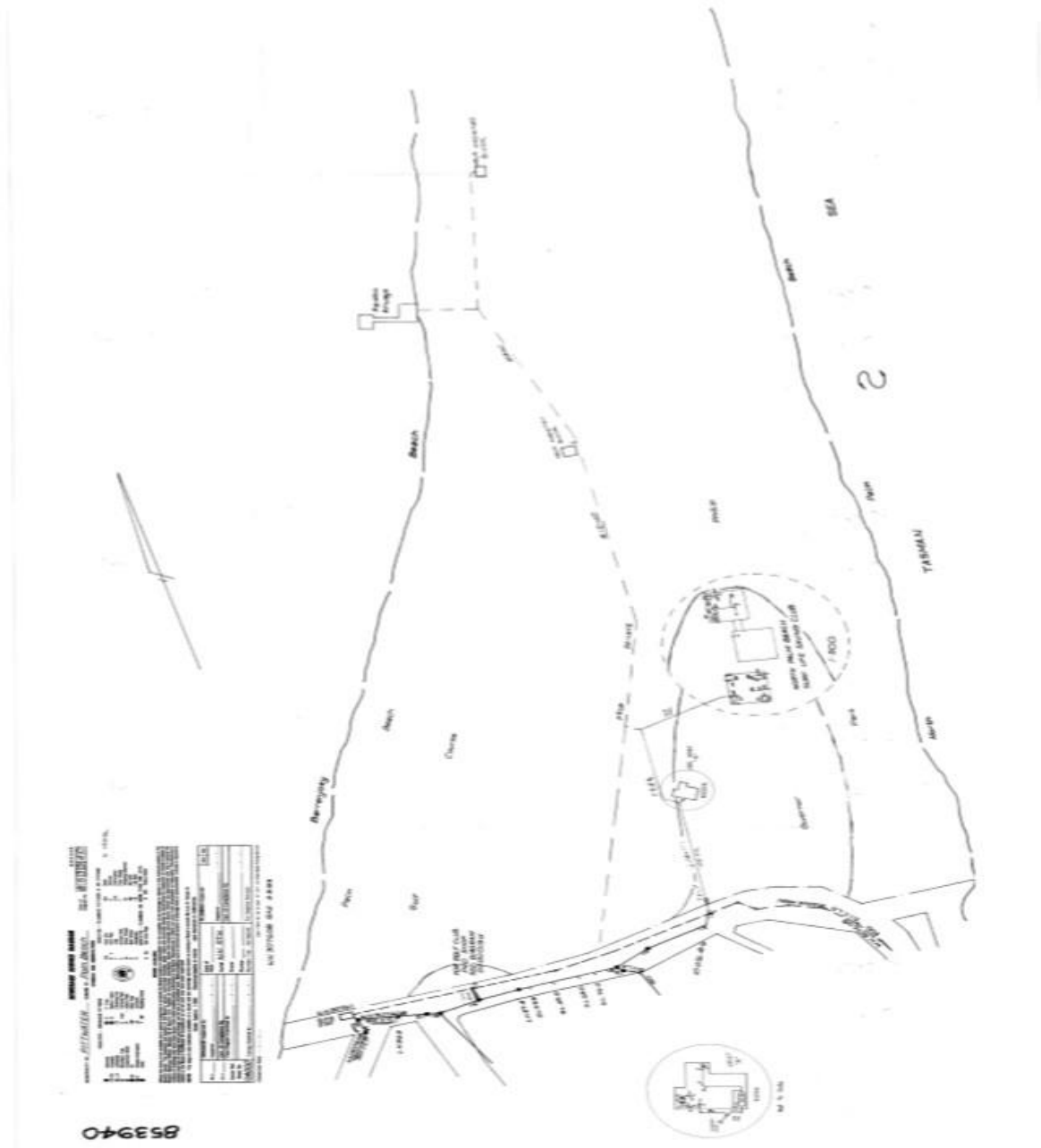
7 Appendix

7.1 Sewer Service Diagram Application Number :910066



Sewer Service Diagram

Application Number: 910066





Note: The appendix 6.1 plan shows a sewer service diagram (application number 910066) This plan was approved by Sydney water in 1995 and shows an approved connection for the existing premises.

The inset within this SSD also shows the connection of Palm Beach Surf Club.

This information has been obtained by using the Sydney Water “ Tap-in “ portal to locate existing sanitary drainage via gravity or by rising mains.

8 Limitations

Adcar Consulting Pty Ltd has prepared the report for the exclusive use of our client, for this project only and for the purpose(s) described in the report. It should not be used for other projects or by a third party. Any party so relying upon the report beyond its exclusive use and purpose as stated above, and without the express written consent of Adcar Consulting, does so entirely at its own risk and without recourse to Adcar Consulting for any loss or damage. In preparing the report Adcar Consulting has necessarily relied upon information provided by the client and or their agents.

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