



24 May 2022

222015rpt20220524_DW_Structural Report.docx

Hannas
Suite 26.02 Governor Phillip Tower
1 Farrer Place
SYDNEY NSW 2000
Australia

RE: PROPOSED DEVELOPMENT – DA 2022/0717 99 AND 101 OLD PITTWATER ROAD, BROOKVALE

Further to the request from Council dated 18 May 2022, regarding the submitted details for the above proposed project we have undertaken a structural engineering review of the interaction between the existing storm water pipe and easement and proposed building and advise as follows:

The location and level of existing easement and pipe have been determined from the site survey plan, copy attached.

The proposed building has been located so that all structural elements are clear of the existing easement and do not impact the Council asset. Refer to the enclosed Architectural Basement Plan.

The existing storm water asset is located at approximately IL 11.30. The proposed building basement level is located below the pipe at RL9.60. Accordingly, the building footings are below the Council asset and do not impose any loads thereon.

Demlakian Consulting Engineers have undertaken preliminary calculations and provides advice in the preparation of the Architectural drawings for this Development Application. We have previously advised that the below ground walls will be constructed using 450 mm diameter overlapping secant piles, which will be either temporarily anchored or strutted for support during excavation. Following construction of the building the secant pile wall will be permanently supported by the building floors.

Secant piles overlap one another, therefore there is no loss of soil or ground water between the piles. This prevents localised settlement of surrounding ground. In addition, the piles are designed to be a rigid wall, therefore eliminating the risk of settlement damage to the existing pipe.

Based upon the above assessment and following construction of the works in accordance with the above requirements, we confirm our advice that the existing asset is adequately protected from the adjacent works, and the works do not have any detrimental impact on the pipeline.

SYDNEY • LONDON • BRISBANE

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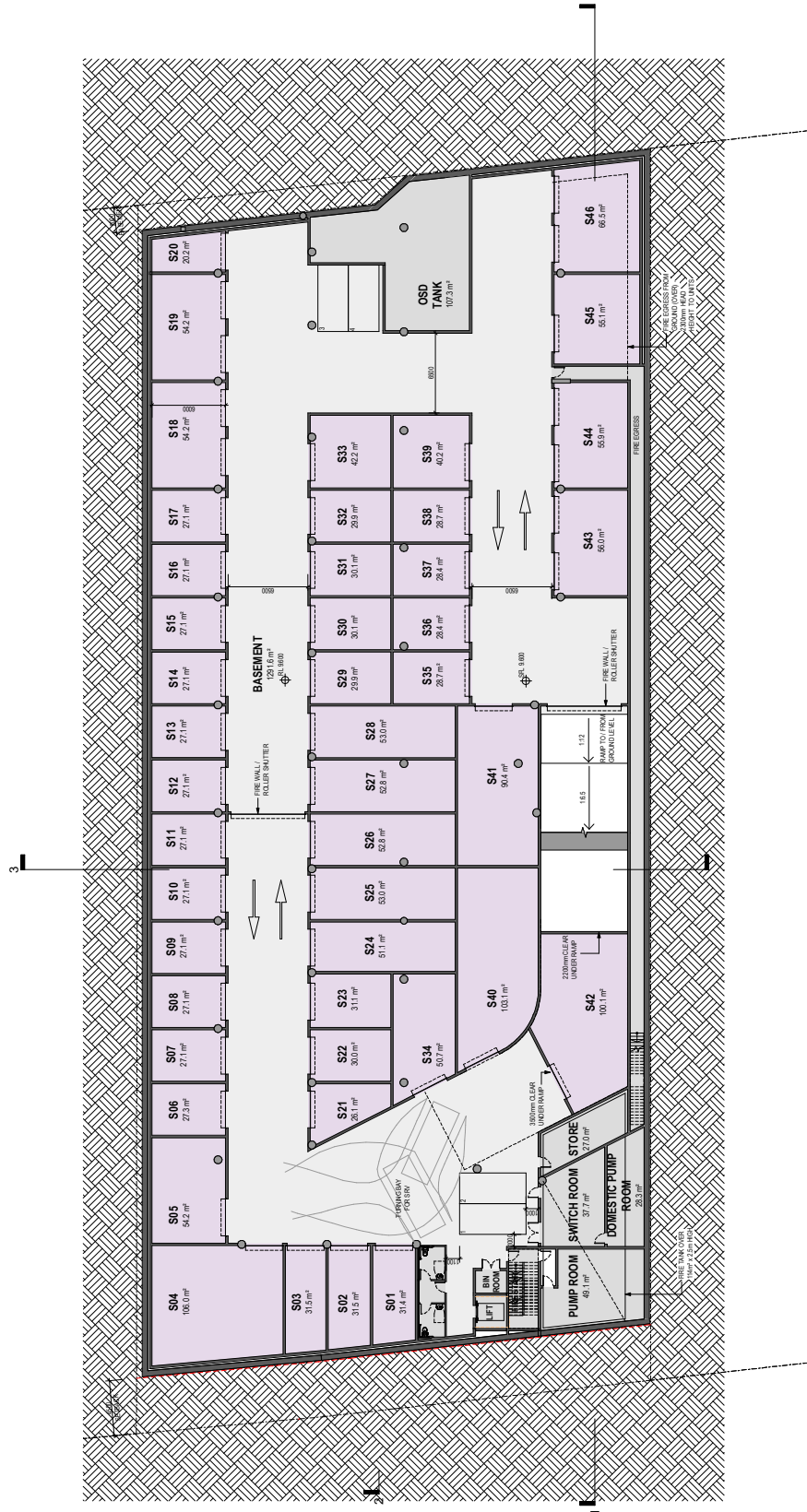
This review has been undertaken in accordance with the requirements of Council's *Building Over or Adjacent to Constructed Council Drainage Systems and Easements Technical Specification*, and *Warringah Development Council Plan 2011 C6 policy and Northern Beaches Council Water Management for Development Policy, Section 6*.

Yours Sincerely,

David Wilcox
B.E. (Hons I) FIEAust CPEng NER APEC Engineer IntPE (Aus) RPEQ
Director
DEMLAKIAN CONSULTING ENGINEERS

Encl. Survey Plan
 Architectural Basement Plan

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CLIENT

HANNAS CONTRACTING
SERVICES PTY LTD

PROJECT

DETAIL SURVEY
OF
LOTS 1-4 IN
DP402645
BEING 101-105
OLD PITTWATER ROAD,
BROOKVALE

NOTES

Tree sizes are estimates only.
Only visible services have been located in this survey.
Service and utilities shown on plan have been located by physical evidence on site only and may not have been opened to verify the type of utility. Neither excavation nor potholing have been carried out to confirm underground location. Service details should be confirmed with the relevant service authority during design and prior to any construction.
All dimensions must be verified on site prior to any construction.
The position of surveyed data has been located and is shown to topographic accuracies. If clearances to boundaries or other features are critical and dimensions are not shown further survey may be required.
The title boundaries shown hereon were not marked at the time of survey and have been determined by plan dimensions only and not by field survey.
Any construction on or near boundaries will require further survey in order that marks defining boundaries can be placed.

1	OV	2/02/2022	INITIAL ISSUE
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SYM	DESCRIPTION	SYM	DESCRIPTION
⬮	AUSPOST BOX	⬮	GAS MAIN
▲	BENCHMARK	⬮	GAS METER
⬮	BOLLARD	⬮	GAS VALVE
⬮	BOREHOLE	⬮	SEWER LAMPHOLE
⬮	BUS STOP SIGN	⬮	SEWER MANHOLE
⬮	FLAG POLE	⬮	SEWER VENT PIPE
⬮	GATE	⬮	OPTICAL FIBRE MARKER
⬮	MAIL BOX	⬮	TELECOM DIST PILLAR
⬮	SEAT	⬮	TELECOM POLE
⬮	UNKNOWN SERVICE	⬮	TELECOM SINGLE PIT
⬮	DRAINAGE GULLY PIT	⬮	TELECOM TWIN PIT
⬮	DRAINAGE MANHOLE	⬮	TRAFFIC JUNCTION BOX
⬮	ELEC FUSE BOX	⬮	TRAFFIC LIGHT
⬮	ELEC GARDEN LIGHT	⬮	TRAFFIC SIGN
⬮	ELEC GREEN PILLAR	⬮	TRAF SIGNAL CONTROLLER
⬮	ELEC LIGHT POLE	⬮	SHRUB
⬮	ELEC POLE & LIGHT	⬮	TREE
⬮	ELEC POLE&TRANSFORMER	⬮	WATER AIR VALVE
⬮	ELEC POWER POLE	⬮	WATER HYDRANT
⬮	ELEC SINGLE PIT	⬮	WATER METER
⬮	ELEC STAY POLE	⬮	WATER PUMP
⬮	ELEC TWIN PIT	⬮	WATER STOP VALVE
⬮	FUEL DIP	⬮	WATER TAP

Symbols shown are indicative only. The symbol size and orientation does not necessarily represent the real size or orientation of the feature.

DRAINAGE PIPE U/G	— — — — —
DRAIN	— — — — —
ELEC CABLE A/G	— — — — —
ELEC CABLE U/G	— — — — —
GAS PIPE	— — — — —
FENCE LINE	— — — — —
SEWERAGE PIPE	— — — — —
TELSTRA CABLE	— — — — —
WATER PIPE	— — — — —



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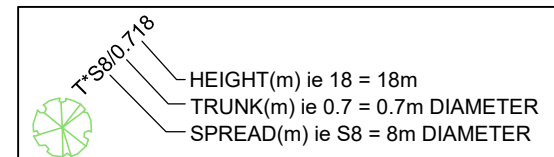


GDA2020

HEIGHT DATUM AHD	LOCAL AUTHORITY WARRINGAH		
HEIGHT ORIGIN SSM19744 RL15.53	SCALE 1:200 @ A1		
MERIDIAN MGA ZONE 56	CONTOUR INTERVAL 0.2 Metre		
CO-ORD SYSTEM MGA2020	SURVEYOR OV	DATE OF SURVEY 21/01/2022	
CCAD FILE 75462 DETAILS	DRAWN JL	DATE 3/02/2022	
AUTOCAD FILE SY075462.000.4.1	CHECKED OV	DATE 3/02/2022	
ARCHIVE FILE N/A	APPROVED RL	DATE 3/02/2022	

M.G.A

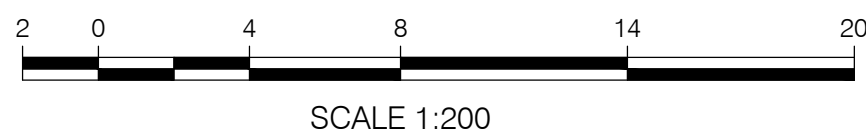
OLD PITTWATER RD



FOR CLARITY THIS PLAN CONTAINS FURTHER SURVEY INFORMATION THAT IS NOT SHOWN ON THE PRINTOUT BUT IS CONTAINED WITHIN THE AUTOCAD FILE

NOTE: THERE ARE DIFFERENCES IN THE BOUNDARY LENGTHS AS STATED ON THE TITLE DIAGRAM AND AS SHOWN ON ADJOINING DEPOSITED PLANS.
A PLAN OF SURVEY OF REDEFINITION IS REQUIRED TO RESOLVE THE DIFFERENCES AND DETERMINE THE AVAILABLE BOUNDARY DIMENSIONS & AREAS

'A' - EASEMENT TO DRAIN WATER 2 WIDE AND VARIABLE
'B' - RIGHT OF CARRIAGEWAY AND FOOTWAY VARIABLE WIDTH
'C' - RIGHT OF CARRIAGEWAY AND FOOTWAY 3.03WIDE



A Dial Before You Dig enquiry must be lodged at least two business days prior to starting any excavation or work site project.