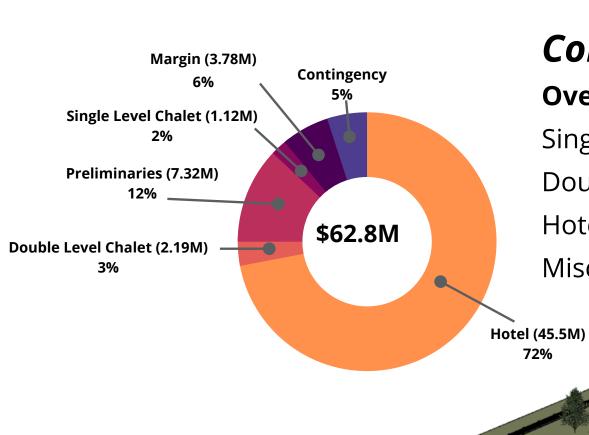






School of Future Environments **Built Environment Engineering** ENBU896 FY 2020

Tuiala Junior Ah Sam	Bachelor of Engineering Technology	18006013
Edmund Changwai	Bachelor (Hons) Construction Engineering	15924253
Bharat Rasali	Bachelor (Hons) Construction Engineering	16938911
Madelein Hoffman	Bachelor (Hons) Construction Engineering	16960253
Gustavo Viana	Bachelor (Hons) Construction Engineering	16954528



Construction Cost

Overall Project Cost: \$62,858,515.07 Single Level Chalet: \$93,890.15 x 12 Double Level Chalet: \$273,998.93 x 8

Hotel: \$45,503,474.39 Misc: \$14,036,367.44

Project Details

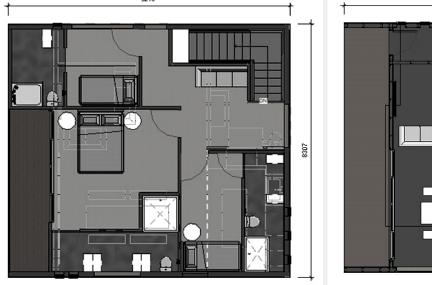
Location: Devonport, Northshore,

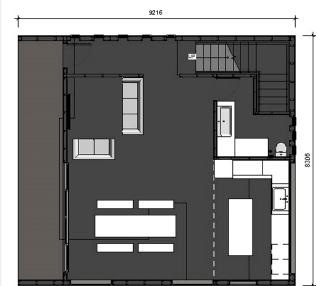
Auckland 0622 Site Area: 4.2ha

Archeological exclusion zone running along the bank of Ngataringa Bay. The scope includes a 4story hotel, amenities tower, and single and double level chalets to accommodate individuals and families.

DOUBLE STORY CHALET

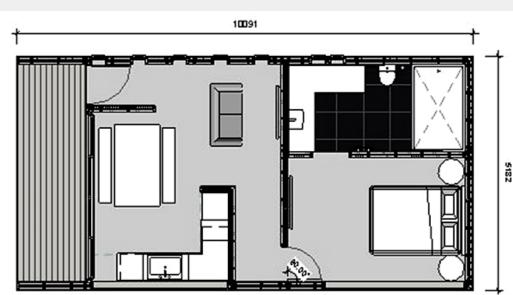






SINGLE STORY CHALET





Single En-suite

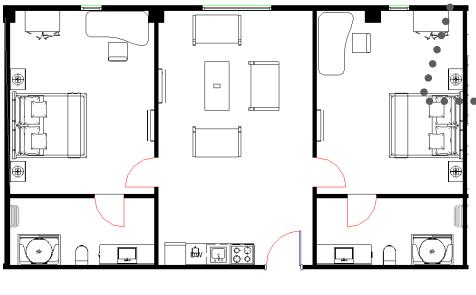
Accessible Room

Hotel Level 4

The rooftop bar is located at the southern end of the hotel to maximize the views towards the Auckland city skyline that light up at night.

Sound barriers at both ends of the bar reduce levels of noise in the direction of the chalets and other residential buildings in the vicinity. Glass and blue coated steel framing was selected as materials for the bar to provide an aesthetically pleasing modern design element.

Double En-suite

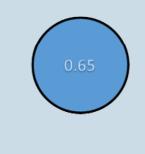


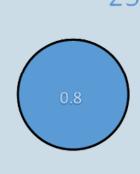
Proposed Site Layout



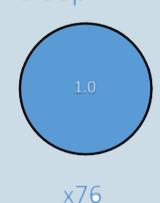
Geotechnical Pile Size

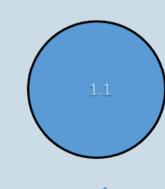
127x Concrete Pile Foundation 25m Deep





x24

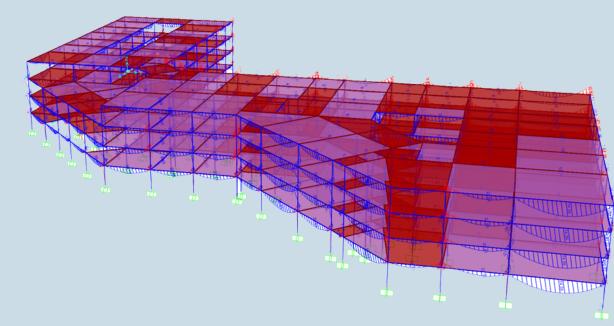




Structural Analysis

Assigned Structural Member Sizes;

Beam: 360 UB 56.7 **Column:** 310 UC 158



Construction Planning

For this particular project construction of hotel, chalets and any other external works is to be conducted simultaneously.

Construction Start Date: 11 Jan 2021 Construction End Date: 30 September 2022 **Construction Duration:** 451 days

DEMOLITION 34 days BULK EARTHWORKS 53 days SUB-STRUCUTRE 100 days	
BULK EARTHWORKS 53 days	
SUB-STRUCUTRE 100 days	
SUB-STRUCUTRE 100 days	
DUU DING CTD CUTUDE	
BUILDING STRCUTURE 178 days	
EXTERNAL FACADES & GLAZING 203 days	
INTERNAL WALLS 133 days	
ROUGH IN MAIN SERVICES 100 days	
EXTERNAL WORKS 61 days	
STAFF CARPARKING 40 days	
GUEST CAR PARK WORKS 61 days	
SWIMMING POOL WORKS 20 days	
LIFTS 45 days	
COMPLETE LANDSCAPING 45 days	

160 days

INTERNAL FINISHINGS

