



# Little Mindil Beach

25 Gilruth Avenue, The Gardens,  
Northern Territory

## Stormwater Management Plan

KTT Investments Pty Ltd

17 June 2021



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## EXECUTIVE SUMMARY

ADG Engineers (Aust.) Pty Ltd was engaged by KTT Investments Pty Ltd to prepare a Stormwater Management Plan (SMP) as additional information in support of a Development Application for a proposed mixed-use development located at 25 Gilruth Avenue, The Gardens, Northern Territory.

This report comprises of a stormwater quantity assessment for the proposed development. This assessment is undertaken to confirm no actionable nuisance of peak flow discharges from the site.

The quantity assessment has identified an increase in the total impervious area across the site as a result of the proposed development. One of the implications of an increase in impervious area is that the total volume and peak flow rate of stormwater runoff from the catchment will increase. Although there has been an increase in peak runoff as a result of the proposed development, due to the sites immediate proximity to an open water body, being the Timor Sea, it is not recommended that detention measures will be required.

The quality assessment has identified that the development should include best practice measures for stormwater quality management in accordance with the Water by Design Deemed to Comply Solutions. Best-management practice for stormwater treatment measures will include:

➤ Option 1 –

- 700m<sup>2</sup> of Bio-filtration basin;
- Green roof; and
- Litter baskets (200s EnviroPod of approved equivalent) placed within each inlet pit.

➤ Option 2 –

- 190m<sup>2</sup> of Ocean Protect Filterra;
- Green roof; and
- Litter baskets (200s EnviroPod of approved equivalent) placed within each inlet pit.

All relevant standards and guidelines are addressed in the SMP including criteria from the City of Darwin Subdivision and Development Guidelines, QUDM and Water by Design Guidelines as well as the requirement of AS 3500.3.

# 1 INTRODUCTION

## 1.1 GENERAL

ADG Engineers (Aust.) Pty Ltd was engaged by KTT Investments Pty Ltd to prepare a Stormwater Management Plan (SMP) as additional information in support of a Development Application for a proposed mixed-use development located at 25 Gilruth Avenue, The Gardens, Northern Territory.

The purpose of this Stormwater Management Plan is to provide advice as to the development proposal as detailed in the Hachem architectural drawings in **Appendix A**. The works described herein are subject to further approvals and cover works required to service the proposed development with regard to stormwater management.

## 1.2 BACKGROUND INFORMATION

This report was compiled using information from the following sources:

- Dial Before You Dig' (DBYD) As-Constructed information;
- City of Darwin Council (CoD) As-Constructed information;
- City of Darwin Subdivision and Development Guidelines (2005);
- Architectural drawings by Hachem (**Appendix A**); and
- Survey Plan prepared by Land Surveys (**Appendix B**).

## 1.3 PROPERTY DETAILS

The total site area is approximately 5.13ha and the existing land titles are provided in **Table 1** below.

**Table 1– Property Detail**

<b>Title</b>	Lot 7651, Town of Darwin
<b>Street Address</b>	25 Gilruth Avenue, The Gardens, Northern Territory
<b>Site Area</b>	5.13ha

**Figure 1** displays the locality of the subject site. The site is bound by Gilruth Avenue to the south-east, the Mindil Beach Casino to the north-east, the Timor Sea to the north-west and Burnett Place to the south.

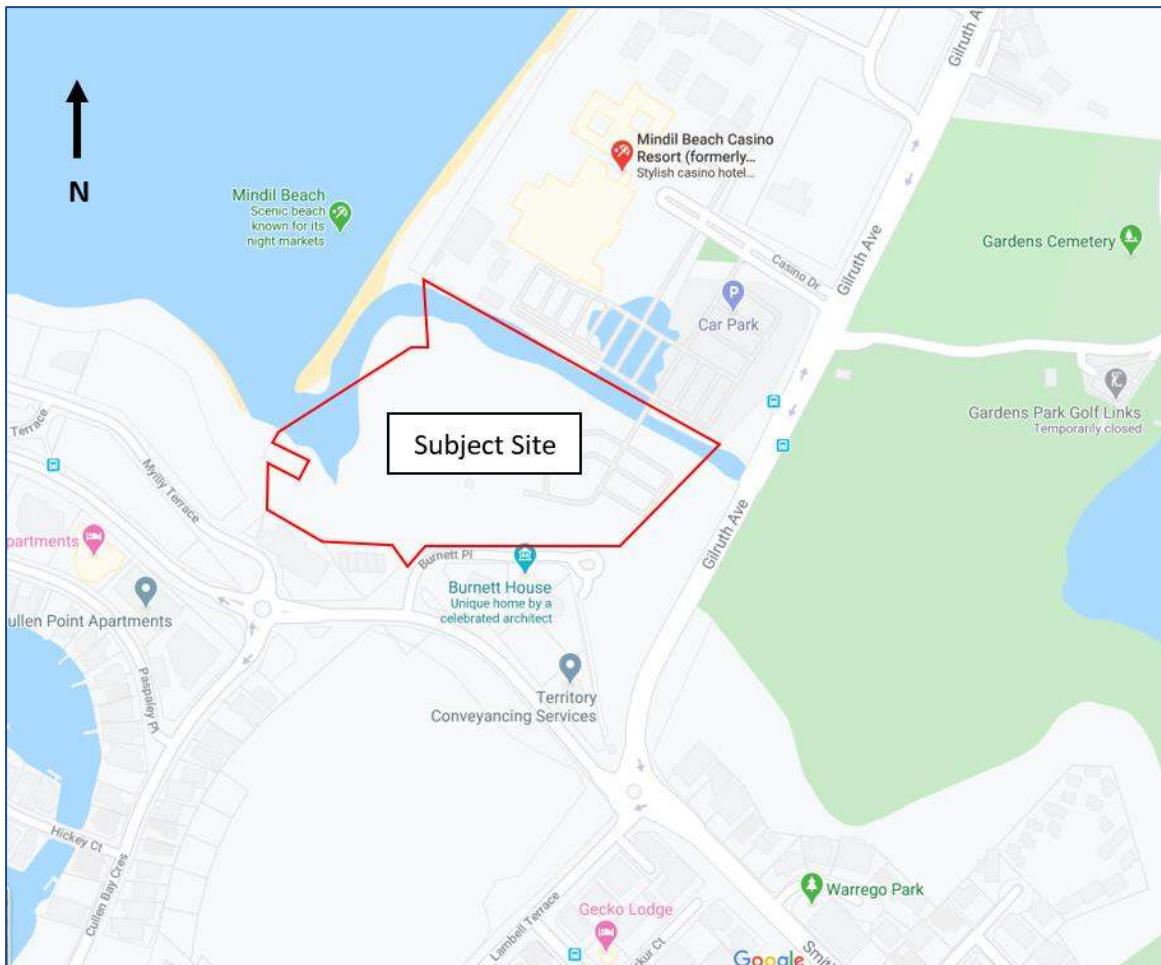


Figure 1 – Locality Map (As accessed from Google maps 30.04.2020)

## 1.4 Existing Site

The subject site is located at 25 Gilruth Avenue, The Gardens within the City of Darwin local government area and thus the stormwater drainage proposal will be assessed by City of Darwin Council officers. The subject site generally falls from south to north at a grade of approximately 1.00%. The site is bound by an existing 1 in 1 rock escarpment bordering the sites southern boundary.

As it currently stands, the subject site consists of one (1) freehold allotment which is predominantly pervious with an existing sealed carpark occupying the eastern half of the lot. These features account for approximately 30% of the site area. The remaining area may be described as good grass coverage with medium permeability. **Figure 2** illustrates these existing features.

Refer to **Appendix B** for the detailed survey plan prepared by Land Surveys.



Figure 2 – Existing Site Condition (As Accessed from Nearmap 30.04.2020)

## 2 PROPOSED DEVELOPMENT

### 2.1 Development Yield

The proposed development will seek approval for development to create a multi-story hotel, apartment and luxury villa precinct including commercial and function tenancies.

A breakdown of the areas for the proposed development is presented in **Table 2**.

**Table 2 – Proposed Development Areas**

Land Type	Area (m <sup>2</sup> )	Percentage of Total Site Area
Roof Area (Impervious)	18,600	36%
Ground Area (Impervious)	4,520	9%
Ground Area (Pervious)	26,140	51%
Lagoon Area (Impervious)	2,040	4%
<b>TOTAL</b>	<b>51,300</b>	<b>100%</b>

Refer to the Architectural drawings prepared by Hachem in **Appendix A** for further information regarding the proposed development.

### 2.2 Existing Stormwater Infrastructure

Based on information gathered via survey, contour data, aerial imagery and site investigations, it has been determined that the majority of the subject site currently discharges via sheet flows towards the north-eastern boundary. Runoff generated within the site is conveyed toward an existing creek located within the site running parallel to the site's northern boundary. Runoff is then ultimately discharged to the adjacent Timor Sea.

A summary below identifies the existing stormwater infrastructure within the vicinity of the subject site:

- An open-channel natural creek located within the development running parallel to the northern boundary of the site. This drain conveys runoff west to the Timor Sea; and
- The Timor Sea located to the sites north-western boundary.

### 2.3 Point of Discharge

#### 2.3.1 Existing PD

The existing Lawful Point of Discharge for the site has been identified as the existing creek running parallel to site's northern boundary. ADG note the existing Point of Discharge can be considered tidal as the existing creek within the allotment forms the mouth of the catchment to the Timor Sea.

#### 2.3.2 Proposed PD

The existing Point of Discharge, being the creek running parallel to site's northern boundary, will be maintained for the proposed development. It is proposed to discharge flows to the creek via a



headwall outlet. The proposed outlet will need to consider tidal influence and the affected pipework will need to be saltwater cover class or a material not susceptible to saltwater corrosion (ie Poly Propylene). The proposed outlet should consider the installation of a non-return valve to regulate tidal influence to the internal hydraulic network.

Refer to **Appendix C** for a preliminary stormwater management layout plan which identifies the location of the Lawful Point of Discharge.

## 2.4 External Catchments

A large external catchment has been identified to discharge to the subject site through the existing creek located within the site parallel to northern boundary. Runoff from this catchment is captured and channelized prior to the subject site and is conveyed within the existing open-channel creek. As such this external catchment does not negatively burden the subject site.

## 2.5 Flooding Considerations

Refer to the Hydraulic Assessment Prepared by ADG Engineers (Aust.) Pty Ltd for further information on the flooding considerations for the proposed development (Ref: 23085 C R003 dated 28/01/2021).



## 3 STORMWATER QUANTITY ASSESSMENT

### 3.1 Proposed Development and Associated Issues

One of the implications of an increase in impervious area is that the total volume and flow rate of stormwater runoff from the catchment will increase. It is essential that these increases are mitigated such that post-developed peak flows and volumes do not exceed those for the pre-developed case. The aim of the stormwater quantity assessment is to:

- Address the need for stormwater quantity control measures.
- Ensure there is no increase in peak discharges from the subject site for events up to and including the 1 in 100 year ARI event.
- Ensure proposed quantity control measures detain and convey flows in accordance with QUDM (2017) minimum freeboard recommendations.

### 3.2 Flow Rate Methodology

#### 3.2.1 Design Storm Events

Based on recommendations within QUDM 2017, AS/NZ 3500.3 and Council standards the major and initial storm events were selected as follows:

- Initial Event: 1 in 10 year ARI
  - Captured within pit and pipe drainage infrastructure through to Point of Discharge.
- Major Event: 1 in 100 year ARI
  - Surface drainage overflows in events up to and including the 1 in 100 year ARI are to be captured with overland flows paths and road corridors and will not present a hazard to people or cause significant damage to property.

Pipe sizing will be performed during detailed design and increased as required to ensure a safe depth vs velocity is maintained at all times during the major event.

#### 3.2.2 Rational Method for Peak Flow Rate

The peak flow rate for the site has been obtained using the Rational Method in accordance with ARR and QUDM. Summaries of the hydrology calculations can be seen in **Sections 3.3** and **3.4** for the pre and post-development scenarios respectively.

$$Q = (2.78 \times 10^{-3}) C_y I_y A$$

**Equation 1**

Q = Peak flow rate (m<sup>3</sup>/s) for average recurrence interval

C<sub>y</sub> = Co-efficient of runoff for ARI of y years (dimensionless)

A = Catchment area (ha)

I<sub>y</sub> = Average rainfall intensity (mm/hr) for a design duration of t hours and an ARI of y years

### 3.3 Pre-Development Hydrology

ADG's pre-development stormwater catchment plan has been provided in **Appendix C** for further information on the location of the existing catchment and the corresponding point of discharge.

The hydrology of the pre-developed catchment has been assessed in accordance with QUDM Section 4.0 using the Rational Method. From QUDM Section 4.0, the theoretical calculated peak discharge for storm events ranging from the 1 in 1 year to 1 in 100 year ARIs has been calculated and a summary of the results is presented in **Appendix D**.

### 3.3.1 Existing Catchment ‘A’

Catchment A has an area of 5.13ha and discharges naturally via overland sheet flow over the northern boundary. Since Catchment ‘A’ is 30% impervious corresponding to a fraction impervious of 0.30, QUDM 2013 (Table 4.5.3) recommends a  $C_{10}$  value of 0.76.

A time of concentration ( $t_c$ ) of 18.8 minutes has been calculated for the pre-development scenario.

Refer to the Pre-Development Stormwater Catchment Plan in **Appendix C** for further information on the existing catchments.

### 3.3.2 Rational Method Pre-Development Summary

**Table 3** provides a summary of the pre-development peak flow rates calculated using the Rational Method.

**Table 3– Pre-development Peak Flow Rates**

Catchment	Area (ha)	$t_c$ (min)	Coefficient of Discharge			Peak Flow Rate ( $m^3/s$ )		
			$C_1$	$C_{10}$	$C_{100}$	Q1	Q10	Q100
A	5.19	18.8	0.61	0.76	0.91	0.79	1.64	2.86

## 3.4 Post-Development Hydrology

The following sections will assess each catchment in terms of post-development hydrology. The key difference is the increase in impervious areas and shorter time of concentration resulting in an increase to the calculated peak flows.

The hydrology of the pre-development catchments has been assessed in accordance with QUDM Section 4.0 using the Rational Method. From QUDM Section 4.0, the theoretical calculated peak discharge for storm events ranging from the 1 in 1 year to 1 in 100 year ARIs has been calculated and a summary of the results is presented in **Appendix D**.

### 3.4.1 Proposed Catchment ‘C1’

Proposed development Catchment C1 is approximately 49% impervious. A breakdown of the proposed development areas has been provided in Section 2 of this report. QUDM 2013 (Table 4.5.4) recommends a  $C_{10}$  value of 0.80 will be required for the corresponding fraction impervious of 0.49.

Due to the high impervious area and the relatively short length of flow for the post-development catchment, a standard inlet time of 10 minutes has been adopted.

Refer to the Post-Development Stormwater Catchment Plan in **Appendix C** for further information on the proposed catchments. Refer to **Appendix C** for a Preliminary Stormwater Management Layout Plan which identifies the location of the discharge point.

### 3.4.2 Rational Method Post-Development Summary (Unmitigated)

**Table 4** provides a summary of the post-development unmitigated peak flow rates calculated using the Rational Method for the catchment.

**Table 4– Post-development Peak Flow Rates (Unmitigated)**

Catchment	Area (ha)	tc (min)	Coefficient of Discharge			Peak Flow Rate (m <sup>3</sup> /s)		
			C <sub>1</sub>	C <sub>10</sub>	C <sub>100</sub>	Q1	Q10	Q100
C1	5.19	10	0.64	0.80	0.96	1.05	2.21	3.88

### 3.5 Recommendation

As demonstrated in **Tables 3** and **4**, there has been an increase in peak flow from the pre to post development unmitigated stage. Although there has been an increase in peak runoff as a result of the proposed development, due to the sites immediate proximity to an open water body, the Timor Sea, it is not recommended that detention measures will be required.

Stormwater drainage infrastructure will be implemented throughout the site to convey stormwater to the proposed point of discharge. A pit and pipe system will be utilised to convey the minor storm flows to the point of discharge. Runoff from a major rainfall event (1 in 100 year) will be conveyed as overland flow through the centralised driveway (ensuring a depth velocity multiplier of less than 0.40) to the point of discharge.

The above proposal is subject to further approvals from City of Darwin, NTG Department of Infrastructure, Planning and Logistics (DIPL) and Department of Environment and Natural Resources (DENR).

Refer to the preliminary stormwater management layout plan in **Appendix C** for further information on the stormwater mitigation scheme.

## 4 STORMWATER QUALITY ASSESSMENT

This section considers stormwater runoff quality and assesses possible methods of treatment and the subsequent impacts on the drainage strategy. The section determines how to make sure that stormwater leaving the site complies with relevant stormwater quality improvement standards.

This section covers:

- Roof, pavement and hardstand runoff to relevant treatment devices;
- Landscaping runoff;
- Infiltration into the basement; and
- Ensuring treatment device selection criteria are in accordance with Industry Best Practice and, WSUD Engineering Guidelines.

### 4.1 Site Analysis and Design Strategy

The proposed development and total proposed pervious and impervious areas are summarised in **Table 2** in Section 2 of this report.

Currently no formal stormwater quality management measures are in place for the subject site. The proposed development offers the opportunity to provide stormwater quality treatment where none exists at present.

A MUSIC model analysis was undertaken to determine the extent of the treatment required for the site to achieve the pollutant reduction targets as identified in the NT Subdivision Guidelines. Stormwater treatment measures will include:

- Option 1 –
  - 700m<sup>2</sup> of Bio-filtration basin;
  - Green roof; and
  - Litter baskets (200s EnviroPod of approved equivalent) placed within each inlet pit.
- Option 2 –
  - 190m<sup>2</sup> of Ocean Protect Filterra;
  - Green roof; and
  - Litter baskets (200s EnviroPod of approved equivalent) placed within each inlet pit.

Stormwater within the proposed roof areas of the development will be initially treated through the provision of green, landscaped roofs. The internal hydraulic drainage network will direct then flows to 200s *EnviroPod* litter baskets located within several of the proposed inlet pits prior to discharging to either the bio-filtration system (Option 1) or Filterra (Option 2) located within the landscaping areas of the development and ultimately from the site. Internal hydraulic stormwater drainage shall be designed and constructed in accordance with AS3500.3 and all other relevant standards and guidelines.

The above proposal is subject to further approvals from City of Darwin (CoD) and NTG Department of Environment and Natural Resources (DENR).

For further information on the conceptual layout of the proposed development refer to Architectural drawings in **Appendix A**.

## 4.2 MUSIC Modelling Results

The sites stormwater run-off was modelled using MUSIC version 6.3.0. The 6-minute rainfall data from 14015 Darwin monitoring site was utilised in the modelling (as recommended by Water by Design Music Modelling Guidelines 2010 and the NT Subdivision Guidelines).

The utilised data was over a 10-year timeframe from 1987 to 1996. Pollutant export parameters for the catchment’s different land use types were applied in accordance with Table 3.8 of the above stated guidelines. The objective at each LPD was to achieve the desired target pollutant reduction levels as specified in the NT Subdivision Guidelines dated August 2020. The target pollutant reduction levels were as follows:

- 75% Reduction in Total Suspended Solids (TSS);
- 60% Reduction in Total Phosphorus (TP);
- 35% Reduction in Total Nitrogen (TN); and
- 90% Reduction in Gross Pollutants.

The following results meet the percent reduction water quality objectives identified by the NT Subdivision Guidelines. Refer to Error! Reference source not found. for further information on the MUSIC Model compiled by ADG.

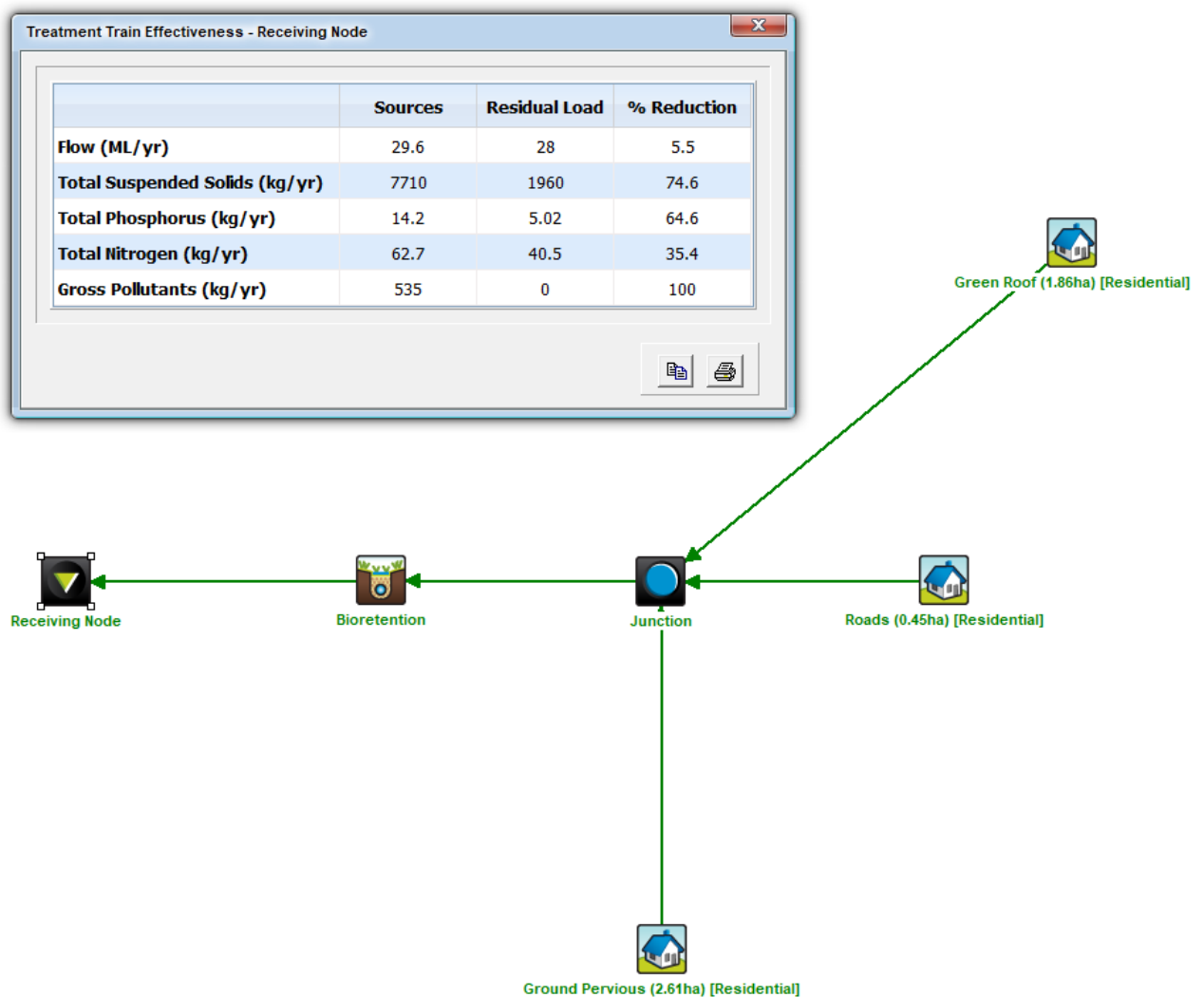
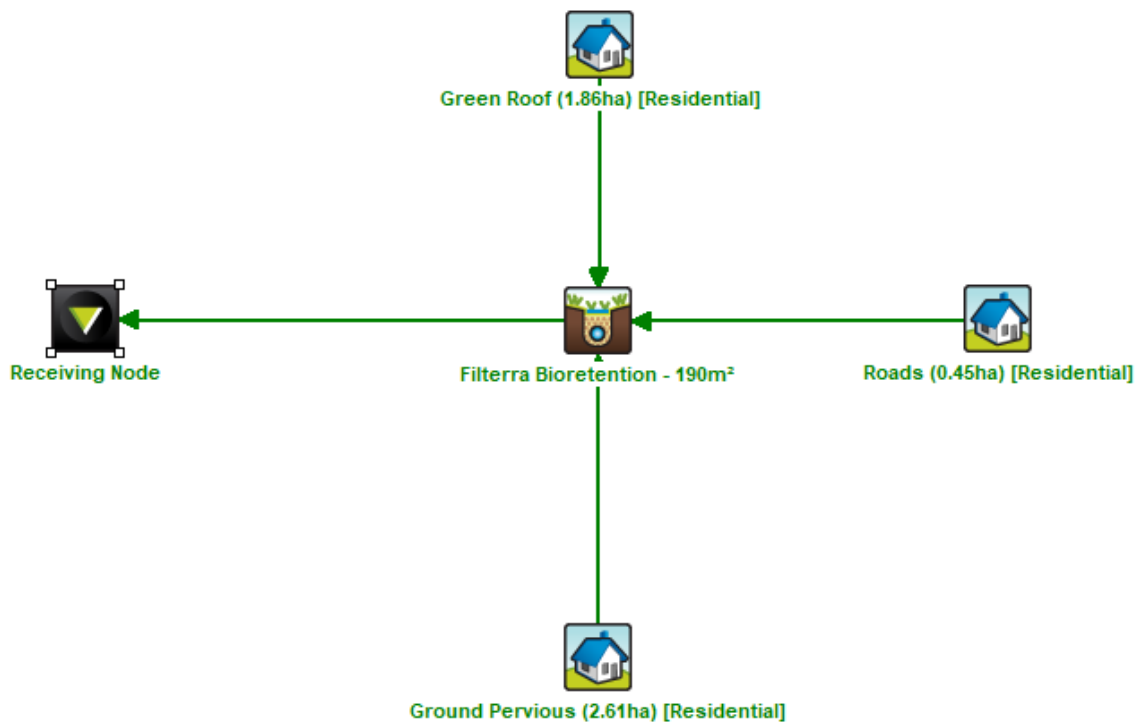


Figure 3 – Treatment Train – Option 1



	Sources	Residual Load	% Reduction
<b>Flow (ML/yr)</b>	29.6	29.2	1.5
<b>Total Suspended Solids (kg/yr)</b>	8080	1980	75.5
<b>Total Phosphorus (kg/yr)</b>	15.6	4.81	69.2
<b>Total Nitrogen (kg/yr)</b>	61	29.4	51.8
<b>Gross Pollutants (kg/yr)</b>	535	0	100

Figure 4– Treatment Train – Option 2

The above results for Options 1 and 2 respectively meet the percent reduction water quality objectives identified by the NT Subdivision Guidelines.

### 4.3 Operational phase

Once commissioned by the Superintendent and Project Engineers, the Stormwater Quality Improvement Devices (SQIDs) will provide the required level of stormwater quality treatment to runoff from the site prior to discharging into the stormwater drainage infrastructure. It is expected that sediment laden runoff and the erosion potential at the subject site during the operational phase will be minimal. This is due to the high amount of permanent impervious area in the form of roofs, paths,

courtyards, driveways and other impervious structures. The new landscaped areas will be maintained in a manner that will minimise erosion.

## 4.4 Stormwater Quality Improvement Devices (SQIDs)

Maintenance of the SQIDs will be the responsibility of the Site Manager or Owner, as determined. The maintenance should be carried out in accordance with the manufacturer's recommendations and in line with the maintenance schedule as specified in **Section 5**.

### 4.4.1 EnviroPod

*EnviroPod* litter baskets are small baskets consisting of a steel frame and a cage that can be fitted inside standard stormwater inlet pits. Within the cage a screening bag is attached to capture litter, debris, sediment and other pollutants from stormwater flows. The mesh size of the screening bag proposed for each *EnviroPod* within the site is to be 200 micro-meters. The mesh size is small enough to capture heavy metals and hydrocarbons associated with solids in the stormwater flows.

### 4.4.2 Green Roofs

As identified in the architectural layout plans prepared by Hachem in **Appendix A**, the development proposal intends to implement green roofs as an aesthetic feature to the net roof area of each building. The green roofs will allow rainwater infiltration which will provide increased water filtration and improve water quality in comparison to a traditional impervious roof. Refer to the Architectural drawings in **Appendix A** for the location and details of the proposed green roofs.

### 4.4.3 Bio-Filtration Basin

Bioretention basins remove contaminants and sedimentation from stormwater runoff via infiltration through layers of soil media. The basin is made of a 400mm filter media layer, a 100mm transition layer, and a 300mm drainage layer, located above in-situ soil. The basin is to be vegetated, as per the landscape architect's recommendations. These plants provide additional treatment, and will prevent clogging of the basin. Runoff within the bioretention area gradually infiltrates the soil layers, before discharging through an underdrain to the point of discharge.

### 4.4.4 Filterra

The Ocean Protect Filterra System is a high-flow bio-filtration/retention technology which has been optimised for high volume/flow treatment and high pollutant removal. The Filterra's small footprint allows it to be used on highly developed sites such as landscaped areas, parking lots and streetscapes. Stormwater runoff enters the Filterra System through an inlet and flows through the specially designed filter media prior to discharging to the receiving waterway. The filter media captures and immobilises pollutants; those pollutants are then decomposed, volatilised and incorporated into the biomass of the Filterra system's micro/macro flora and fauna. Stormwater runoff flows through the media and into an underdrain manifold at the bottom of the system.

## 4.5 Lifecycle Costs

All the recommended water quality treatment infrastructure lies within the development site and it shall be maintained and serviced by the owners of the development at no cost to Council. A lifecycle cost analysis is not part of the scope of this report.

## 4.6 Water Quality Monitoring

Water quality monitoring is not proposed for this development at this stage due to the nature of the development and the fact that no monitoring currently takes place by another statutory authority.

## 5 MAINTENANCE

Maintenance of the stormwater network will need to be undertaken regularly by the end user to ensure the system performs as required. **Table 5** outlines a maintenance schedule and associated corrective measures to ensure the stormwater network performs adequately.

**Table 5 –Maintenance Schedule**

Structure	Maintenance	Maintenance Trigger	Timeframe for Completion of Maintenance
Grate	Removal of all debris and build-up	The capacity of grated field inlet pit falls below 70%	Prior to the next storm
Inlet Pit Structure	Removal of all silt and debris build-up in base of pit	The capacity of grated field inlet pit falls below 70%	Prior to the next storm
Litter Basket	Removal of all silt and debris build-up in litter basket	The capacity of grated field inlet pit falls below 70%	Prior to the next storm
Stormwater Pipe	Removal of any blockages	The capacity of the stormwater network falls below 70%	Prior to the next storm
Non-Return Valve	Removal of any blockages including silt and debris build-up	The capacity of the stormwater network falls below 70%	Prior to the next storm
Bio-filtration Basin	In accordance with the Healthy Waterways guidelines “Guide to the Cost of Maintaining Bioretention Systems” dated February 2015.		
Filtrerra	In accordance with manufacturers maintenance management plan		



## 6 Erosion and Sediment Control

### 6.1 Pre-Development Phase

Prior to construction commencing, the following erosion and sediment control measures will need to be installed around the subject site to minimise disturbance and ensure the quality of runoff discharging from the site is of an acceptable standard:

- Sediment barriers to be installed on all entrances to downstream stormwater infrastructure (i.e. gully pits);
- Designation of transport routes through the site to minimise vegetation disturbance;
- Maximise retention of existing vegetation to reduce soil disturbance and provide filter strip treatment for runoff;
- Install construction entry and exit shakedown areas;
- Sediment fences are to be installed on the downstream boundaries of the subject site; and
- Install dust control measures as required.

All erosion and sediment control measures are to be designed and installed in accordance with IECA Guidelines. Further details regarding the proposed erosion and sediment control measures will be provided during the detailed design phase of the development.

### 6.2 Bulk Earthworks Phase

During the bulk earthworks phase, the following erosion and sediment control measure will need to be installed in addition to the aforementioned measures (Pre-Development Phase) to ensure there is minimal disturbance to downstream receiving water bodies:

- Construction chutes to control runoff over earthworks batters;
- Construction of temporary bunds at the top of all earthworks batters to ensure runoff is directed away from exposed batters;
- Sediment basins to be constructed at low points within each stage of the proposed development;
- Construction of temporary diversion drains to divert water to sediment basins and around any stockpiles;
- Sediment fences to be installed on the downstream side of any stockpiles; and
- Stabilisation of all batters upon reaching the finished earthworks levels.

All erosion and sediment control measures are to be designed and installed in accordance with IECA Guidelines. Further details regarding the proposed erosion and sediment control measures will be provided during the detailed design phase of the development.

### 6.3 Construction Phase

During the construction phase of the development, there is a risk of sedimentation transport due to large areas of disturbed land. The following erosion and sediment control measure will need to be installed in addition to the aforementioned measures (Pre-Development and Bulk Earthworks

Phases) to ensure there is minimal disturbance and the quality of runoff is maintained to an acceptable standard:

- Construction of temporary diversion drains to divert water to sediment basins;
- Construction of temporary diversion drains to divert water to protect treatment devices as required;
- Sediment barriers to be installed on all entrances to newly constructed stormwater infrastructure (i.e. gully pits);
- Sediment fences to be installed on the downstream side of any stockpiles and batters; and
- Re-vegetation of all disturbed areas within two (2) weeks of completion.

All erosion and sediment control measures are to be designed and installed in accordance with IECA Guidelines. Further details regarding the proposed erosion and sediment control measures will be provided during the detailed design phase of the development.

## 6.4 Maintenance of ESC Measures

All erosion and sediment control devices are to be maintained through the entire phase of the development leading up to the operational phase. Erosion and sediment control devices will need to be monitored closely throughout the entire project to ensure they are operating correctly and efficiently. No erosion and sediment control devices are to be removed unless otherwise authorised by a suitably qualified engineer or the site superintendent.

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## 7 CONCLUSIONS

Detailed design is to address the above water quantity recommendations. In preparing this report, we have achieved all requirements for Stormwater Management Plans as described in the City of Darwin Subdivision and Development Guidelines, Water by Design Guidelines and QUDM standards, as well as the requirement of AS 3500.3.

Detailed engineering diagrams and management requirements for the proposed development are to be submitted to Council for approval prior to any works commencing on site with design certification prepared by a qualified stormwater engineer or scientist.

# Appendix A

## Architectural Drawings



**DRAWING REGISTER**

SHEET No.	SHEET NAME	REV.	ISSUED	ISSUED DATE	REV. DATE
TP0.00	COVER PAGE	P11	INFORMATION	22/12/20	22/01/21
TP0.01	DEVELOPMENT SUMMARY & LEGEND	P11	INFORMATION	22/12/20	22/01/21
TP0.03	SITE OPPORTUNITIES & CONSTRAINTS	P11	INFORMATION	22/12/20	22/01/21
TP0.11	EXISTING SITE CONDITIONS	P11	INFORMATION	22/12/20	22/01/21
TP0.12	DEMOLITION PLAN	P11	INFORMATION	22/12/20	22/01/21
TP0.13	PROPOSED SITE PLAN	P11	INFORMATION	22/12/20	22/01/21
TP0.21	PERSPECTIVE IMAGES	P11	INFORMATION	22/01/21	22/01/21
TP1.01	OVERALL PLAN - SEMI-BASEMENT	P11	INFORMATION	22/12/20	22/01/21
TP1.02	FLOOR PLAN - SEMI-BASEMENT - HOTEL - PART A	P11	INFORMATION	22/12/20	22/01/21
TP1.03	FLOOR PLAN - SEMI-BASEMENT - HOTEL - PART B	P11	INFORMATION	22/12/20	22/01/21
TP1.04	OVERALL PLAN - GROUND LEVEL	P11	INFORMATION	22/12/20	22/01/21
TP1.05	FLOOR PLAN - GROUND LEVEL - SERVICED APARTMENTS / FORESHORE VILLAS	P11	INFORMATION	22/12/20	22/01/21
TP1.06	FLOOR PLAN - GROUND LEVEL - HOTEL	P11	INFORMATION	22/12/20	22/01/21
TP1.07	FLOOR PLAN - GROUND LEVEL - GARDEN & LAGOON VILLAS - PART A	P11	INFORMATION	22/12/20	22/01/21
TP1.08	FLOOR PLAN - GROUND LEVEL - LAGOON VILLAS - PART B	P11	INFORMATION	22/12/20	22/01/21
TP1.09	OVERALL PLAN - LEVEL 01	P11	INFORMATION	21/12/20	22/01/21
TP1.10	FLOOR PLAN - LEVEL 01 - SERVICED APARTMENTS / ROOF PLAN - FORESHORE VILLAS	P11	INFORMATION	22/12/20	22/01/21
TP1.11	FLOOR PLAN - LEVEL 01 - HOTEL	P11	INFORMATION	22/12/20	22/01/21
TP1.12	ROOF PLAN - GARDEN & LAGOON VILLAS - PART A	P11	INFORMATION	12/22/20	22/01/21
TP1.13	ROOF PLAN - LAGOON VILLAS - PART B	P11	INFORMATION	12/22/20	22/01/21
TP1.14	OVERALL PLAN - LEVEL 02	P11	INFORMATION	21/12/20	22/01/21
TP1.15	FLOOR PLAN - LEVEL 02 - SERVICED APARTMENTS	P11	INFORMATION	22/12/20	22/01/21
TP1.16	FLOOR PLAN - LEVEL 02 - HOTEL	P11	INFORMATION	21/12/20	22/01/21
TP1.17	OVERALL PLAN - LEVEL 03	P11	INFORMATION	21/12/20	22/01/21
TP1.18	FLOOR PLAN - LEVEL 03 - SERVICED APARTMENTS	P11	INFORMATION	22/12/20	22/01/21
TP1.19	FLOOR PLAN - LEVEL 03 - HOTEL	P11	INFORMATION	22/12/20	22/01/21
TP1.20	OVERALL PLAN - LEVEL 04	P11	INFORMATION	21/12/20	22/01/21
TP1.21	FLOOR PLAN - LEVEL 04 - SERVICED APARTMENTS	P11	INFORMATION	22/12/20	22/01/21
TP1.22	FLOOR PLAN - LEVEL 04 - HOTEL	P11	INFORMATION	22/12/20	22/01/21
TP1.23	OVERALL PLAN - LEVEL 05	P11	INFORMATION	21/12/20	22/01/21
TP1.24	FLOOR PLAN - LEVEL 05 - SERVICED APARTMENTS	P11	INFORMATION	22/12/20	22/01/21
TP1.25	FLOOR PLAN - LEVEL 05 - HOTEL	P11	INFORMATION	22/12/20	22/01/21
TP1.26	OVERALL PLAN - ROOF	P11	INFORMATION	22/12/20	22/01/21
TP2.01	OVERALL ELEVATIONS - SERVICED APARTMENT / FORESHORE VILLAS	P11	INFORMATION	14/12/20	22/01/21
TP2.02	OVERALL ELEVATIONS - HOTEL	P11	INFORMATION	14/12/20	22/01/21
TP2.03	OVERALL ELEVATIONS - GARDEN VILLAS	P11	INFORMATION	14/12/20	22/01/21
TP2.04	OVERALL ELEVATIONS - LAGOON VILLAS	P11	INFORMATION	14/12/20	22/01/21
TP3.02	BUILDING SECTIONS - GARDEN & LAGOON VILLA	P11	INFORMATION	01/14/21	22/01/21
TP3.03	BUILDING SECTION - HOTEL / F&B BAR	P11	INFORMATION	14/01/20	22/01/21
TP4.01	PROPOSED SHADOW DIAGRAMS	P11	INFORMATION	14/12/20	22/01/21

# 257

LITTLE MINDIL - 25 GILRUTH AVENUE, THE GARDENS, DARWIN



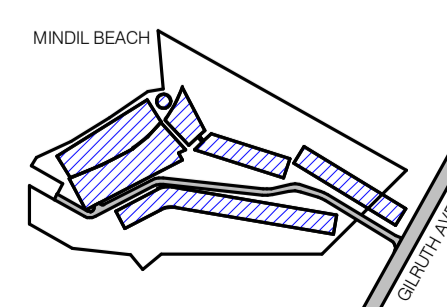
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REV.	DESCRIPTION	DATE
P11	ISSUE FOR COORDINATION	22/01/21
P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

CLIENT  
 DAVID DO AWI

DRAWING SCALE

DRAWING DATE  
 22/12/20

SHEET SIZE  
 A1

CHECK  
 EP

PROJECT NO  
 257

DRAWN  
 KS



DRAWING TITLE  
 COVER PAGE

PROJECT NAME  
 LITTLE MINDIL

ISSUE FOR INFORMATION

REVISION BUILDING / ATTRIBUTE  
**P11** 12°26'59" S  
 130°49'45" E

DRAWING NO.

**TP0.00**



NAME	AREA	%
SITE AREA	51328 m <sup>2</sup>	100%

DEVELOPMENT SUMMARY		
2 BEDROOM APARTMENTS	22	
2 BEDROOM GARDEN VILLA	3	
2 BEDROOM LAGOON VILLA	16	
3 BEDROOM APARTMENTS	22	
3 BEDROOM FORESHORE VILLAS	7	
4 BEDROOM APARTMENTS	2	
HOTEL ROOM	149	

GROUND		
2 BEDROOM GARDEN VILLA	3	
2 BEDROOM LAGOON VILLA	16	
3 BEDROOM FORESHORE VILLAS	7	

LEVEL 01		
2 BEDROOM APARTMENTS	6	
3 BEDROOM APARTMENTS	2	

LEVEL 02		
2 BEDROOM APARTMENTS	4	
3 BEDROOM APARTMENTS	10	
4 BEDROOM APARTMENTS	1	
HOTEL ROOM	17	

LEVEL 03		
2 BEDROOM APARTMENTS	4	
HOTEL ROOM	49	

LEVEL 04		
2 BEDROOM APARTMENTS	4	
3 BEDROOM APARTMENTS	10	
4 BEDROOM APARTMENTS	1	
HOTEL ROOM	46	

LEVEL 05		
2 BEDROOM APARTMENTS	4	
HOTEL ROOM	37	

HOTEL ROOMS SCHEDULE				
ROOM NO.	TYPE	ROOM	BALCONY	TOTAL
LEVEL 02				
2001	S1	68 m <sup>2</sup>	13 m <sup>2</sup>	80 m <sup>2</sup>
2002	S1	70 m <sup>2</sup>	13 m <sup>2</sup>	82 m <sup>2</sup>
2003	S1	72 m <sup>2</sup>	13 m <sup>2</sup>	85 m <sup>2</sup>
2004	S5	61 m <sup>2</sup>	13 m <sup>2</sup>	74 m <sup>2</sup>
2005	K2	33 m <sup>2</sup>	13 m <sup>2</sup>	46 m <sup>2</sup>
2006	S6	69 m <sup>2</sup>	22 m <sup>2</sup>	90 m <sup>2</sup>
2007	K2	34 m <sup>2</sup>	0 m <sup>2</sup>	34 m <sup>2</sup>
2008	K2	34 m <sup>2</sup>	0 m <sup>2</sup>	34 m <sup>2</sup>
2009	K2	34 m <sup>2</sup>	0 m <sup>2</sup>	34 m <sup>2</sup>
2010	K2	34 m <sup>2</sup>	0 m <sup>2</sup>	34 m <sup>2</sup>
2011	K3	27 m <sup>2</sup>	0 m <sup>2</sup>	27 m <sup>2</sup>
17		536 m <sup>2</sup>	85 m <sup>2</sup>	622 m <sup>2</sup>

HOTEL ROOMS SCHEDULE				
ROOM NO.	TYPE	ROOM	BALCONY	TOTAL
LEVEL 03				
3001	S2	61 m <sup>2</sup>	13 m <sup>2</sup>	74 m <sup>2</sup>
3002	S2	62 m <sup>2</sup>	13 m <sup>2</sup>	75 m <sup>2</sup>
3003	S2	63 m <sup>2</sup>	13 m <sup>2</sup>	76 m <sup>2</sup>
3004	S7	51 m <sup>2</sup>	13 m <sup>2</sup>	63 m <sup>2</sup>
3005	K7	32 m <sup>2</sup>	13 m <sup>2</sup>	44 m <sup>2</sup>
3006	K6	37 m <sup>2</sup>	20 m <sup>2</sup>	57 m <sup>2</sup>
3007	K2	34 m <sup>2</sup>	0 m <sup>2</sup>	34 m <sup>2</sup>
3008	K2	34 m <sup>2</sup>	0 m <sup>2</sup>	34 m <sup>2</sup>
3009	K2	34 m <sup>2</sup>	0 m <sup>2</sup>	34 m <sup>2</sup>
3010	K2	34 m <sup>2</sup>	0 m <sup>2</sup>	34 m <sup>2</sup>
3011	K3	27 m <sup>2</sup>	0 m <sup>2</sup>	27 m <sup>2</sup>
3012	K4	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3013	S4	51 m <sup>2</sup>	0 m <sup>2</sup>	51 m <sup>2</sup>
3014	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3015	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3016	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3017	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3018	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3019	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3020	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3021	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3022	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3023	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3024	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3025	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3026	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3027	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3028	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3029	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3030	K5	33 m <sup>2</sup>	0 m <sup>2</sup>	33 m <sup>2</sup>
3031	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3032	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3033	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3034	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3035	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3036	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3037	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3038	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3039	K1	37 m <sup>2</sup>	0 m <sup>2</sup>	37 m <sup>2</sup>
3040	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3041	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3042	K12	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
3043	K1	38 m <sup>2</sup>	0 m <sup>2</sup>	38 m <sup>2</sup>
49		1682 m <sup>2</sup>	83 m <sup>2</sup>	1766 m <sup>2</sup>

HOTEL ROOMS SCHEDULE				
ROOM NO.	TYPE	ROOM	BALCONY	TOTAL
LEVEL 04				
4001	S3	52 m <sup>2</sup>	13 m <sup>2</sup>	64 m <sup>2</sup>
4002	S3	51 m <sup>2</sup>	13 m <sup>2</sup>	64 m <sup>2</sup>
4003	S3	52 m <sup>2</sup>	13 m <sup>2</sup>	64 m <sup>2</sup>
4004	K8	25 m <sup>2</sup>	13 m <sup>2</sup>	38 m <sup>2</sup>
4005	K9	32 m <sup>2</sup>	13 m <sup>2</sup>	44 m <sup>2</sup>
4006	K10	44 m <sup>2</sup>	17 m <sup>2</sup>	61 m <sup>2</sup>
4007	K2	34 m <sup>2</sup>	0 m <sup>2</sup>	34 m <sup>2</sup>
4008	K2	34 m <sup>2</sup>	0 m <sup>2</sup>	34 m <sup>2</sup>
4009	K2	34 m <sup>2</sup>	0 m <sup>2</sup>	34 m <sup>2</sup>
4010	K3	27 m <sup>2</sup>	0 m <sup>2</sup>	27 m <sup>2</sup>
4011	K4	39 m <sup>2</sup>	0 m <sup>2</sup>	39 m <sup>2</sup>

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AREA ANALYSIS	
DEPARTMENT	AREA
SEMI-BASEMENT	
HOTEL	
ADMIN OFFICES	214 m <sup>2</sup>
BOH & SUPPORT AREAS	1680 m <sup>2</sup>
EXTERNAL AREAS & PARKING	5496 m <sup>2</sup>
PUBLIC AREAS	40 m <sup>2</sup>
SERVICES	8 m <sup>2</sup>
VERTICAL CIRCULATION	81 m <sup>2</sup>
GROUND	7520 m <sup>2</sup>
APARTMENT	
EXTERNAL AREAS & PARKING	2767 m <sup>2</sup>
SERVICES	297 m <sup>2</sup>
VERTICAL CIRCULATION	38 m <sup>2</sup>
HOTEL	
BOH & SUPPORT AREAS	562 m <sup>2</sup>
EXTERNAL AREAS & PARKING	811 m <sup>2</sup>
GARDEN VILLA	13 m <sup>2</sup>
LAGOON VILLA	2408 m <sup>2</sup>
RECREATIONAL	38 m <sup>2</sup>
RESTAURANT & BARS / SUPPORT	105 m <sup>2</sup>
RETAIL	213 m <sup>2</sup>
SERVICES	9 m <sup>2</sup>
VERTICAL CIRCULATION	13 m <sup>2</sup>
VILLA	
FORESHORE VILLA	3813 m <sup>2</sup>
GARDEN VILLA	295 m <sup>2</sup>
LAGOON VILLA	1631 m <sup>2</sup>
SERVICES	446 m <sup>2</sup>
	13471 m <sup>2</sup>
LEVEL 01	
APARTMENT	
APARTMENT FLOORS	1668 m <sup>2</sup>
BOH & SUPPORT AREAS	311 m <sup>2</sup>
RECREATIONAL	399 m <sup>2</sup>
SERVICES	111 m <sup>2</sup>
HOTEL	
ADMIN OFFICES	16 m <sup>2</sup>
BOH & SUPPORT AREAS	143 m <sup>2</sup>

AREA ANALYSIS	
DEPARTMENT	AREA
GUEST ROOM FLOORS	3 m <sup>2</sup>
MEETING & FUNCTION SPACE	596 m <sup>2</sup>
PUBLIC AREAS	617 m <sup>2</sup>
RECREATIONAL	461 m <sup>2</sup>
RESTAURANT & BARS / SUPPORT	1170 m <sup>2</sup>
SERVICES	190 m <sup>2</sup>
	5674 m <sup>2</sup>
LEVEL 02	
APARTMENT	
APARTMENT FLOORS	2331 m <sup>2</sup>
HOTEL	
BOH & SUPPORT AREAS	109 m <sup>2</sup>
GUEST ROOM FLOORS	793 m <sup>2</sup>
PUBLIC AREAS	1482 m <sup>2</sup>
SERVICES	45 m <sup>2</sup>
	4760 m <sup>2</sup>
LEVEL 03	
APARTMENT	
APARTMENT FLOORS	2256 m <sup>2</sup>
HOTEL	
BOH & SUPPORT AREAS	94 m <sup>2</sup>
GUEST ROOM FLOORS	2133 m <sup>2</sup>
SERVICES	17 m <sup>2</sup>
	4510 m <sup>2</sup>
LEVEL 04	
APARTMENT	
APARTMENT FLOORS	2287 m <sup>2</sup>
HOTEL	
BOH & SUPPORT AREAS	94 m <sup>2</sup>
GUEST ROOM FLOORS	1956 m <sup>2</sup>
SERVICES	17 m <sup>2</sup>
	4354 m <sup>2</sup>
LEVEL 05	
APARTMENT	
APARTMENT FLOORS	2216 m <sup>2</sup>
HOTEL	
BOH & SUPPORT AREAS	94 m <sup>2</sup>
GUEST ROOM FLOORS	1812 m <sup>2</sup>
SERVICES	17 m <sup>2</sup>
	4140 m <sup>2</sup>
TOTAL	44428 m <sup>2</sup>

APARTMENTS SCHEDULE			
ROOM NO.	ROOM	BALCONY	TOTAL
LEVEL 01			
4012	S4	52 m <sup>2</sup>	52 m <sup>2</sup>
4013	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4014	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4015	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4016	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4017	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4018	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4019	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4020	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4021	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4022	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4023	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4024	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4025	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4026	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4027	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4028	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4029	K5	33 m <sup>2</sup>	33 m <sup>2</sup>
4030	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4031	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4032	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4033	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4034	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4035	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4036	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4037	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4038	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
4039	K12	38 m <sup>2</sup>	38 m <sup>2</sup>
4040	K1	38 m <sup>2</sup>	38 m <sup>2</sup>
46		1525 m <sup>2</sup>	81 m <sup>2</sup>
			1605 m <sup>2</sup>

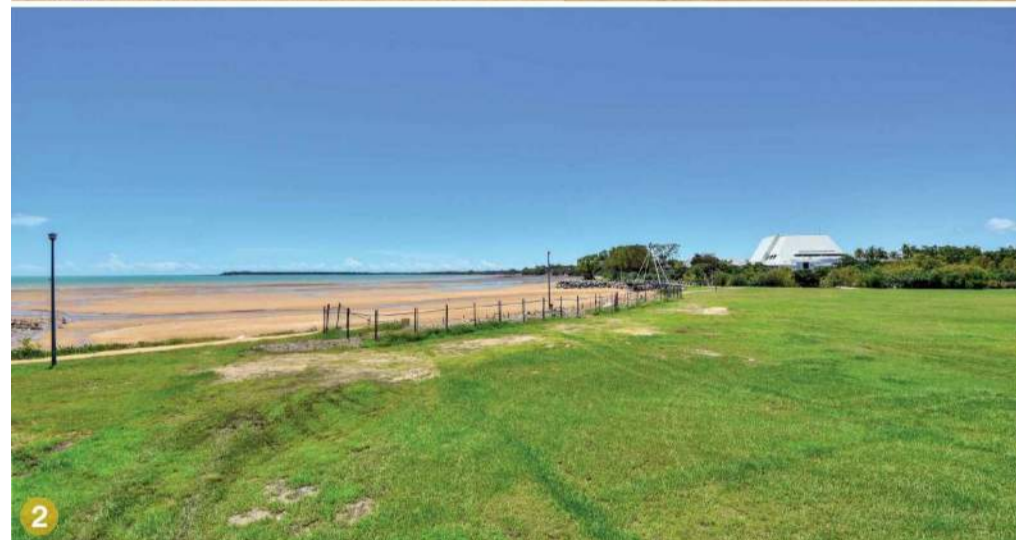
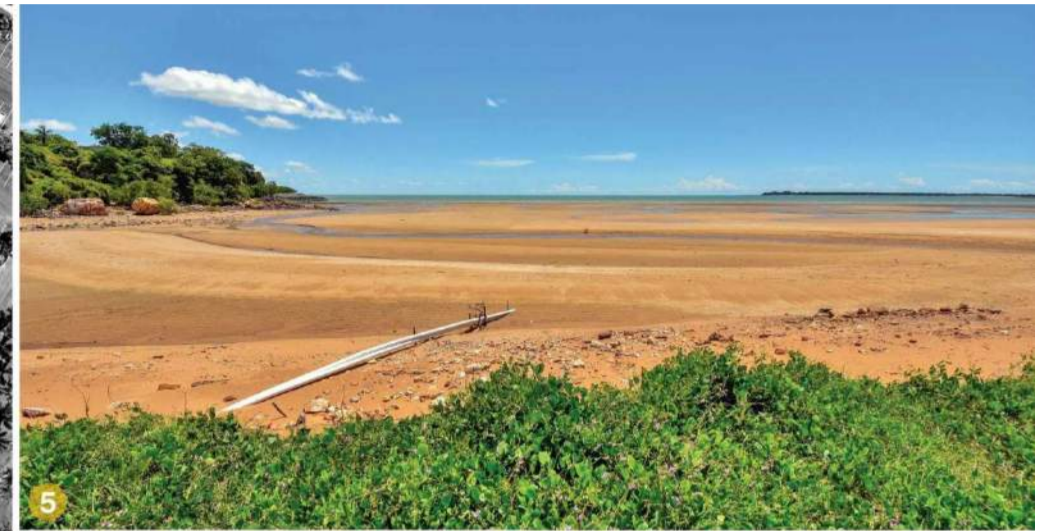
  

APARTMENTS SCHEDULE			
ROOM NO.	ROOM	BALCONY	TOTAL
LEVEL 02			
201	166 m <sup>2</sup>	25 m <sup>2</sup>	191 m <sup>2</sup>
202	95 m <sup>2</sup>	15 m <sup>2</sup>	110 m <sup>2</sup>
203	92 m <sup>2</sup>	15 m <sup>2</sup>	107 m <sup>2</sup>
204	90 m <sup>2</sup>	15 m <sup>2</sup>	105 m <sup>2</sup>
205	106 m <sup>2</sup>	30 m <sup>2</sup>	136 m <sup>2</sup>
206	105 m <sup>2</sup>	30 m <sup>2</sup>	135 m <sup>2</sup>
207	88 m <sup>2</sup>	15 m <sup>2</sup>	103 m <sup>2</sup>
208	88 m <sup>2</sup>	15 m <sup>2</sup>	103 m <sup>2</sup>
209	89 m <sup>2</sup>	15 m <sup>2</sup>	104 m <sup>2</sup>
210	90 m <sup>2</sup>	15 m <sup>2</sup>	105 m <sup>2</sup>
211	115 m <sup>2</sup>	30 m <sup>2</sup>	145 m <sup>2</sup>
212	132 m <sup>2</sup>	30 m <sup>2</sup>	162 m <sup>2</sup>
213	109 m <sup>2</sup>	15 m <sup>2</sup>	124 m <sup>2</sup>
214	116 m <sup>2</sup>	15 m <sup>2</sup>	131 m <sup>2</sup>
215	210 m <sup>2</sup>	13 m <sup>2</sup>	223 m <sup>2</sup>
34	1692 m <sup>2</sup>	292 m <sup>2</sup>	1984 m <sup>2</sup>

APARTMENTS SCHEDULE			
ROOM NO.	ROOM	BALCONY	TOTAL
LEVEL 03			
201	157 m <sup>2</sup>	25 m <sup>2</sup>	182 m <sup>2</sup>
202	100 m <sup>2</sup>	15 m <sup>2</sup>	115 m <sup>2</sup>
203	96 m <sup>2</sup>	15 m <sup>2</sup>	111 m <sup>2</sup>
204	93 m <sup>2</sup>	15 m <sup>2</sup>	108 m <sup>2</sup>
207	91 m <sup>2</sup>	15 m <sup>2</sup>	106 m <sup>2</sup>
208	91 m<		



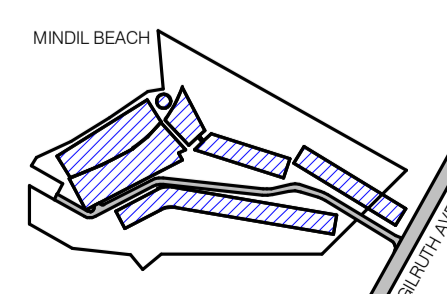
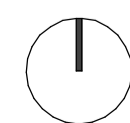


HACHEM ARCHITECTURE INTERIOR MARKETING

HACHEM.COM.AU LEVEL 3, 2 DREWERY PLACE 183 WESTON STREET  
 INFO@HACHEM.COM.AU MELBOURNE 3000 BRUNSWICK EAST 3057  
 STUDIO +61 1300 734 560 VICTORIA, AUSTRALIA VICTORIA, AUSTRALIA

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REV.	DESCRIPTION	DATE
P10	ISSUE FOR INFORMATION	15/01/21
P9	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

CLIENT  
 DAVID DO

DRAWING SCALE  
 SHEET SIZE  
 PROJECT NO

DRAWING DATE  
 CHECK  
 DRAWN



DRAWING TITLE  
 DESIGN RESPONSE WITH SITE  
 PHOTOS

PROJECT NAME  
 LITTLE MINDIL

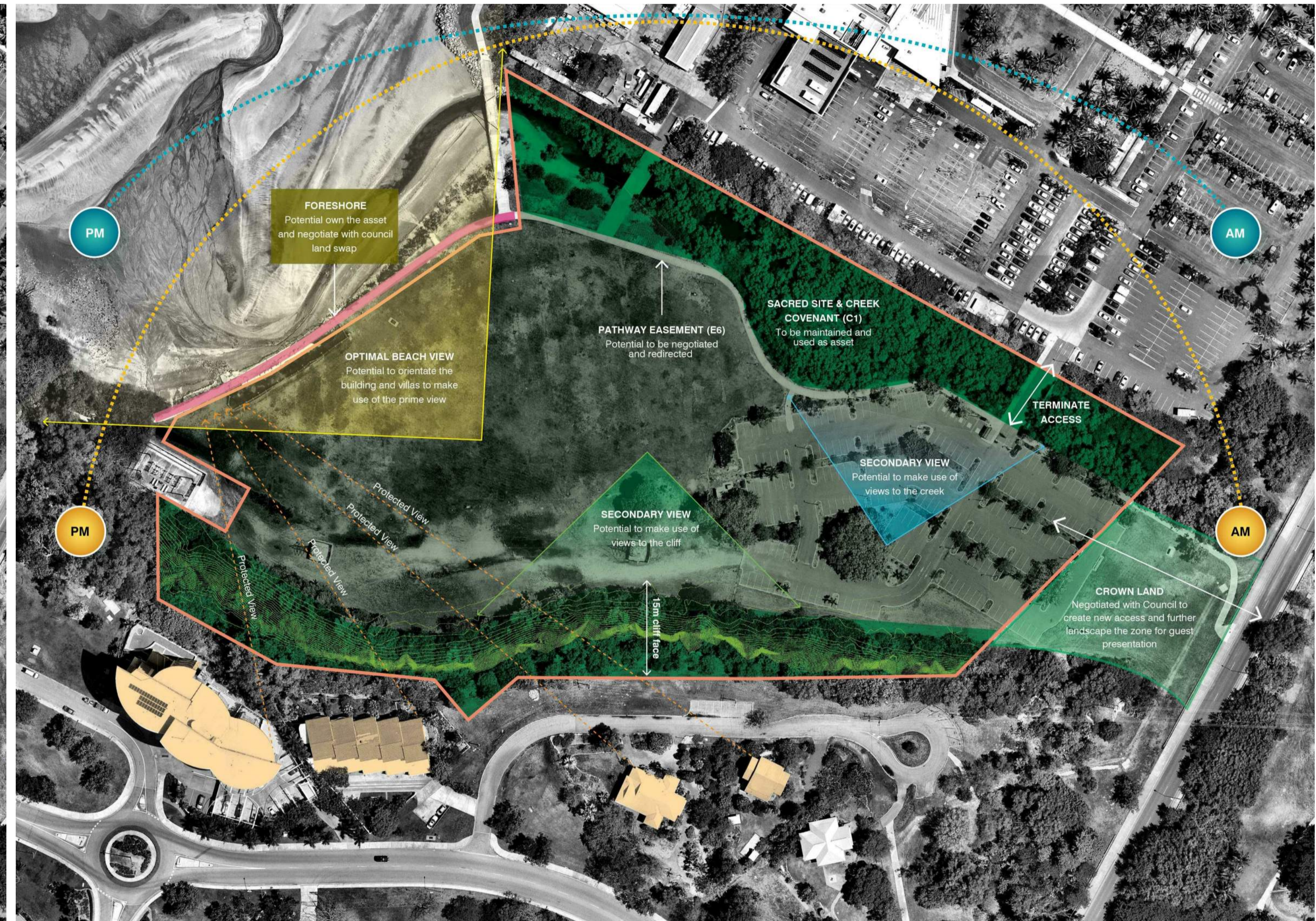
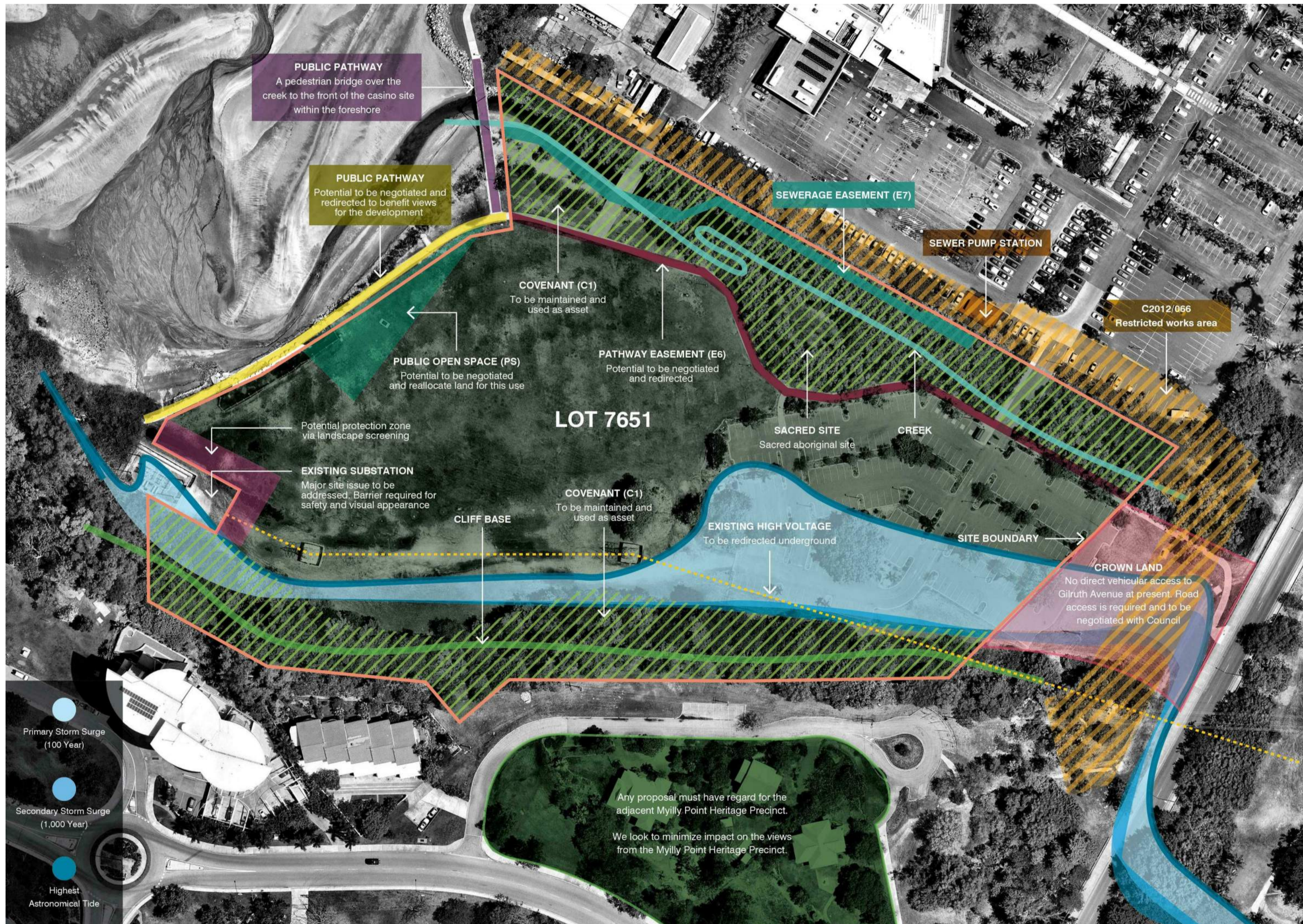
ISSUE FOR INFORMATION

REVISION BUILDING / ATTRIBUTE  
 P10 12°26'59" S  
 130°49'45" E

DRAWING NO.

TP0.02



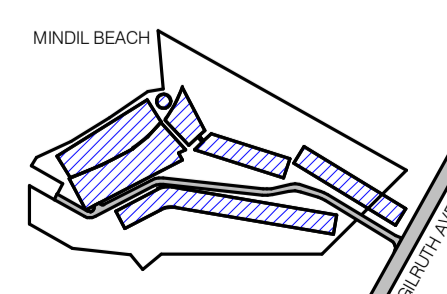
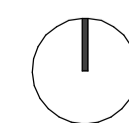


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P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

CLIENT  
 DAVID DO AWI

DRAWING SCALE  
 SHEET SIZE  
 PROJECT NO

DRAWING DATE  
 CHECK  
 DRAWN



DRAWING TITLE  
 SITE OPPORTUNITIES &  
 CONSTRAINTS

PROJECT NAME  
 LITTLE MINDIL

ISSUE FOR INFORMATION

REVISION BUILDING / ATTRIBUTE  
**P11** 12°26'59" S  
 130°49'45" E

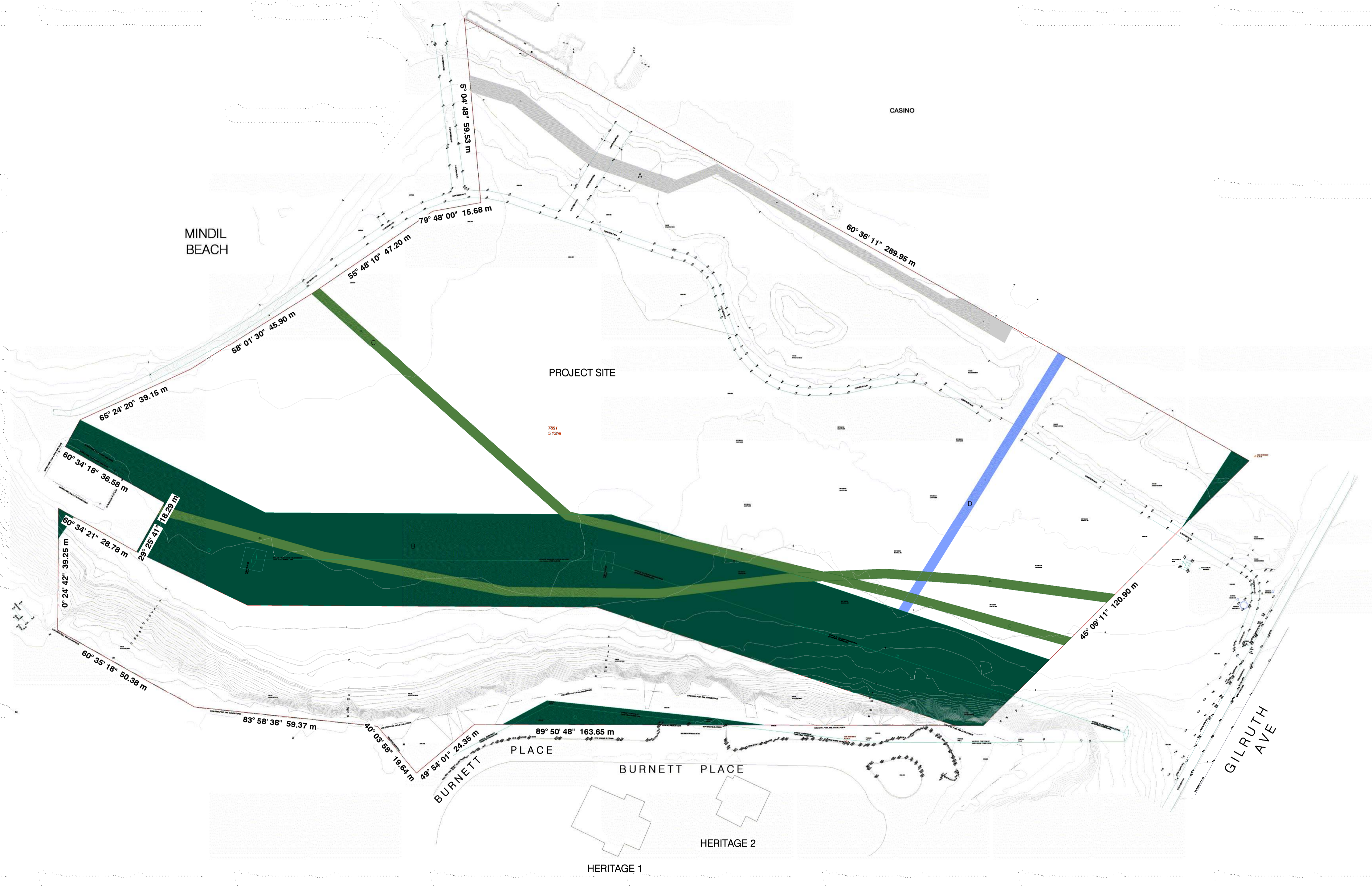
DRAWING NO.

**TP0.03**



**EASEMENT LEGEND**

- Ⓐ = EASEMENT (SEWERAGE) BENEFIT TO THE POWER & WATER CORPORATION.
- Ⓑ = EASEMENT (ELECTRICITY SUPPLY) BENEFIT TO THE POWER & WATER CORPORATION.
- Ⓒ = EASEMENT (ELECTRONIC COMMUNICATIONS SUPPLY) BENEFIT TO THE POWER & WATER CORPORATION.
- Ⓓ = EASEMENT (RIGHT OF WAY) BENEFIT TO THE POWER & WATER CORPORATION.

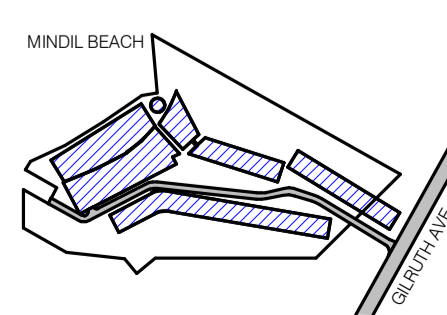
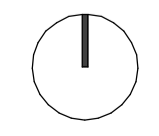


1 SITE PLAN - EXISTING  
1 : 750

**HACHEM ARCHITECTURE INTERIOR MARKETING**  
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PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

CLIENT  
 DAVID DO AWI

DRAWING SCALE  
 As indicated

DRAWING DATE  
 22/12/20

SHEET SIZE  
 A1

CHECK  
 EP

PROJECT NO.  
 257

DRAWN  
 KS



DRAWING TITLE  
 EXISTING SITE CONDITIONS

PROJECT NAME  
 LITTLE MINDIL

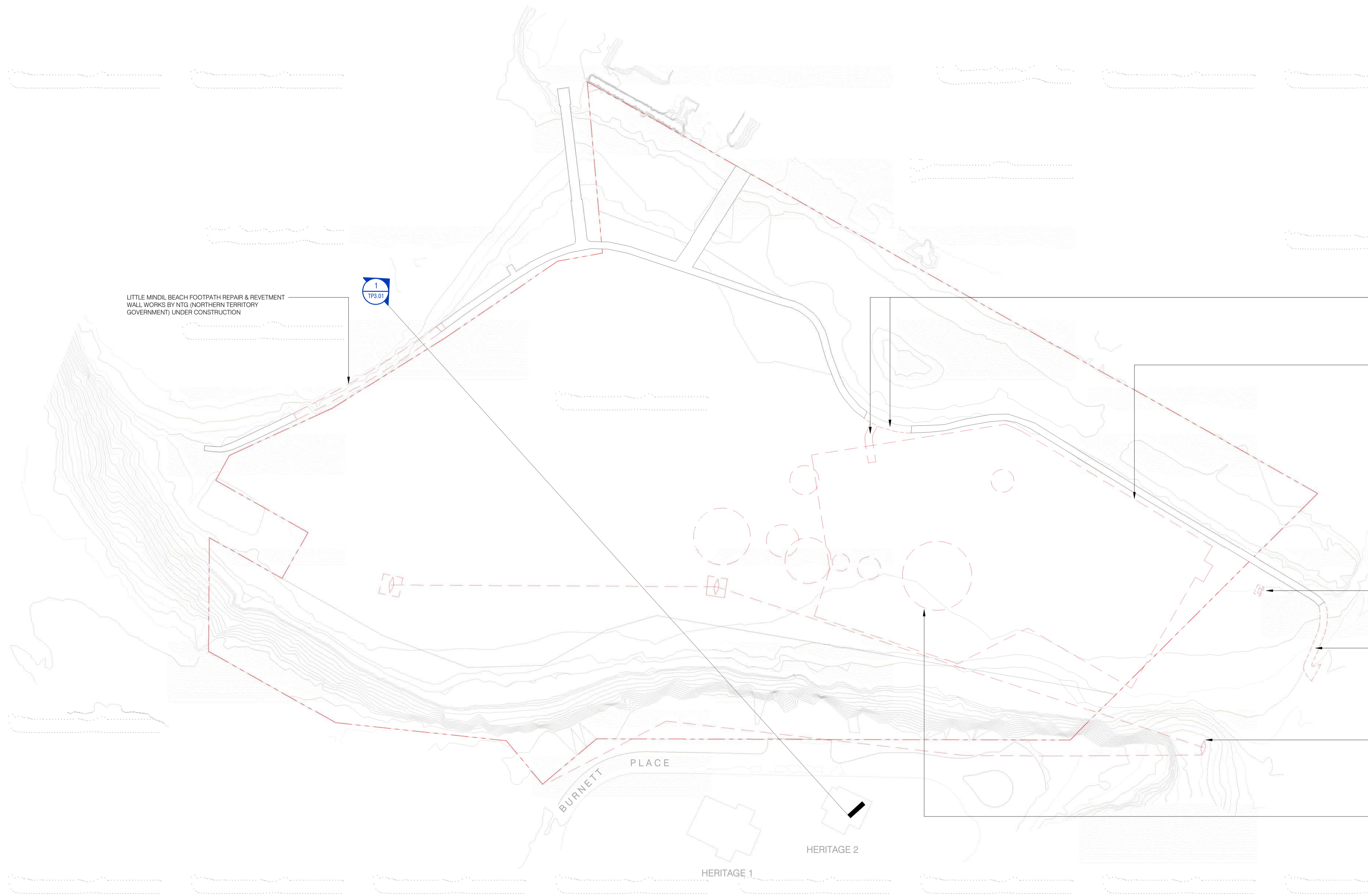
**ISSUE FOR INFORMATION**

REVISION BUILDING / ATTRIBUTE  
**P11** 12°26'59" S  
 130°49'45" E

DRAWING NO.

**TP0.11**





LITTLE MINDIL BEACH FOOTPATH REPAIR & REVETMENT WALL WORKS BY NTG (NORTHERN TERRITORY GOVERNMENT) UNDER CONSTRUCTION



REFER TO ENGINEERING SERVICES REPORT BY ADG PREPARED AS ADDITIONAL INFORMATION IN SUPPORT OF THIS DEVELOPMENT APPLICATION.  
 DETAILED ENGINEERING DIAGRAMS & MANAGEMENT REQUIREMENTS FOR THE PROPOSED DEVELOPMENT ARE TO BE SUBMITTED TO THE RELEVANT AUTHORITY FOR APPROVAL PRIOR TO ANY WORKS COMMENCING ON SITE.  
 TELSTRA & OTHER COMMUNICATION INFRASTRUCTURE TO BE RE-ROUTED SUBJECT TO APPROVAL.

EXISTING PATH TO BE DEMOLISHED SHOWN DASHED

EXISTING CAR PARK TO BE DEMOLISHED SHOWN DASHED

EXISTING (11KV) UNDERGROUND HV CABLES TO BE DE-COMMISSIONED AND SUBSTATION 3044 (SHOWN AS ELECTRICAL BOX AS PER SURVEY) TO BE REMOVED AS PART OF THIS PROPOSED DEVELOPMENT.

EXISTING PATH TO BE DEMOLISHED SHOWN DASHED

HIGH VOLTAGE PYLONS & OVERHEAD POWERLINES (66KV) TO BE RE-LOCATED UNDERGROUND SUBJECT TO APPROVAL

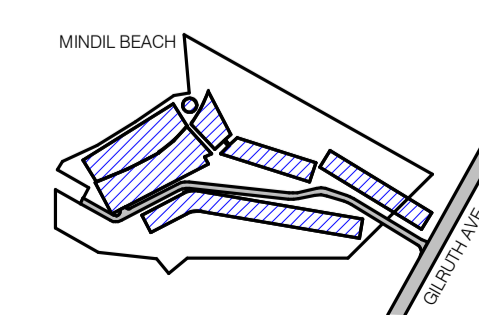
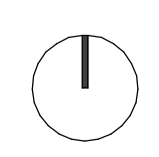
ALL EXISTING TREES ON SITE EXCLUDING THOSE LOCATED WITHIN COVENANT C1 (CLIFF BASE / ENCASCIPMENT & SACRED SITE) TO BE REMOVED AND REPLACED - REFER TO LANDSCAPE PLAN BY CLOUSTON ASSOCIATES  
 \* TREES SHOWN DASHED IN RED ARE INDICATIVE ONLY. ADDITIONAL TREES NOT SHOWN ON THIS DRAWING MAY REQUIRE REMOVAL

**1** SITE PLAN - DEMOLITION  
 1 : 750

**HACHEM ARCHITECTURE INTERIOR MARKETING**  
 HACHEM.COM.AU LEVEL 3, 2 DREWERY PLACE 183 WESTON STREET  
 INFO@HACHEM.COM.AU MELBOURNE 3000 BRUNSWICK EAST 3057  
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P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
**25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN**

DRAWING SCALE  
**1 : 750**

SHEET SIZE  
**A1**

PROJECT NO  
**257**

CLIENT  
**DAVID DO AWI**

DRAWING DATE  
**22/12/20**

CHECK  
**EP**

DRAWN  
**KS**



DRAWING TITLE  
**DEMOLITION PLAN**

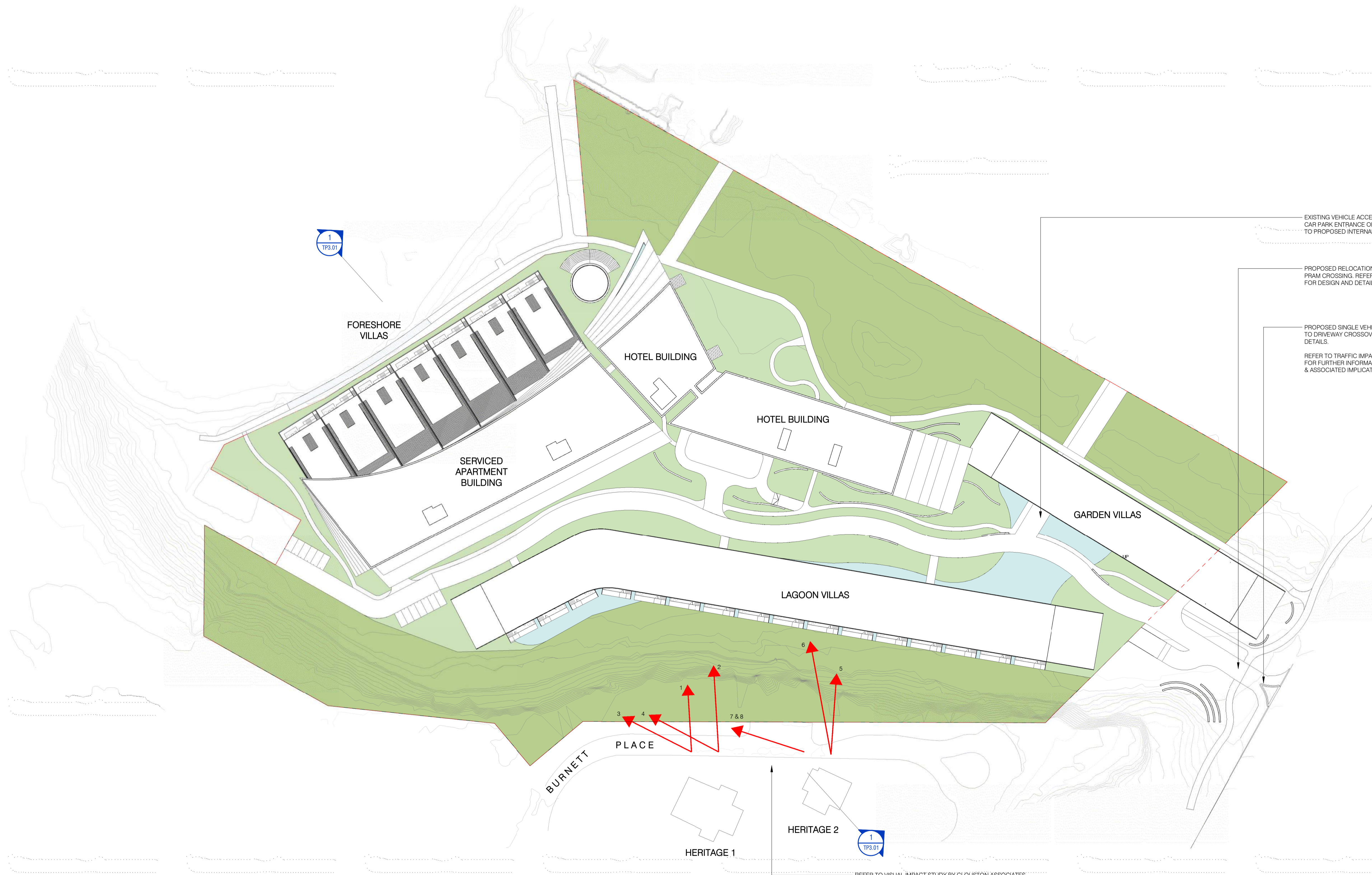
PROJECT NAME  
**LITTLE MINDIL**

**ISSUE FOR INFORMATION**

REVISION BUILDING / ATTRIBUTE  
**P11** 12°26'59" S  
 130°49'45" E

DRAWING NO.  
**TP0.12**





1  
TP3.01

EXISTING VEHICLE ACCESS ROAD VIA ADJACENT MINDIL BEACH CASINO CAR PARK ENTRANCE ON CASINO DRIVE TO REMAIN & BE CONNECTED TO PROPOSED INTERNAL ROAD NETWORK.

PROPOSED RELOCATION OF EXISTING PEDESTRIAN PATH & PROPOSED PRAM CROSSING. REFER TO DRIVEWAY CROSSOVER DRAWINGS BY ADJ FOR DESIGN AND DETAILS.

PROPOSED SINGLE VEHICULAR ACCESS POINT / CROSSOVER. REFER TO DRIVEWAY CROSSOVER DRAWINGS BY ADJ FOR DESIGN AND DETAILS.

REFER TO TRAFFIC IMPACT ASSESSMENT PREPARED BY SJ TRAFFIC FOR FURTHER INFORMATION IN REGARD TO THE TRAFFIC GENERATION & ASSOCIATED IMPLICATIONS RELEVANT TO THIS PROPOSAL.

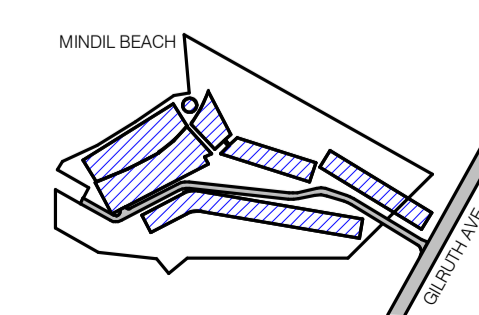
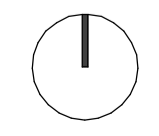
REFER TO VISUAL IMPACT STUDY BY CLOUSTON ASSOCIATES  
CAMERA VIEWS SHOWN IN RED  
- VIEWS 1, 3, 5, 7 ARE FROM 1.7m ABOVE NGL  
- VIEWS 2, 4, 6, 8 ARE FROM 4.5m ABOVE NGL

1 SITE PLAN - PROPOSED 1:750

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P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
25 GILRUTH AVENUE,  
THE GARDENS, DARWIN

CLIENT  
DAVID DO AWI

DRAWING SCALE  
1 : 750

DRAWING DATE  
22/12/20

SHEET SIZE  
A1

CHECK  
EP

PROJECT NO.  
257

DRAWN  
KS



DRAWING TITLE  
PROPOSED SITE PLAN

PROJECT NAME  
LITTLE MINDIL

ISSUE FOR INFORMATION

REVISION  
P11

BUILDING / ATTRIBUTE  
12°26'59" S  
130°49'45" E

DRAWING NO.  
**TP0.13**



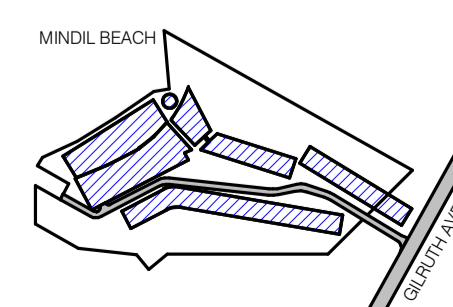


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P11	ISSUE FOR COORDINATION	22/01/21



PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

DRAWING SCALE SHEET SIZE PROJECT NO  
 A1 257

CLIENT  
 DAVID DO AWI

DRAWING DATE CHECK DRAWN  
 22/01/21 EP KS



DRAWING TITLE  
 PERSPECTIVE IMAGES

PROJECT NAME  
 LITTLE MINDIL

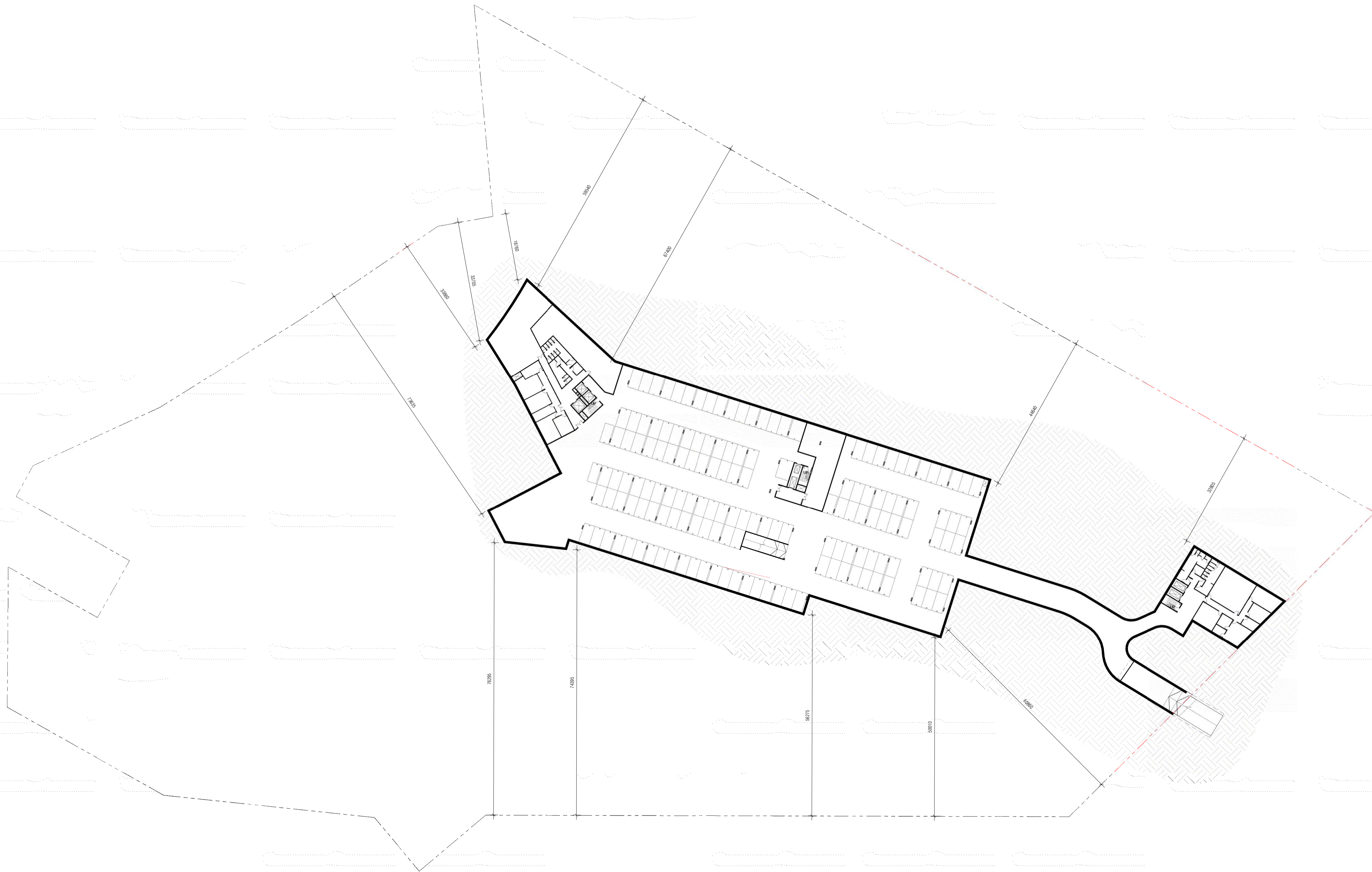
ISSUE FOR INFORMATION

REVISION BUILDING / ATTRIBUTE  
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 130°49'45" E

DRAWING NO.

TP0.21



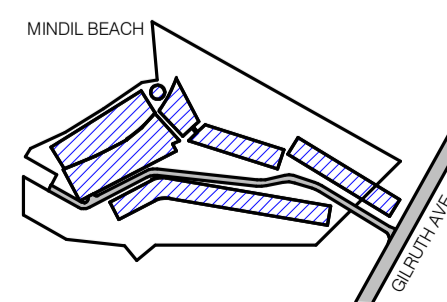
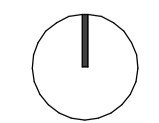


**1** OVERALL PLAN - BASEMENT 01  
1 : 500

**HACHEM ARCHITECTURE INTERIOR MARKETING**  
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PROJECT LOCATION  
**25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN**

DRAWING SCALE  
**1 : 500**

SHEET SIZE  
**A1**

PROJECT NO  
**257**

CLIENT  
**DAVID DO AWI**

DRAWING DATE  
**22/12/20**

CHECK  
**EP**

DRAWN  
**KS**



DRAWING TITLE  
**OVERALL PLAN - SEMI-BASEMENT**

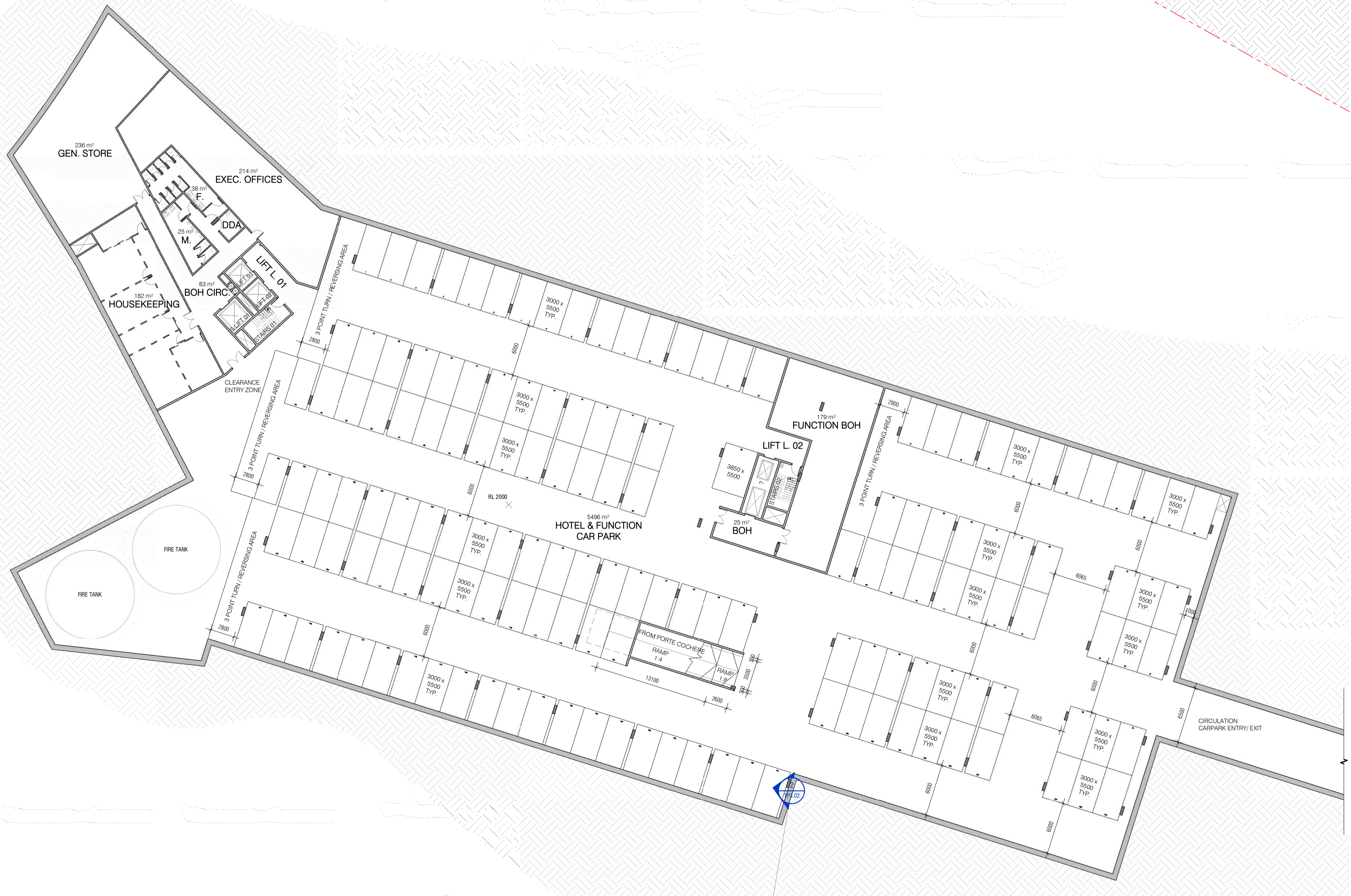
PROJECT NAME  
**LITTLE MINDIL**

REVISION BUILDING / ATTRIBUTE  
**P11 12°26'59" S  
 130°49'45" E**

DRAWING NO.  
**TP1.01**

ISSUE FOR INFORMATION





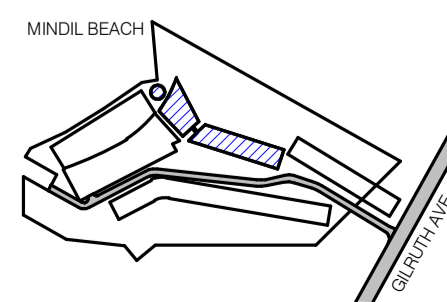
REFER TO TP1.03 / 1  
FOR ADDITIONAL INFORMATION

**1** SEMI-BASEMENT PLAN - HOTEL  
1 : 250

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PROJECT LOCATION  
25 GILRUTH AVENUE,  
THE GARDENS, DARWIN

DRAWING SCALE  
1 : 250

SHEET SIZE  
A1

PROJECT NO.  
257

CLIENT  
DAVID DO AWI

DRAWING DATE  
22/12/20

CHECK  
EP

DRAWN  
KS



DRAWING TITLE  
FLOOR PLAN - SEMI-BASEMENT -  
HOTEL - PART A

PROJECT NAME  
LITTLE MINDIL

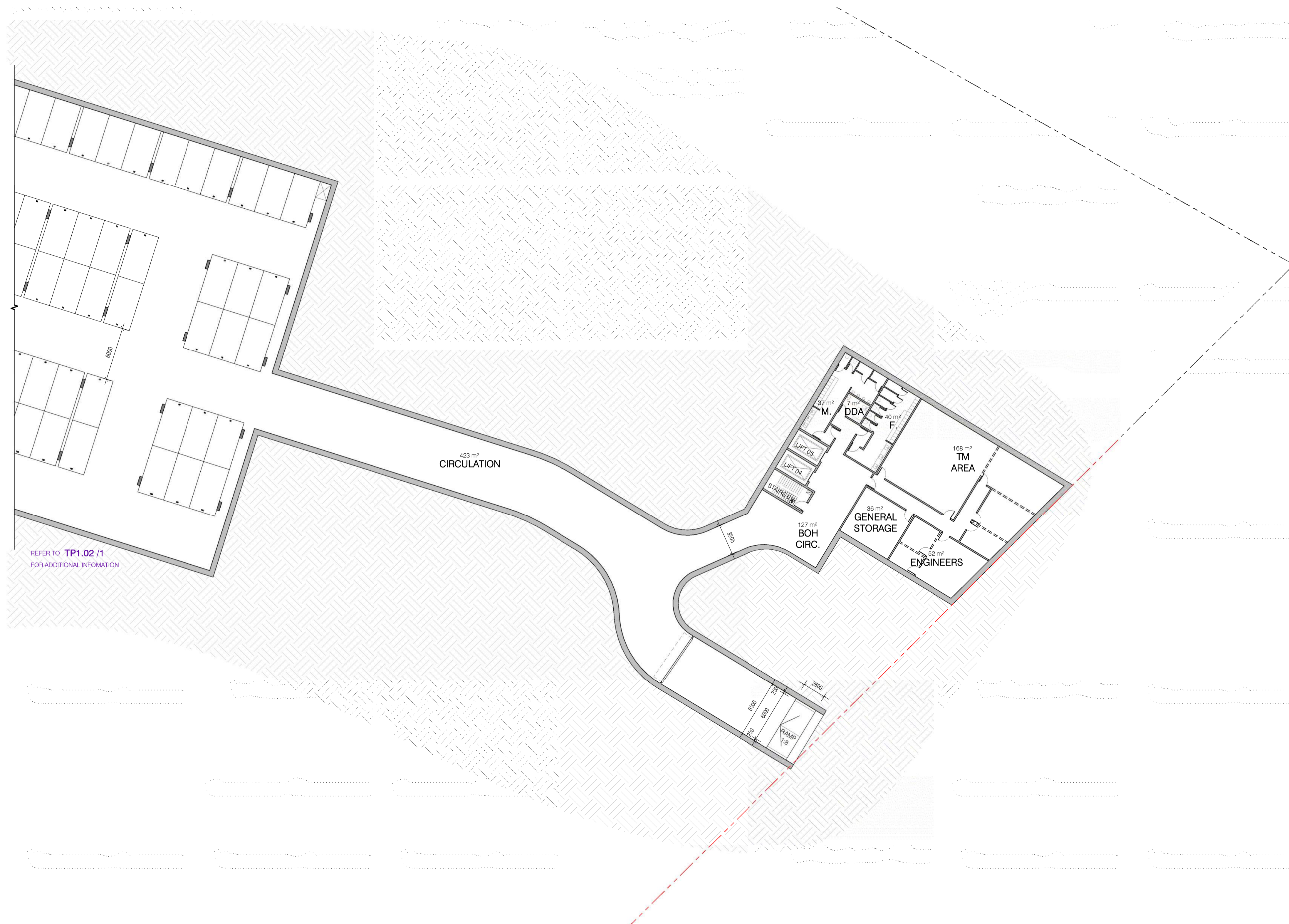
REVISION BUILDING / ATTRIBUTE  
P11 12°26'59" S  
130°49'45" E

DRAWING NO.

ISSUE FOR INFORMATION

**TP1.02**



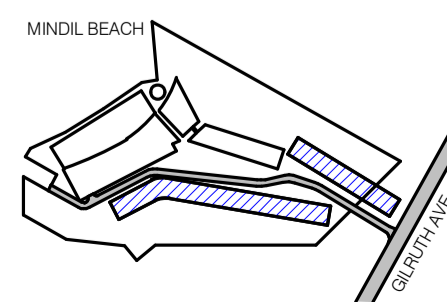
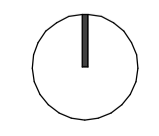


**1** SEMI-BASEMENT PLAN - HOTEL VILLAS  
1 : 250

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PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

DRAWING SCALE  
 1 : 250

CLIENT  
 DAVID DO AWI

DRAWING DATE  
 22/12/20

SHEET SIZE  
 A1

CHECK  
 EP

PROJECT NO  
 257

DRAWN  
 KS



DRAWING TITLE  
 FLOOR PLAN - SEMI-BASEMENT -  
 HOTEL - PART B

PROJECT NAME  
 LITTLE MINDIL

REVISION  
**P11**

BUILDING / ATTRIBUTE  
 12°26'59" S  
 130°49'45" E

DRAWING NO.  
**TP1.03**

ISSUE FOR INFORMATION



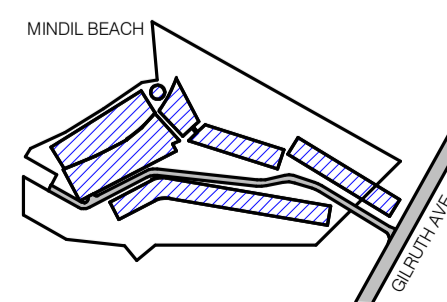
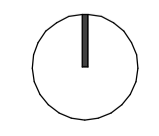


1 OVERALL PLAN - GROUND LEVEL  
1 : 500

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PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

DRAWING SCALE  
 1 : 500

SHEET SIZE  
 A1

PROJECT NO  
 257

CLIENT  
 DAVID DO AWI

DRAWING DATE  
 22/12/20

CHECK  
 EP

DRAWN  
 KS



DRAWING TITLE  
 OVERALL PLAN - GROUND LEVEL

PROJECT NAME  
 LITTLE MINDIL

ISSUE FOR INFORMATION  
 REVISION BUILDING / ATTRIBUTE  
**P11** 12°26'59" S  
 130°49'45" E

DRAWING NO.  
**TP1.04**



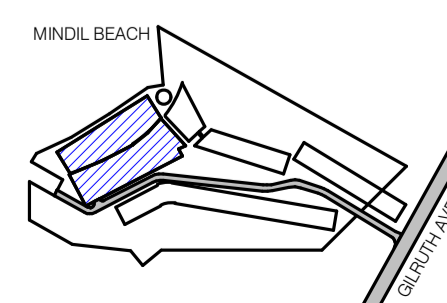
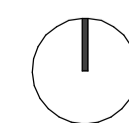


1 GROUND PLAN - APARTMENTS / LUXURY VILLAS  
1 : 250

HACHEM ARCHITECTURE INTERIOR MARKETING  
 HACHEM.COM.AU LEVEL 3, 2 DREWERY PLACE 183 WESTON STREET  
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P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

DRAWING SCALE  
 1 : 250

SHEET SIZE  
 A1

PROJECT NO.  
 257

CLIENT  
 DAVID DO AWI

DRAWING DATE  
 22/12/20

CHECK  
 EP

DRAWN  
 KS



DRAWING TITLE  
 FLOOR PLAN - GROUND LEVEL -  
 SERVICED APARTMENTS /  
 FORESHORE VILLAS

PROJECT NAME  
 LITTLE MINDIL

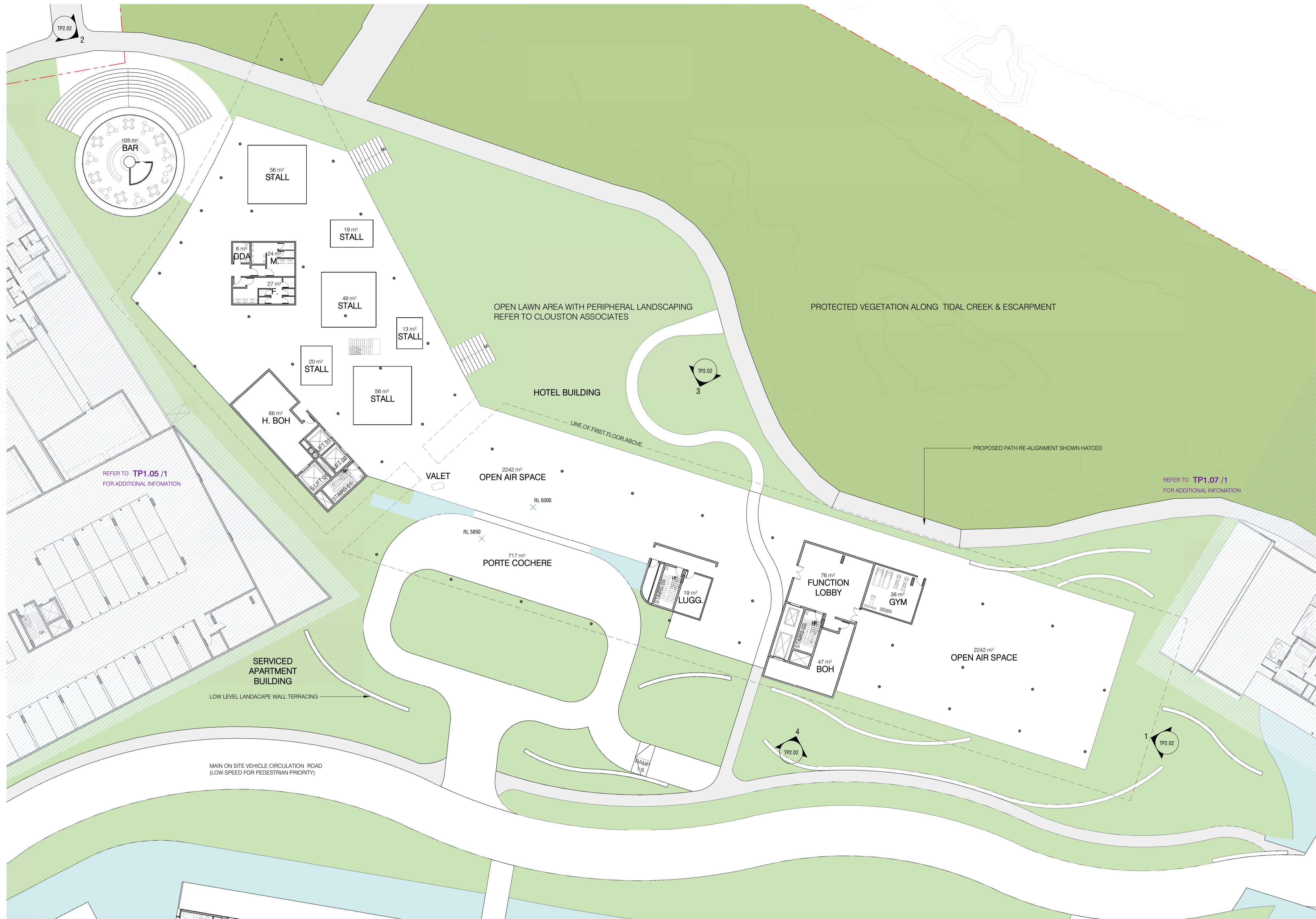
ISSUE FOR INFORMATION

REVISION BUILDING / ATTRIBUTE  
**P11** 12°26'59" S  
 130°49'45" E

DRAWING NO.

**TP1.05**



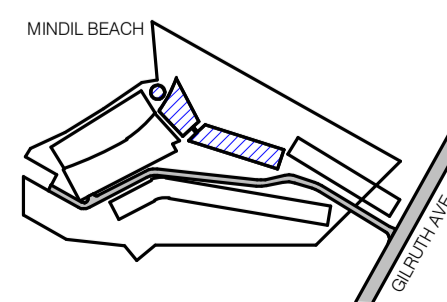
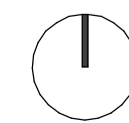


1 GROUND PLAN - HOTEL  
1 : 250

HACHEM ARCHITECTURE INTERIOR MARKETING  
HACHEM.COM.AU LEVEL 3, 2 DREWERY PLACE 183 WESTON STREET  
INFO@HACHEM.COM.AU MELBOURNE 3000 BRUNSWICK EAST 3057  
STUDIO +61 1300 734 560 VICTORIA, AUSTRALIA VICTORIA, AUSTRALIA

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REV.	DESCRIPTION	DATE
P11	ISSUE FOR COORDINATION	22/01/21
P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
25 GILRUTH AVENUE,  
THE GARDENS, DARWIN

DRAWING SCALE  
1 : 250

SHEET SIZE  
A1

PROJECT NO  
257

CLIENT  
DAVID DO AWI

DRAWING DATE  
22/12/20

CHECK  
EP

DRAWN  
KS



DRAWING TITLE  
FLOOR PLAN - GROUND LEVEL -  
HOTEL

PROJECT NAME  
LITTLE MINDIL

ISSUE FOR INFORMATION

REVISION BUILDING / ATTRIBUTE  
P11 12°26'59" S  
130°49'45" E

DRAWING NO.

TP1.06





REFER TO TP1.08 / 1 FOR ADDITIONAL INFORMATION

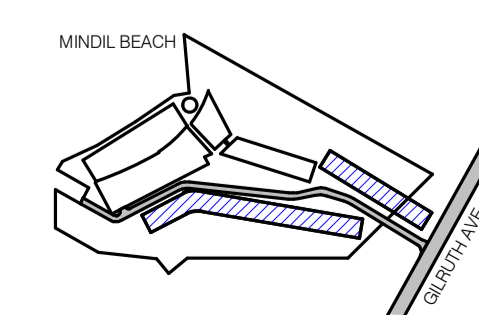
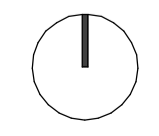
**1** GROUND PLAN - HOTEL VILLAS - PART A

1 : 250

**HACHEM ARCHITECTURE INTERIOR MARKETING**  
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PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

CLIENT  
 DAVID DO AWI

DRAWING SCALE  
 1 : 250

DRAWING DATE  
 22/12/20

SHEET SIZE  
 A1

CHECK  
 EP

PROJECT NO.  
 257

DRAWN  
 KS



DRAWING TITLE  
**FLOOR PLAN - GROUND LEVEL - GARDEN & LAGOON VILLAS - PART A**

PROJECT NAME  
 LITTLE MINDIL

REVISION  
**P11**

BUILDING / ATTRIBUTE  
 12°26'59" S  
 130°49'45" E

DRAWING NO.

ISSUE FOR INFORMATION

**TP1.07**



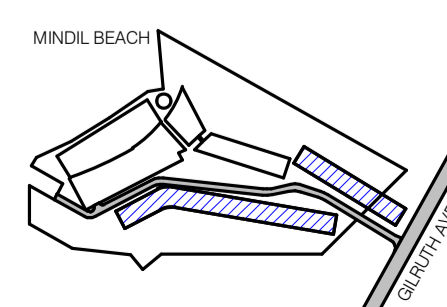
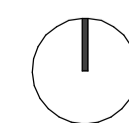


1 GROUND PLAN - HOTEL VILLAS - PART B  
1 : 250

HACHEM ARCHITECTURE INTERIOR MARKETING  
 HACHEM.COM.AU LEVEL 3, 2 CREWERY PLACE 183 WESTON STREET  
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PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

DRAWING SCALE  
 1 : 250

SHEET SIZE  
 A1

PROJECT NO  
 257

CLIENT  
 DAVID DO AWI

DRAWING DATE  
 22/12/20

CHECK  
 EP

DRAWN  
 KS



DRAWING TITLE  
 FLOOR PLAN - GROUND LEVEL -  
 LAGOON VILLAS - PART B

PROJECT NAME  
 LITTLE MINDIL

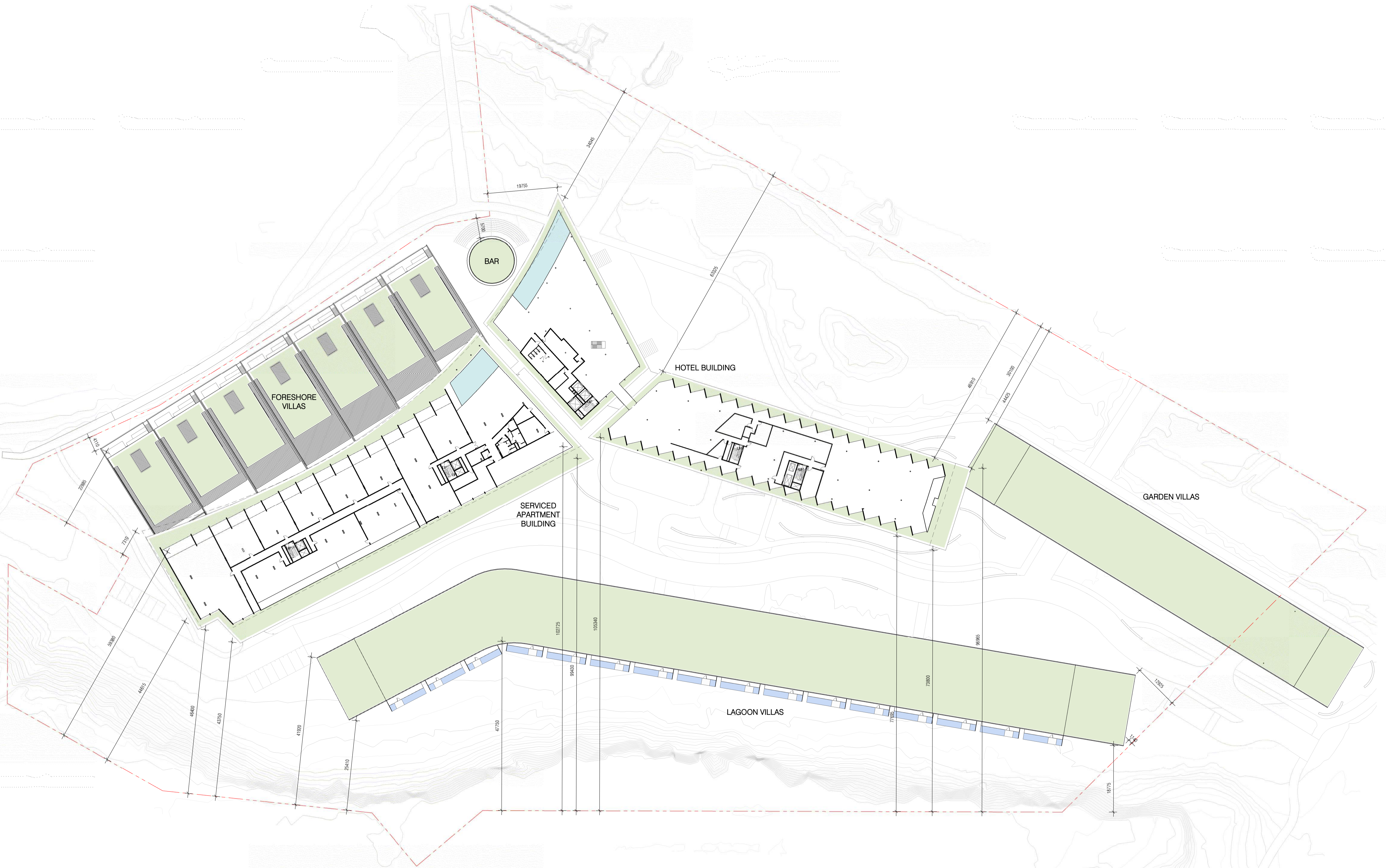
ISSUE FOR INFORMATION

REVISION BUILDING / ATTRIBUTE  
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DRAWING NO.

**TP1.08**



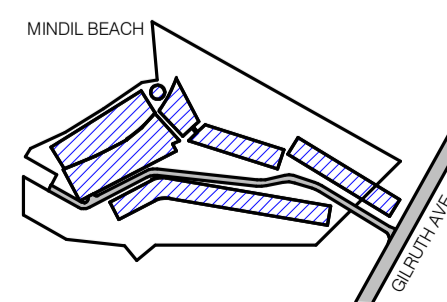
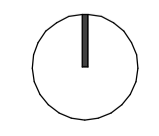


1 OVERALL PLAN - LEVEL 01  
1:500

HACHEM ARCHITECTURE INTERIOR MARKETING  
 HACHEM.COM.AU LEVEL 3, 2 DREWEERY PLACE 183 WESTON STREET  
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REV.	DESCRIPTION	DATE
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PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

DRAWING SCALE  
 1:500

SHEET SIZE  
 A1

PROJECT NO  
 257

CLIENT  
 DAVID DO AWI

DRAWING DATE  
 21/12/20

CHECK  
 EP

DRAWN  
 KS



DRAWING TITLE  
 OVERALL PLAN - LEVEL 01

PROJECT NAME  
 LITTLE MINDIL

ISSUE FOR INFORMATION

REVISION BUILDING / ATTRIBUTE  
**P11** 12°26'59" S  
 130°49'45" E

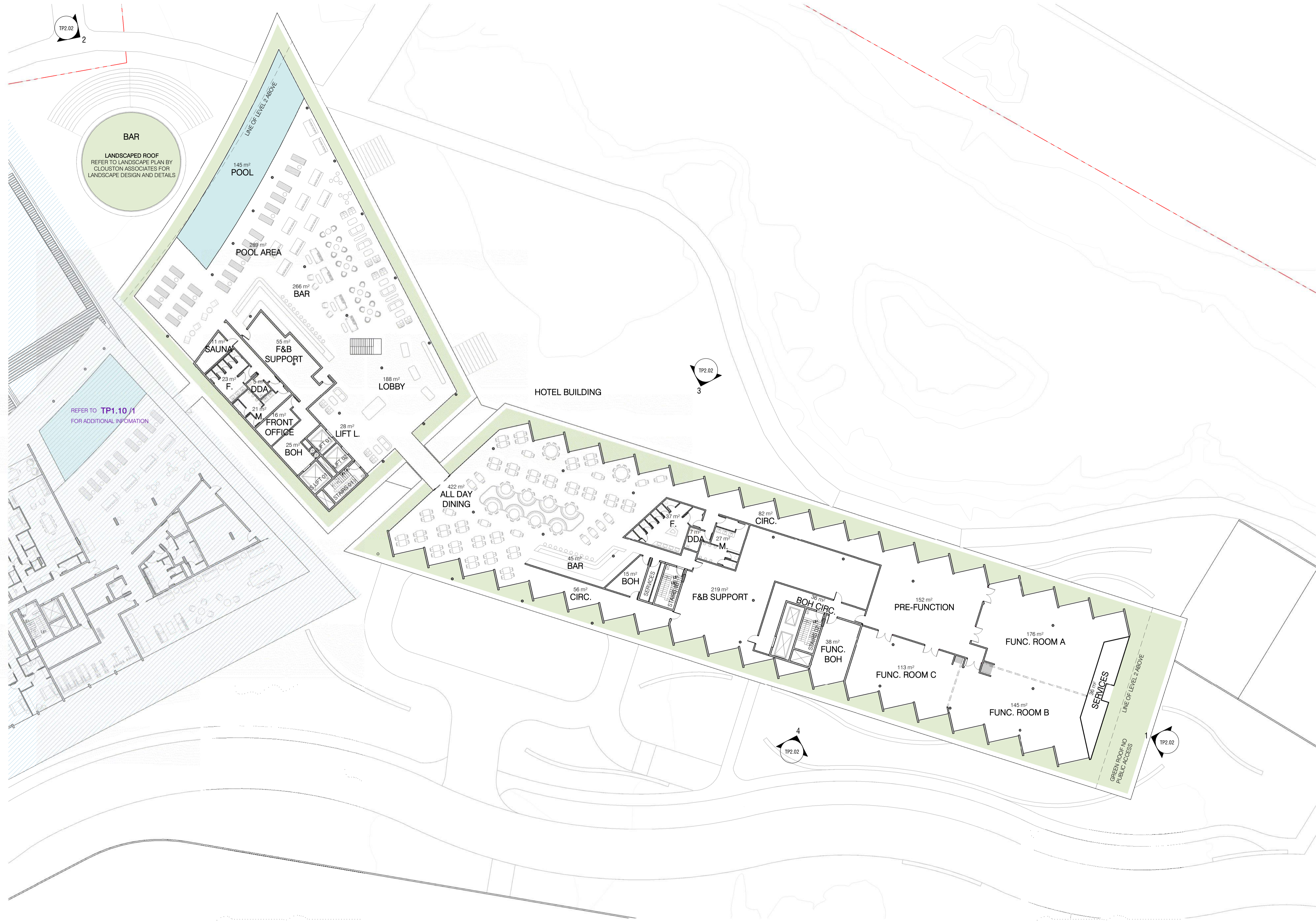
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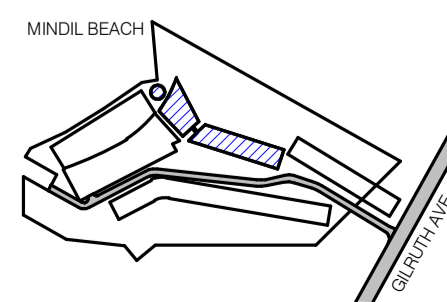
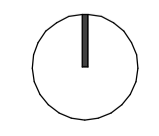


1 FLOOR PLAN - LEVEL 01 - HOTEL  
1 : 250

HACHEM ARCHITECTURE INTERIOR MARKETING  
 HACHEM.COM.AU LEVEL 3, 2 DREWERY PLACE 188 WESTON STREET  
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P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

DRAWING SCALE  
 1 : 250

SHEET SIZE  
 A1

PROJECT NO.  
 257

CLIENT  
 DAVID DO AWI

DRAWING DATE  
 22/12/20

CHECK  
 EP

DRAWN  
 KS



DRAWING TITLE  
 FLOOR PLAN - LEVEL 01 - HOTEL

PROJECT NAME  
 LITTLE MINDIL

REVISION BUILDING / ATTRIBUTE  
**P11** 12°26'59" S  
 130°49'45" E

DRAWING NO.

ISSUE FOR INFORMATION

**TP1.11**



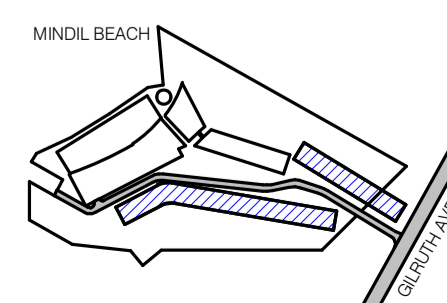
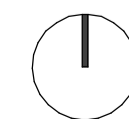


**1** ROOF PLAN - HOTEL VILLAS - PART A  
1 : 250

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 HACHEM.COM.AU LEVEL 3, 2 DREWERY PLACE 183 WESTON STREET  
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P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

DRAWING SCALE  
 1 : 250

SHEET SIZE  
 A1

PROJECT NO  
 257

CLIENT  
 DAVID DO AWI

DRAWING DATE  
 12/22/20

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 EP

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 KS



DRAWING TITLE  
 ROOF PLAN - GARDEN & LAGOON  
 VILLAS - PART A

PROJECT NAME  
 LITTLE MINDIL

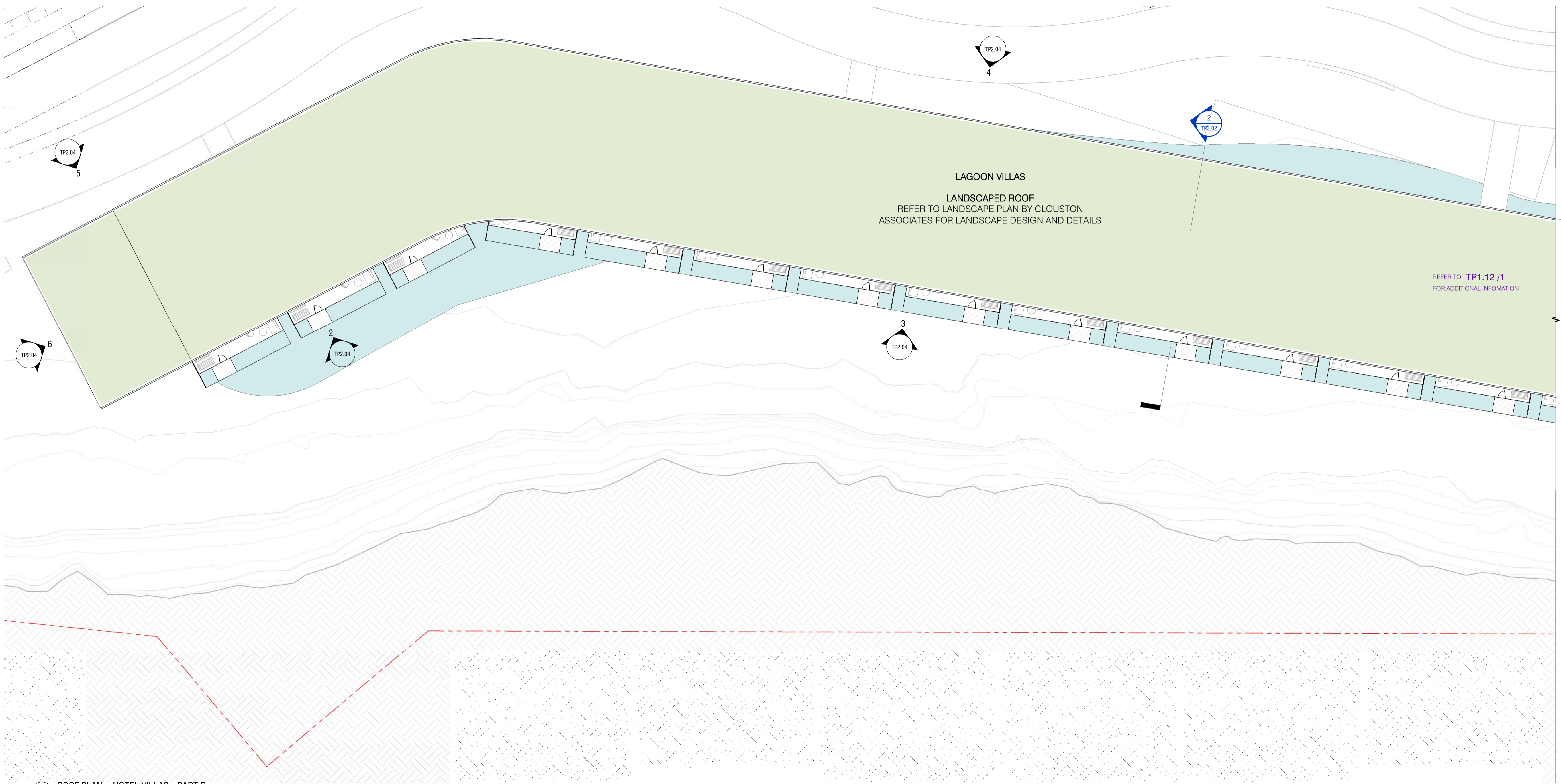
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DRAWING NO.

ISSUE FOR INFORMATION

**TP1.12**



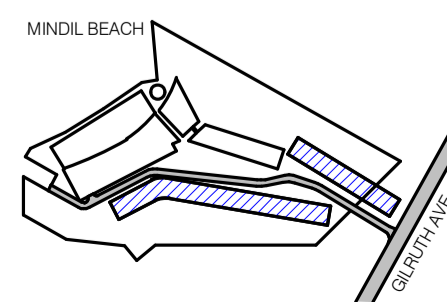
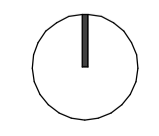


1 ROOF PLAN - HOTEL VILLAS - PART B  
1 : 250

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 HACHEM.COM.AU LEVEL 3, 2 CREWERY PLACE 183 WESTON STREET  
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PROJECT LOCATION  
25 GILRUTH AVENUE,  
THE GARDENS, DARWIN

CLIENT  
DAVID DO AWI

DRAWING SCALE  
1 : 250

DRAWING DATE  
12/22/20

SHEET SIZE  
A1

CHECK  
EP

PROJECT NO  
257

DRAWN  
KS



DRAWING TITLE  
ROOF PLAN - LAGOON VILLAS -  
PART B

PROJECT NAME  
LITTLE MINDIL

ISSUE FOR INFORMATION

REVISION BUILDING / ATTRIBUTE  
P11 12°26'59" S  
130°49'45" E

DRAWING NO.

**TP1.13**



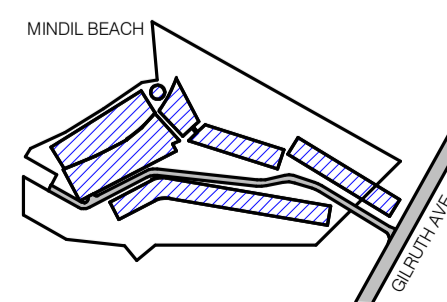
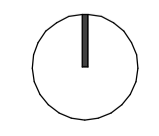


1 OVERALL PLAN - LEVEL 02  
1:500

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 HACHEM.COM.AU LEVEL 3, 2 DREWEERY PLACE 183 WESTON STREET  
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P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

DRAWING SCALE  
 1:500

SHEET SIZE  
 A1

PROJECT NO  
 257

CLIENT  
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 21/12/20

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DRAWING TITLE  
 OVERALL PLAN - LEVEL 02

PROJECT NAME  
 LITTLE MINDIL

ISSUE FOR INFORMATION

REVISION  
**P11**

BUILDING / ATTRIBUTE  
 12°26'59" S  
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DRAWING NO.

**TP1.14**





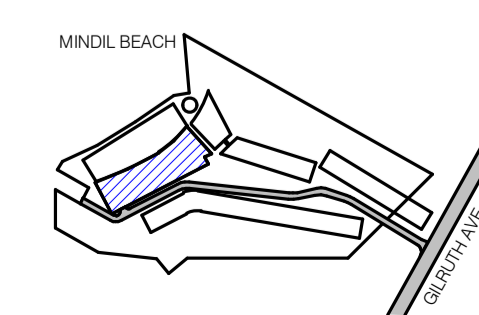
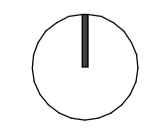
**1 LEVEL 02 PLAN - APARTMENTS**

1 : 250

**HACHEM ARCHITECTURE INTERIOR MARKETING**  
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PROJECT LOCATION  
**25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN**

CLIENT  
**DAVID DO AWI**

DRAWING SCALE  
**1 : 250**

DRAWING DATE  
**22/12/20**

SHEET SIZE  
**A1**

CHECK  
**EP**

PROJECT NO.  
**257**

DRAWN  
**KS**



DRAWING TITLE  
**FLOOR PLAN - LEVEL 02 -  
 SERVICED APARTMENTS**

PROJECT NAME  
**LITTLE MINDIL**

**ISSUE FOR INFORMATION**

REVISION BUILDING / ATTRIBUTE  
**P11 12°26'59" S  
 130°49'45" E**

DRAWING NO.  
**TP1.15**



TP2.02  
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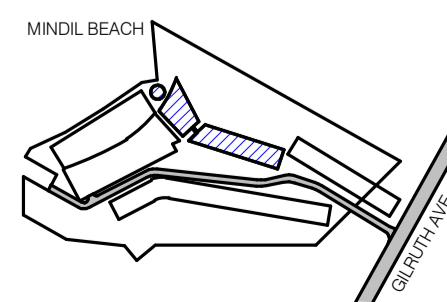
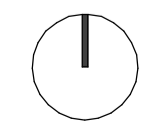
REFER TO TP1.15 / 1  
FOR ADDITIONAL INFORMATION

1 LEVEL 02 PLAN - HOTEL  
1 : 250

HACHEM ARCHITECTURE INTERIOR MARKETING  
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P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

DRAWING SCALE  
 1 : 250

SHEET SIZE  
 A1

PROJECT NO.  
 257

CLIENT  
 DAVID DO AWI

DRAWING DATE  
 21/12/20

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DRAWING TITLE  
 FLOOR PLAN - LEVEL 02 - HOTEL

PROJECT NAME  
 LITTLE MINDIL

ISSUE FOR INFORMATION

REVISION BUILDING / ATTRIBUTE  
**P11** 12°26'59" S  
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DRAWING NO.

**TP1.16**



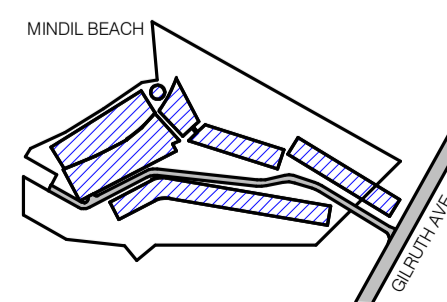
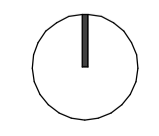


**1** OVERALL PLAN - LEVEL 03  
1 : 500

**HACHEM ARCHITECTURE INTERIOR MARKETING**  
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P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

DRAWING SCALE  
 1 : 500

SHEET SIZE  
 A1

PROJECT NO  
 257

CLIENT  
 DAVID DO AWI

DRAWING DATE  
 21/12/20

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DRAWING TITLE  
 OVERALL PLAN - LEVEL 03

PROJECT NAME  
 LITTLE MINDIL

ISSUE FOR INFORMATION

REVISION  
**P11**

BUILDING / ATTRIBUTE  
 12°26'59" S  
 130°49'45" E

DRAWING NO.  
**TP1.17**



**1 LEVEL 03 PLAN - APARTMENTS**

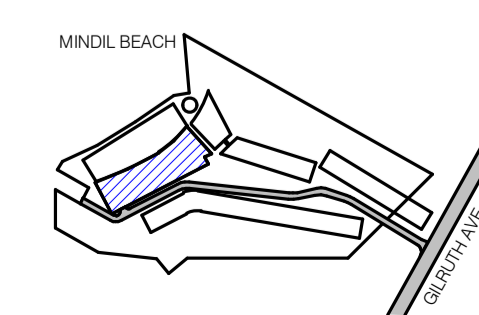
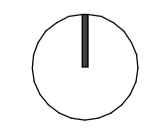
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**HACHEM ARCHITECTURE INTERIOR MARKETING**  
 HACHEM.COM.AU LEVEL 3, 2 DREWEYRY PLACE 183 WESTON STREET  
 INFO@HACHEM.COM.AU MELBOURNE 3000 BRUNSWICK EAST 3057  
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REV.	DESCRIPTION	DATE
P11	ISSUE FOR COORDINATION	22/01/21
P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
**25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN**

CLIENT  
**DAVID DO AWI**

DRAWING SCALE  
**1 : 250**

DRAWING DATE  
**22/12/20**

SHEET SIZE  
**A1**

CHECK  
**EP**

PROJECT NO.  
**257**

DRAWN  
**KS**



DRAWING TITLE  
**FLOOR PLAN - LEVEL 03 -  
 SERVICED APARTMENTS**

PROJECT NAME  
**LITTLE MINDIL**

**ISSUE FOR INFORMATION**

REVISION	BUILDING / ATTRIBUTE
<b>P11</b>	12°26'59" S 130°49'45" E

DRAWING NO.  
**TP1.18**



SERVICED APARTMENT BUILDING

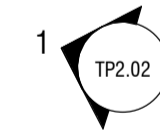
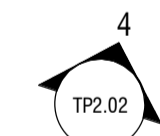
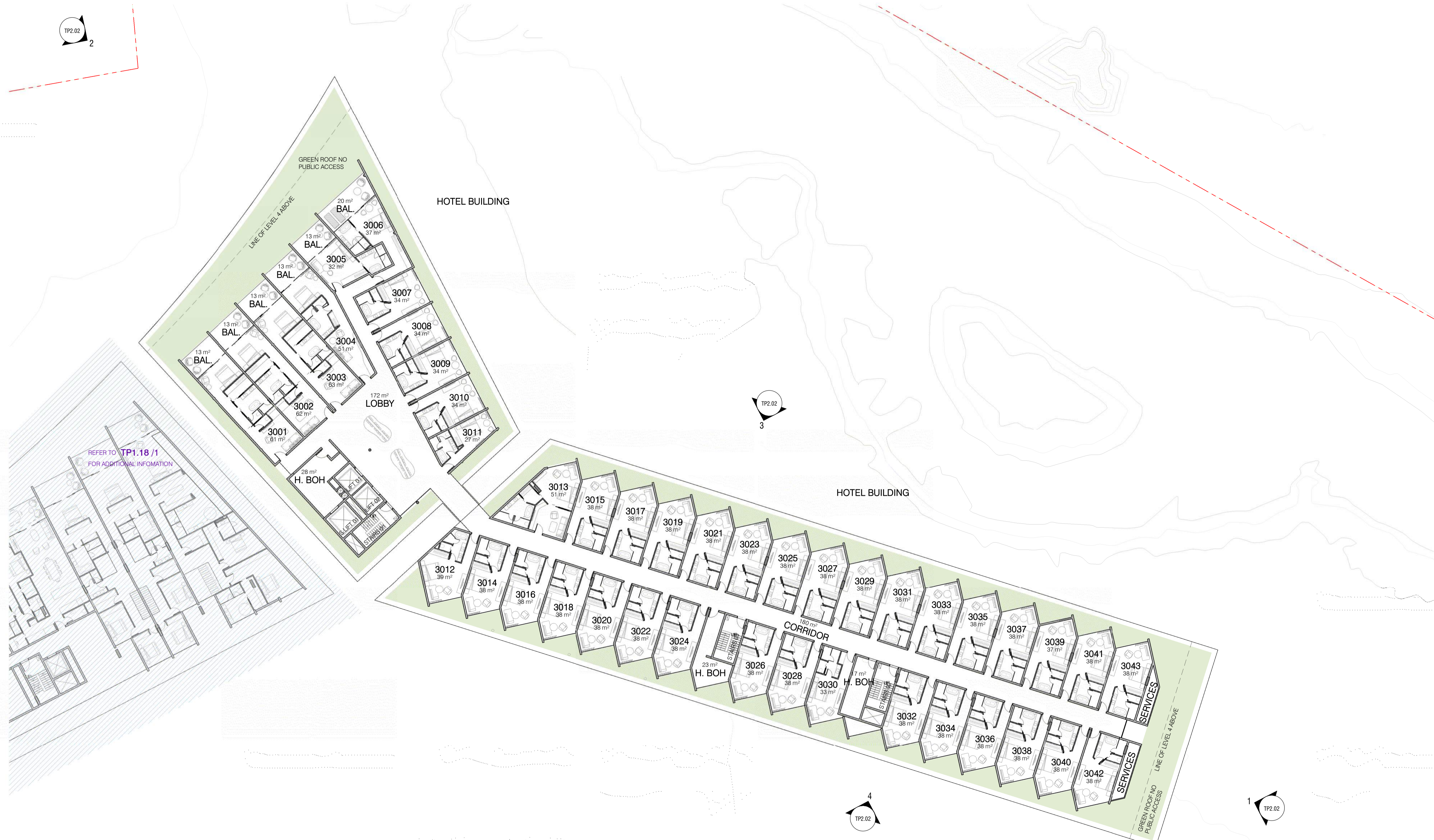
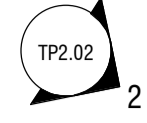
LEVEL 4 ABOVE

GREEN ROOF NO PUBLIC ACCESS

LEVEL 4 ABOVE

REFER TO TP1.19/1 FOR ADDITIONAL INFORMATION



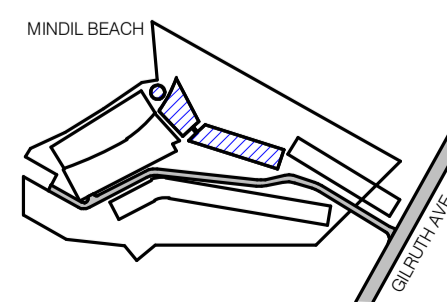
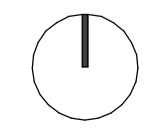


1 LEVEL 03 PLAN - HOTEL 1 : 250

HACHEM ARCHITECTURE INTERIOR MARKETING  
HACHEM.COM.AU LEVEL 3, 2 DREWEYRY PLACE 183 WESTON STREET  
INFO@HACHEM.COM.AU MELBOURNE 3000 BRUNSWICK EAST 3057  
STUDIO +61 1300 734 560 VICTORIA, AUSTRALIA VICTORIA, AUSTRALIA

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REV.	DESCRIPTION	DATE
P11	ISSUE FOR COORDINATION	22/01/21
P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
25 GILRUTH AVENUE,  
THE GARDENS, DARWIN

CLIENT  
DAVID DO AWI

DRAWING SCALE  
1 : 250

DRAWING DATE  
22/12/20

SHEET SIZE  
A1

CHECK  
EP

PROJECT NO.  
257

DRAWN  
KS



DRAWING TITLE  
FLOOR PLAN - LEVEL 03 - HOTEL

PROJECT NAME  
LITTLE MINDIL

ISSUE FOR INFORMATION

REVISION BUILDING / ATTRIBUTE  
P11 12°26'59" S  
130°49'45" E

DRAWING NO.  
TP1.19



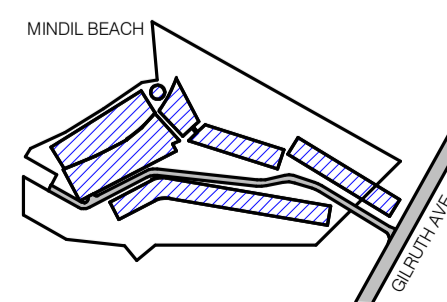
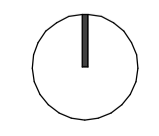


1 OVERALL PLAN - LEVEL 04  
1 : 500

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P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

DRAWING SCALE  
 1 : 500

SHEET SIZE  
 A1

PROJECT NO  
 257

CLIENT  
 DAVID DO AWI

DRAWING DATE  
 21/12/20

CHECK  
 EP

DRAWN  
 KS



DRAWING TITLE  
 OVERALL PLAN - LEVEL 04

PROJECT NAME  
 LITTLE MINDIL

ISSUE FOR INFORMATION

REVISION  
**P11**

BUILDING / ATTRIBUTE  
 12°26'59" S  
 130°49'45" E

DRAWING NO.

**TP1.20**





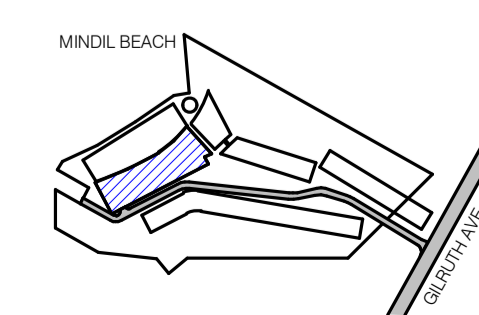
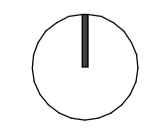
**1 LEVEL 04 PLAN - APARTMENTS**

1 : 250

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P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
**25 GILRUTH AVENUE, THE GARDENS, DARWIN**

CLIENT  
**DAVID DO AWI**

DRAWING SCALE  
**1 : 250**

DRAWING DATE  
**22/12/20**

SHEET SIZE  
**A1**

CHECK  
**EP**

PROJECT NO.  
**257**

DRAWN  
**KS**



DRAWING TITLE  
**FLOOR PLAN - LEVEL 04 - SERVICED APARTMENTS**

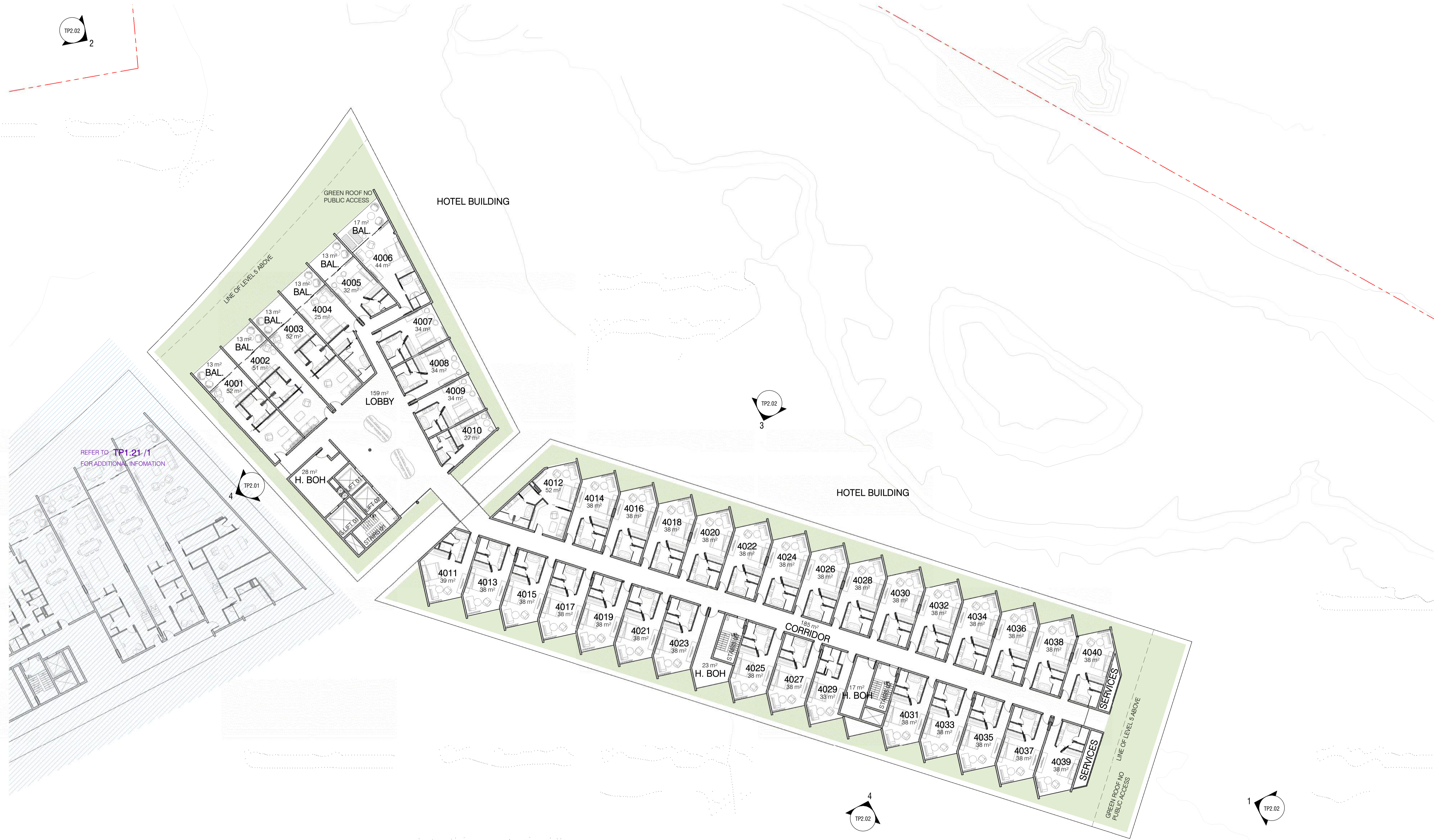
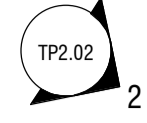
PROJECT NAME  
**LITTLE MINDIL**

**ISSUE FOR INFORMATION**

REVISION	BUILDING / ATTRIBUTE
<b>P11</b>	12°26'59" S 130°49'45" E

DRAWING NO.  
**TP1.21**





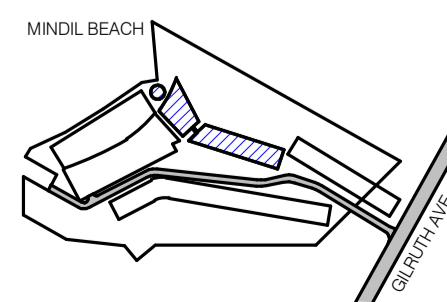
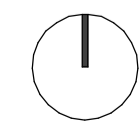
REFER TO TP1.21 /1 FOR ADDITIONAL INFORMATION

1 LEVEL 04 PLAN - HOTEL 1 : 250

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P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
25 GILRUTH AVENUE,  
THE GARDENS, DARWIN

DRAWING SCALE  
1 : 250

SHEET SIZE  
A1

PROJECT NO.  
257

DRAWING DATE  
22/12/20

CHECK  
EP

DRAWN  
KS

CLIENT  
DAVID DO AWI



DRAWING TITLE  
FLOOR PLAN - LEVEL 04 - HOTEL

PROJECT NAME  
LITTLE MINDIL

REVISION  
P11

BUILDING / ATTRIBUTE  
12°26'59" S  
130°49'45" E

DRAWING NO.  
TP1.22

ISSUE FOR INFORMATION



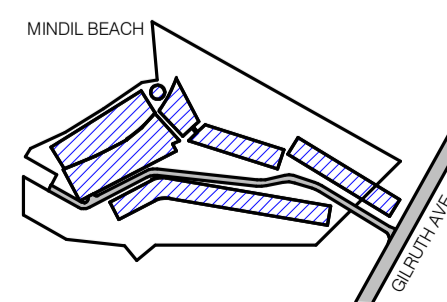
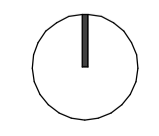


1 OVERALL PLAN - LEVEL 05  
1:500

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P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

DRAWING SCALE  
 1:500

SHEET SIZE  
 A1

PROJECT NO  
 257

CLIENT  
 DAVID DO AWI

DRAWING DATE  
 21/12/20

CHECK  
 EP

DRAWN  
 KS



DRAWING TITLE  
 OVERALL PLAN - LEVEL 05

PROJECT NAME  
 LITTLE MINDIL

ISSUE FOR INFORMATION

REVISION BUILDING / ATTRIBUTE  
**P11** 12°26'59" S  
 130°49'45" E

DRAWING NO.

**TP1.23**





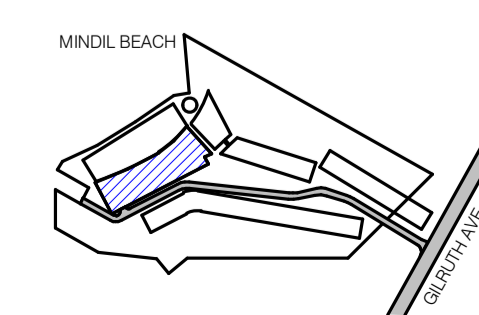
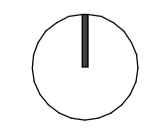
**1 FLOOR PLAN - LEVEL 05 - APARTMENTS**

1 : 250

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 HACHEM.COM.AU INFO@HACHEM.COM.AU STUDIO +61 1300 734 560  
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PROJECT LOCATION  
**25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN**

CLIENT  
**DAVID DO AWI**

DRAWING SCALE  
**1 : 250**

DRAWING DATE  
**22/12/20**

SHEET SIZE  
**A1**

CHECK  
**EP**

PROJECT NO  
**257**

DRAWN  
**KS**



DRAWING TITLE  
**FLOOR PLAN - LEVEL 05 -  
 SERVICED APARTMENTS**

PROJECT NAME  
**LITTLE MINDIL**

**ISSUE FOR INFORMATION**

REVISION BUILDING / ATTRIBUTE  
**P11 12°26'59" S  
 130°49'45" E**

DRAWING NO.

**TP1.24**



TP2.02  
2

REFER TO TP1.24 / 1  
FOR ADDITIONAL INFORMATION

HOTEL BUILDING

HOTEL BUILDING

TP2.02  
3

TP2.02  
4

TP2.02  
1

1 LEVEL 05 PLAN - HOTEL

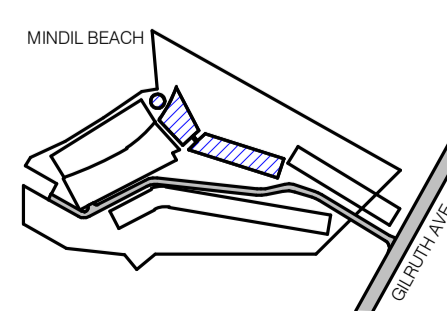
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PROJECT LOCATION  
25 GILRUTH AVENUE,  
THE GARDENS, DARWIN

DRAWING SCALE  
1 : 250

SHEET SIZE  
A1

PROJECT NO.  
257

CLIENT  
DAVID DO AWI

DRAWING DATE  
22/12/20

CHECK  
EP

DRAWN  
KS



DRAWING TITLE  
FLOOR PLAN - LEVEL 05 - HOTEL

PROJECT NAME  
LITTLE MINDIL

ISSUE FOR INFORMATION

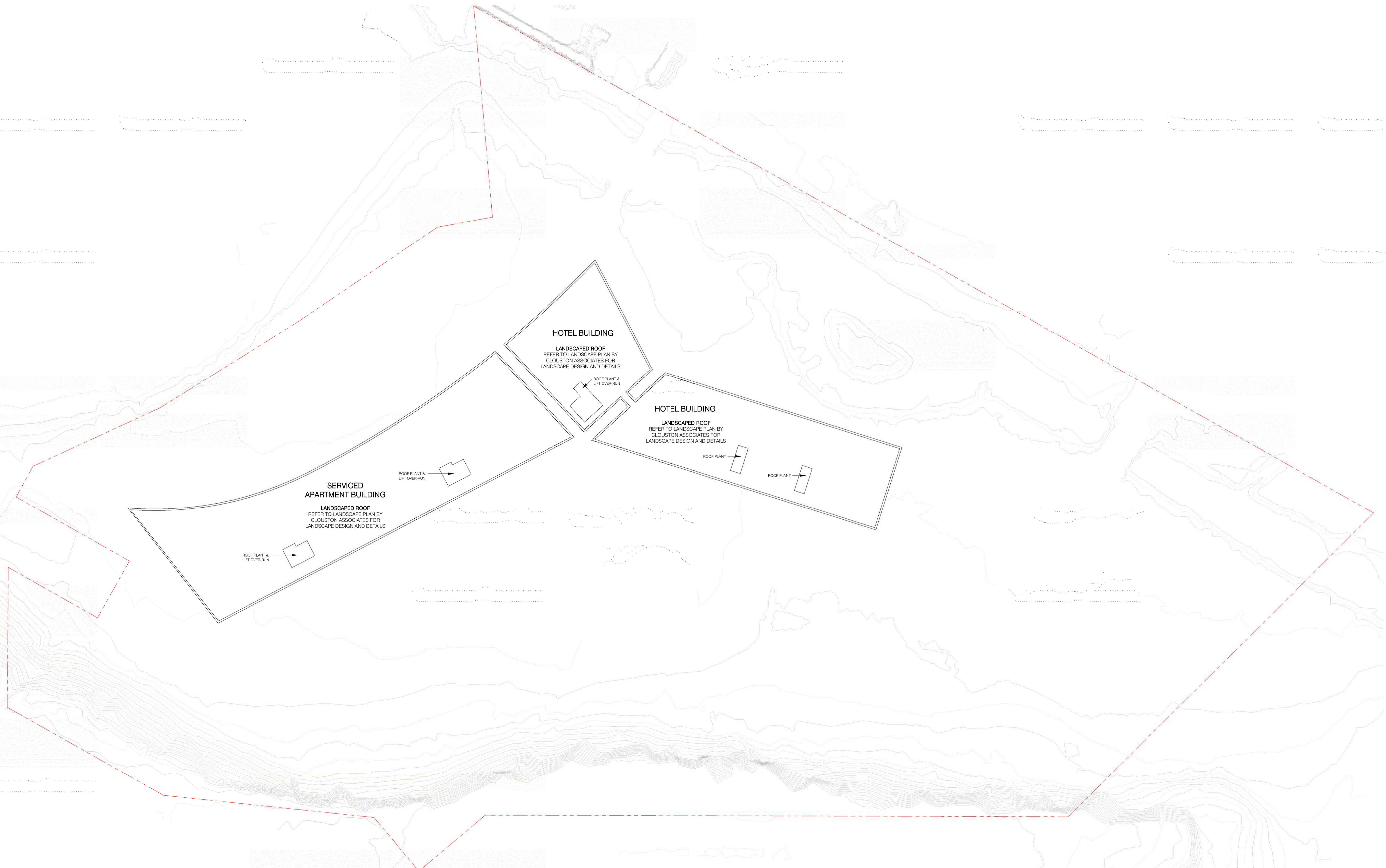
REVISION  
P11

BUILDING / ATTRIBUTE  
12°26'59" S  
130°49'45" E

DRAWING NO.  
TP1.25

TP1.25



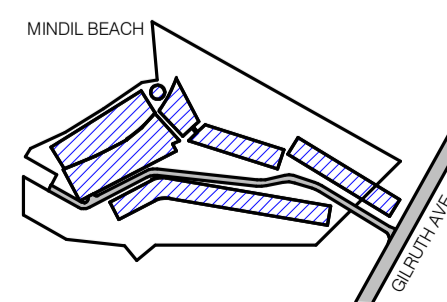
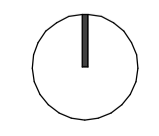


1 OVERALL PLAN - ROOF  
1:500

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 HACHEM.COM.AU LEVEL 3, 2 DREWEYRY PLACE 183 WESTON STREET  
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P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

DRAWING SCALE  
 1:500

SHEET SIZE  
 A1

PROJECT NO  
 257

CLIENT  
 DAVID DO AWI

DRAWING DATE  
 22/12/20

CHECK  
 EP

DRAWN  
 KS



DRAWING TITLE  
 OVERALL PLAN - ROOF

PROJECT NAME  
 LITTLE MINDIL

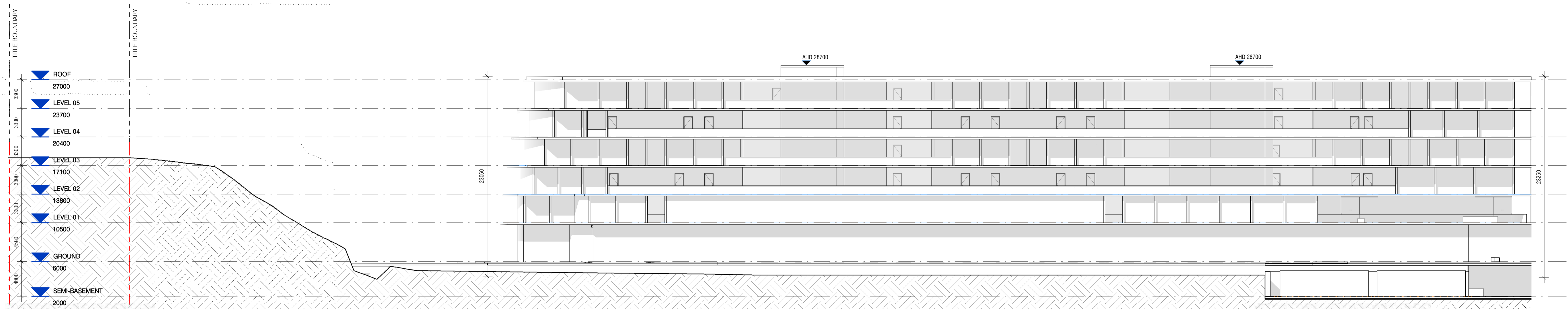
ISSUE FOR INFORMATION

REVISION  
 P11

BUILDING / ATTRIBUTE  
 12°26'59" S  
 130°49'45" E

DRAWING NO.  
 TP1.26

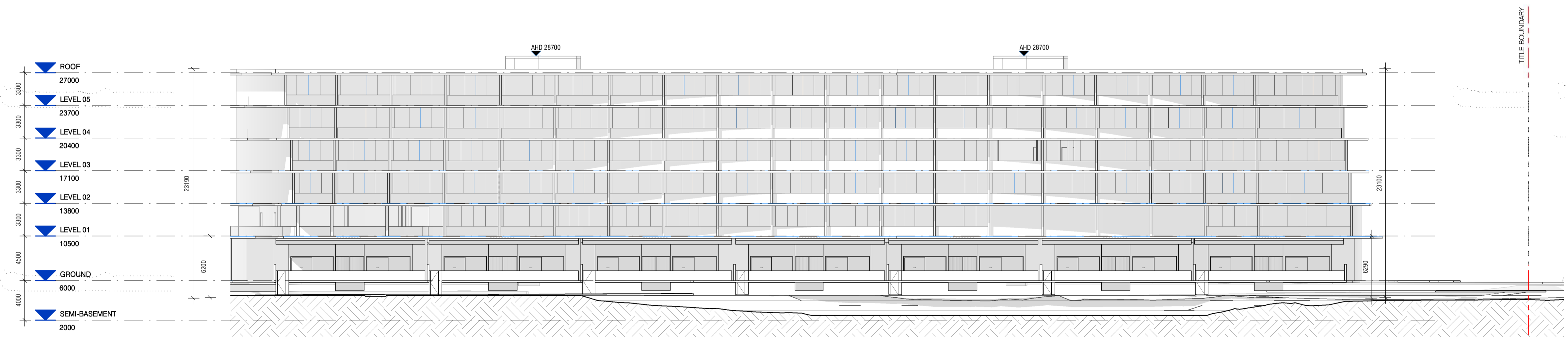




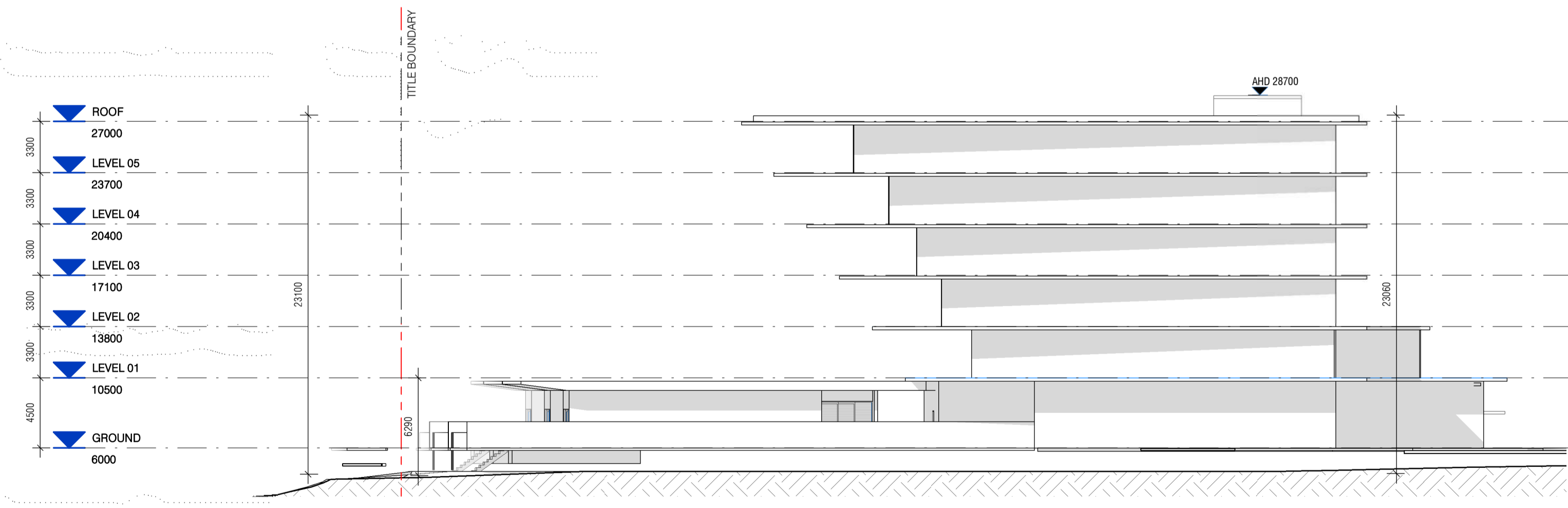
1 BUILDING ELEVATION - APARTMENT / VILLA 01  
1 : 250

**LEGEND - EXTERNAL FINISHES**

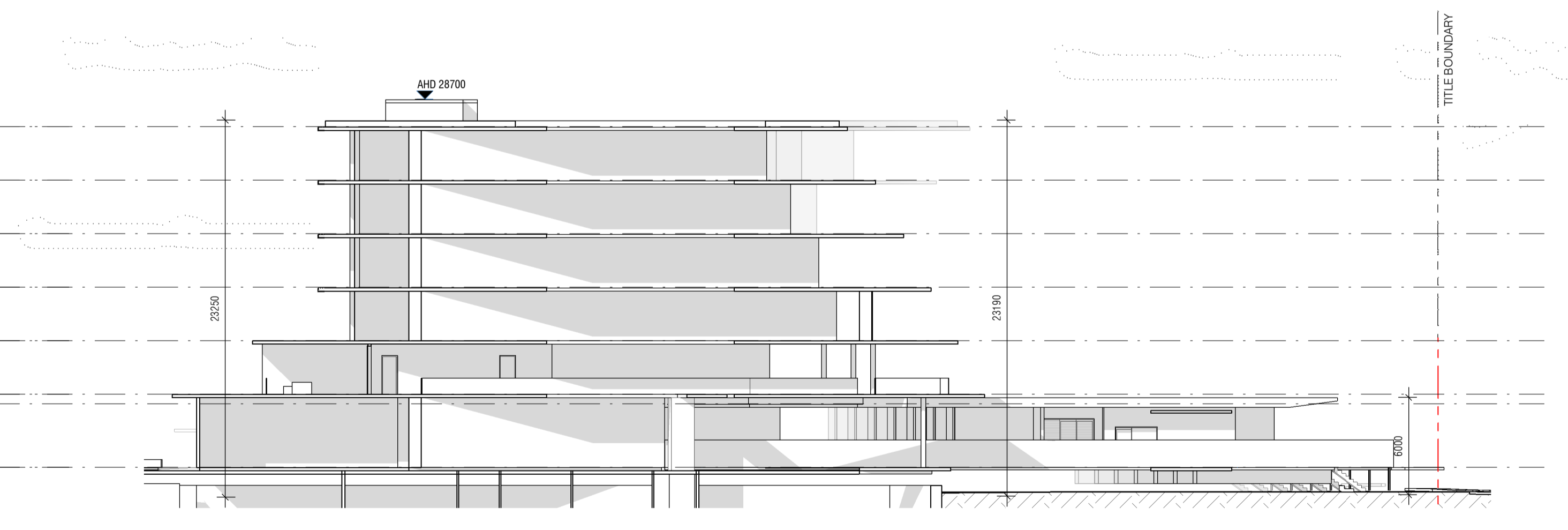
M01	TIMBER BOARD FORMED CONCRETE
M02	GREEN ROOF (REFER TO LANDSCAPE ARCH.)
M03	FLUTED TERRACOTTA TILES (150mm x 900mm)
M04	COLOURED GLAZED PODS
M05	FULL HEIGHT GLAZING (RECESSED FRAMING, 40mm x 40mm FRONT GLAZED TIMBER MULLIONS 35x100mm)
M06	FRAMELESS GLAZED BALUSTRADE
M07	FRAMELESS BUTT JOINTED GLAZING
M08	FEATURE TIMBER COLUMN & CEILING
M09	CONCRETE PAVER (1200mm x 1200mm)
M10	CLEAR ACRYLIC EDGE TO POOL
M11	TIMBER SCREENING / LOUVRES
M12	CONCRETE CRIB WALL WITH PLANTING
M13	DARK GREY MOSAIC TILING
M14	BAMBOO PRESSED CONCRETE (VERTICAL STRIPS)
M15	VERTICAL TIMBER SCREEN (35x35mm WITH 50mm SPACING)



2 BUILDING ELEVATION - APARTMENT / VILLA 02  
1 : 250



3 BUILDING ELEVATION - APARTMENT / VILLA 03  
1 : 250

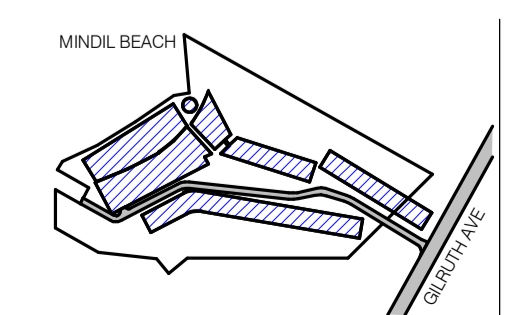


4 BUILDING ELEVATION - APARTMENT / VILLA 04  
1 : 250

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P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

DRAWING SCALE  
 As indicated

SHEET SIZE  
 A1

PROJECT NO.  
 257

CLIENT  
 DAVID DO AWI

DRAWING DATE  
 14/12/20

CHECK  
 EP

DRAWN  
 KS



DRAWING TITLE  
 OVERALL ELEVATIONS - SERVICED  
 APARTMENT / FORESHORE VILLAS

REVISION  
**P11**

BUILDING / ATTRIBUTE  
 12°26'59" S  
 130°49'45" E

PROJECT NAME  
 LITTLE MINDIL

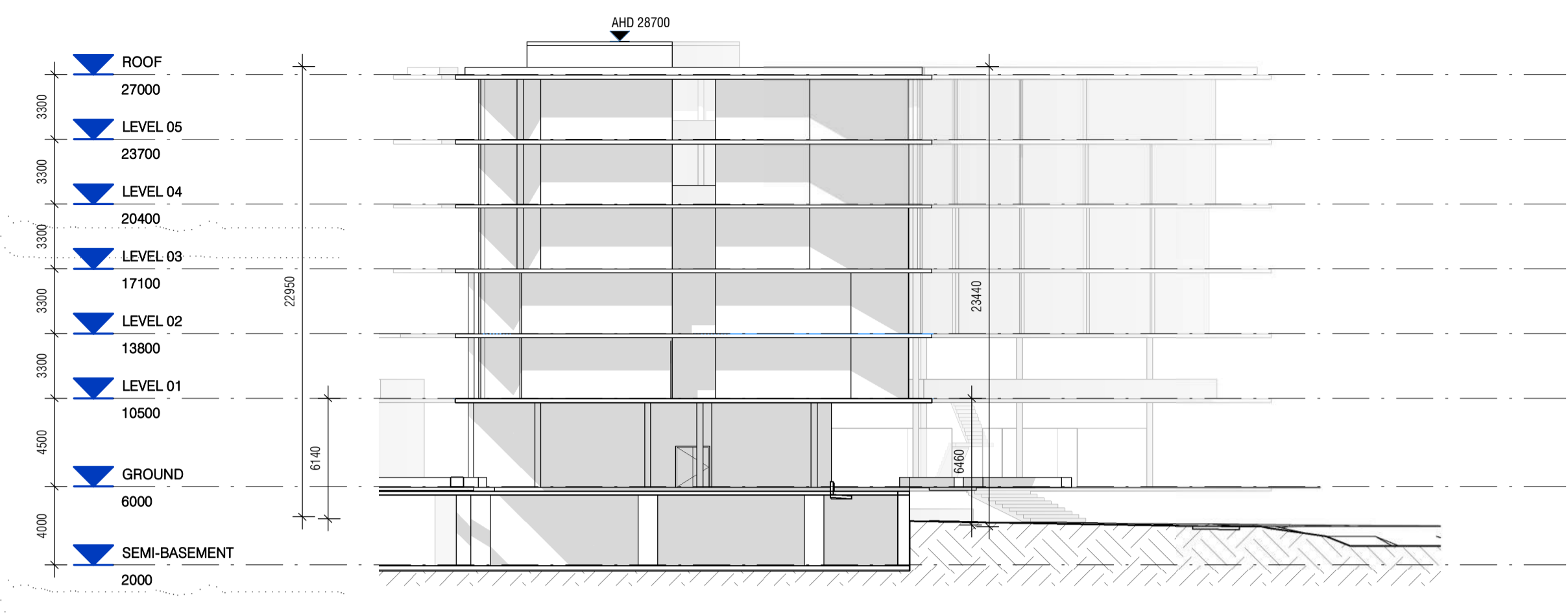
DRAWING NO.  
**TP2.01**

ISSUE FOR INFORMATION

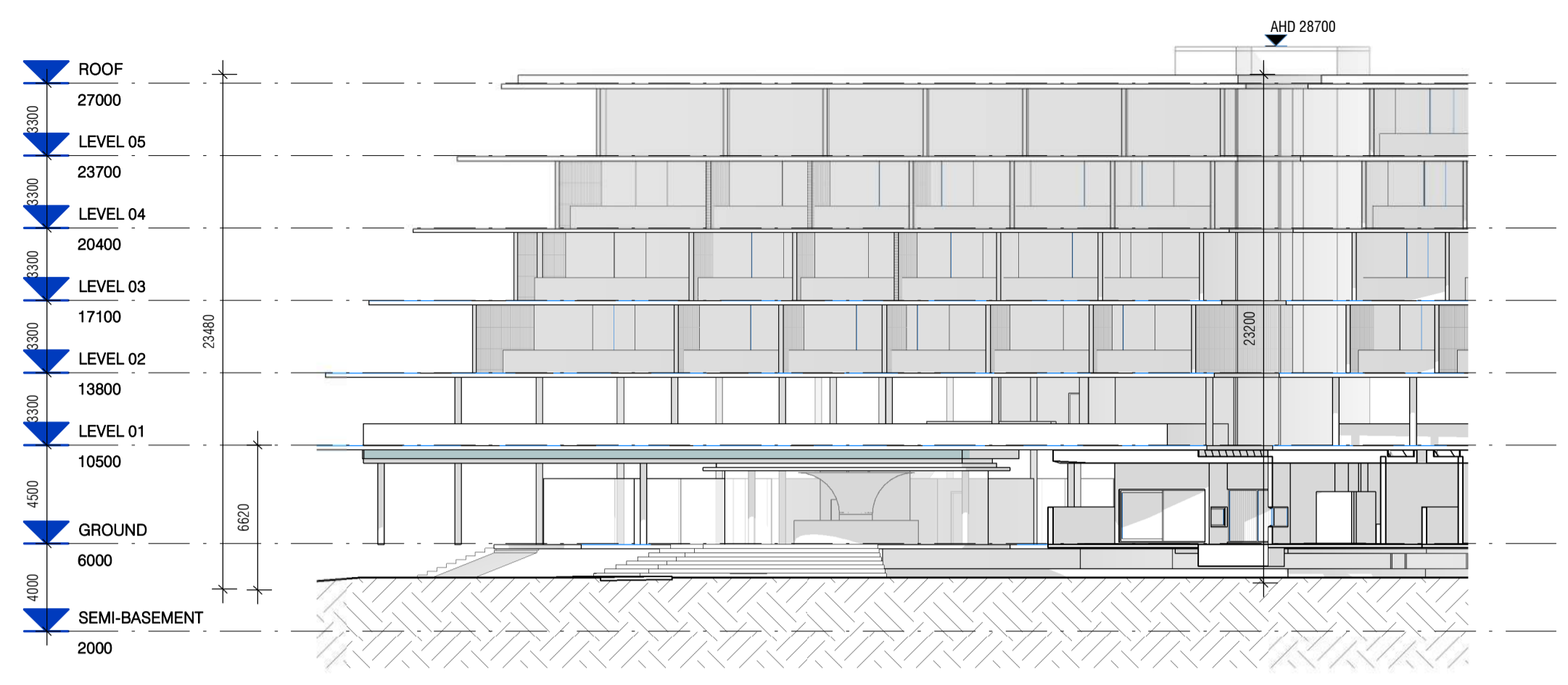


LEGEND - EXTERNAL FINISHES

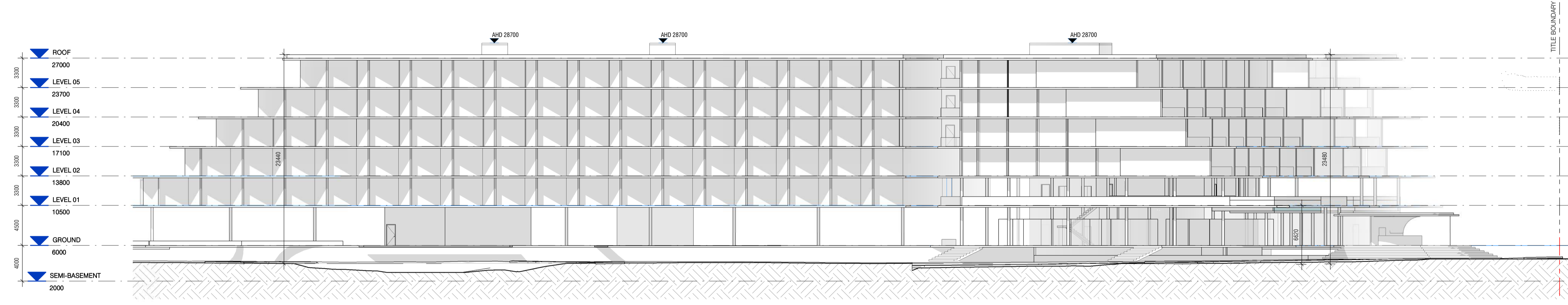
- M01 TIMBER BOARD FORMED CONCRETE
- M02 GREEN ROOF (REFER TO LANDSCAPE ARCH.)
- M03 FLUTED TERRACOTTA TILES (150mm x 900mm)
- M04 COLOURED GLAZED PODS
- M05 FULL HEIGHT GLAZING (RECESSED FRAMING, 40mm x 40mm FRONT GLAZED TIMBER MULLIONS 35x100mm)
- M06 FRAMELESS GLAZED BALUSTRADE
- M07 FRAMELESS BUTT JOINTED GLAZING
- M08 FEATURE TIMBER COLUMN & CEILING
- M09 CONCRETE PAVER (1200mm x 1200mm)
- M10 CLEAR ACRYLIC EDGE TO POOL
- M11 TIMBER SCREENING / LOUVRES
- M12 CONCRETE CRIB WALL WITH PLANTING
- M13 DARK GREY MOSAIC TILING
- M14 BAMBOO PRESSED CONCRETE (VERTICAL STRIPS)
- M15 VERTICAL TIMBER SCREEN (35x35mm WITH 50mm SPACING)



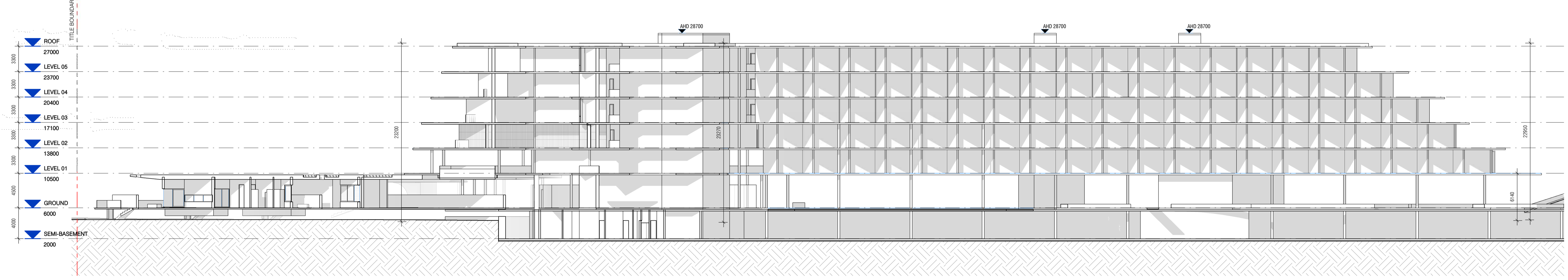
1 BUILDING ELEVATION - HOTEL 01  
1 : 250



2 BUILDING ELEVATION - HOTEL 02  
1 : 250



3 BUILDING ELEVATION - HOTEL 03  
1 : 250

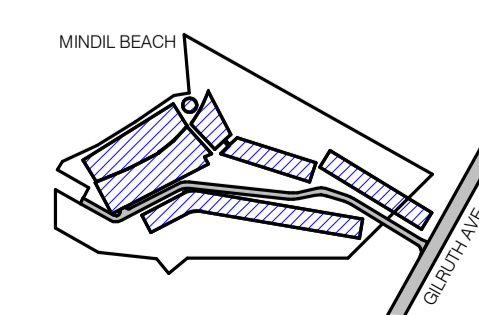


4 BUILDING ELEVATION - HOTEL 04  
1 : 250

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P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
25 GILRUTH AVENUE,  
THE GARDENS, DARWIN

DRAWING SCALE  
As indicated

SHEET SIZE  
A1

PROJECT NO.  
257

CLIENT  
DAVID DO AWI

DRAWING DATE  
14/12/20

CHECK  
EP

DRAWN  
KS



DRAWING TITLE  
OVERALL ELEVATIONS - HOTEL

PROJECT NAME  
LITTLE MINDIL

ISSUE FOR INFORMATION

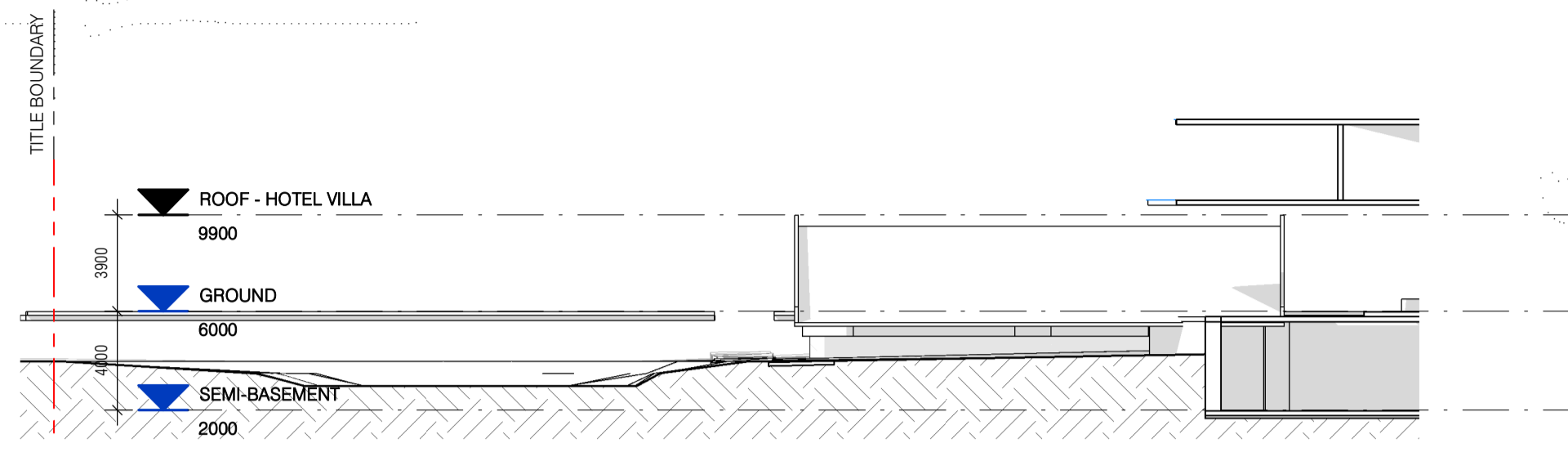
REVISION BUILDING / ATTRIBUTE  
P11 12°26'59" S  
130°49'45" E

DRAWING NO.  
TP2.02

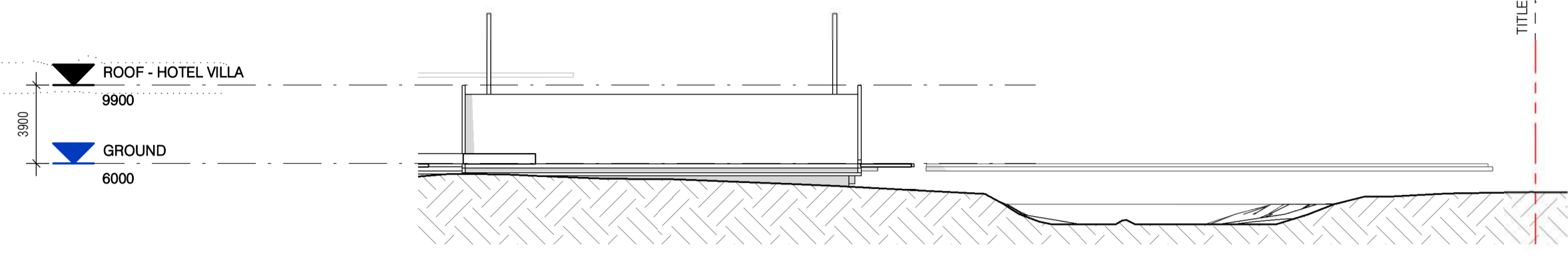


LEGEND - EXTERNAL FINISHES

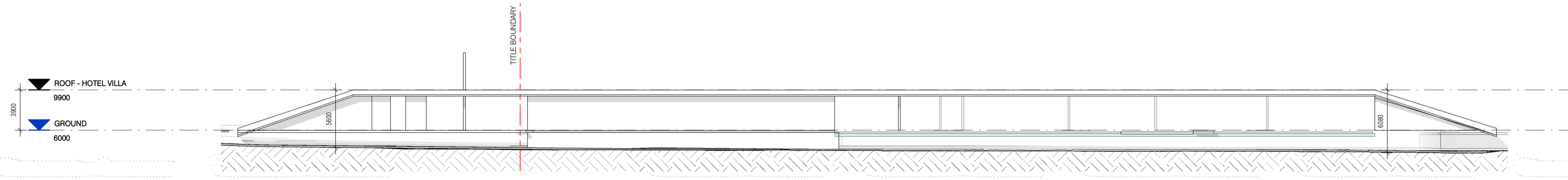
- M01 TIMBER BOARD FORMED CONCRETE
- M02 GREEN ROOF (REFER TO LANDSCAPE ARCH.)
- M03 FLUTED TERRACOTTA TILES (150mm x 900mm)
- M04 COLOURED GLAZED PODS
- M05 FULL HEIGHT GLAZING (RECESSED FRAMING, 40mm x 40mm FRONT GLAZED TIMBER MULLIONS 35x100mm)
- M06 FRAMELESS GLAZED BALUSTRADE
- M07 FRAMELESS BUTT JOINTED GLAZING
- M08 FEATURE TIMBER COLUMN & CEILING
- M09 CONCRETE PAVER (1200mm x 1200mm)
- M10 CLEAR ACRYLIC EDGE TO POOL
- M11 TIMBER SCREENING / LOUVRES
- M12 CONCRETE CRIB WALL WITH PLANTING
- M13 DARK GREY MOSAIC TILING
- M14 BAMBOO PRESSED CONCRETE (VERTICAL STRIPS)
- M15 VERTICAL TIMBER SCREEN (35x35mm WITH 50mm SPACING)



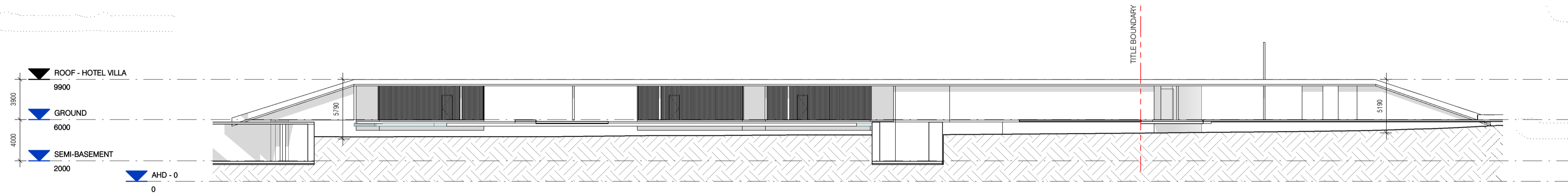
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1 : 250



2 BUILDING ELEVATION - VILLA 02  
1 : 250



3 BUILDING ELEVATION - VILLA 03  
1 : 250

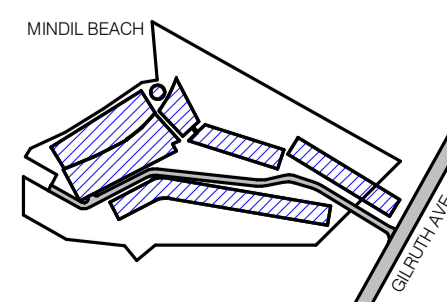


4 BUILDING ELEVATION - VILLA 04  
1 : 250

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 HACHEM.COM.AU LEVEL 3, 2 DREWERY PLACE 183 WESTON STREET  
 INFO@HACHEM.COM.AU MELBOURNE 3000 BRUNSWICK EAST 3057  
 STUDIO +61 1300 734 560 VICTORIA, AUSTRALIA VICTORIA, AUSTRALIA

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REV.	DESCRIPTION	DATE
P11	ISSUE FOR COORDINATION	22/01/21
P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

DRAWING SCALE  
 As indicated

SHEET SIZE  
 A1

PROJECT NO.  
 257

CLIENT  
 DAVID DO AWI

DRAWING DATE  
 14/12/20

CHECK  
 EP

DRAWN  
 KS



DRAWING TITLE  
**OVERALL ELEVATIONS - GARDEN VILLAS**

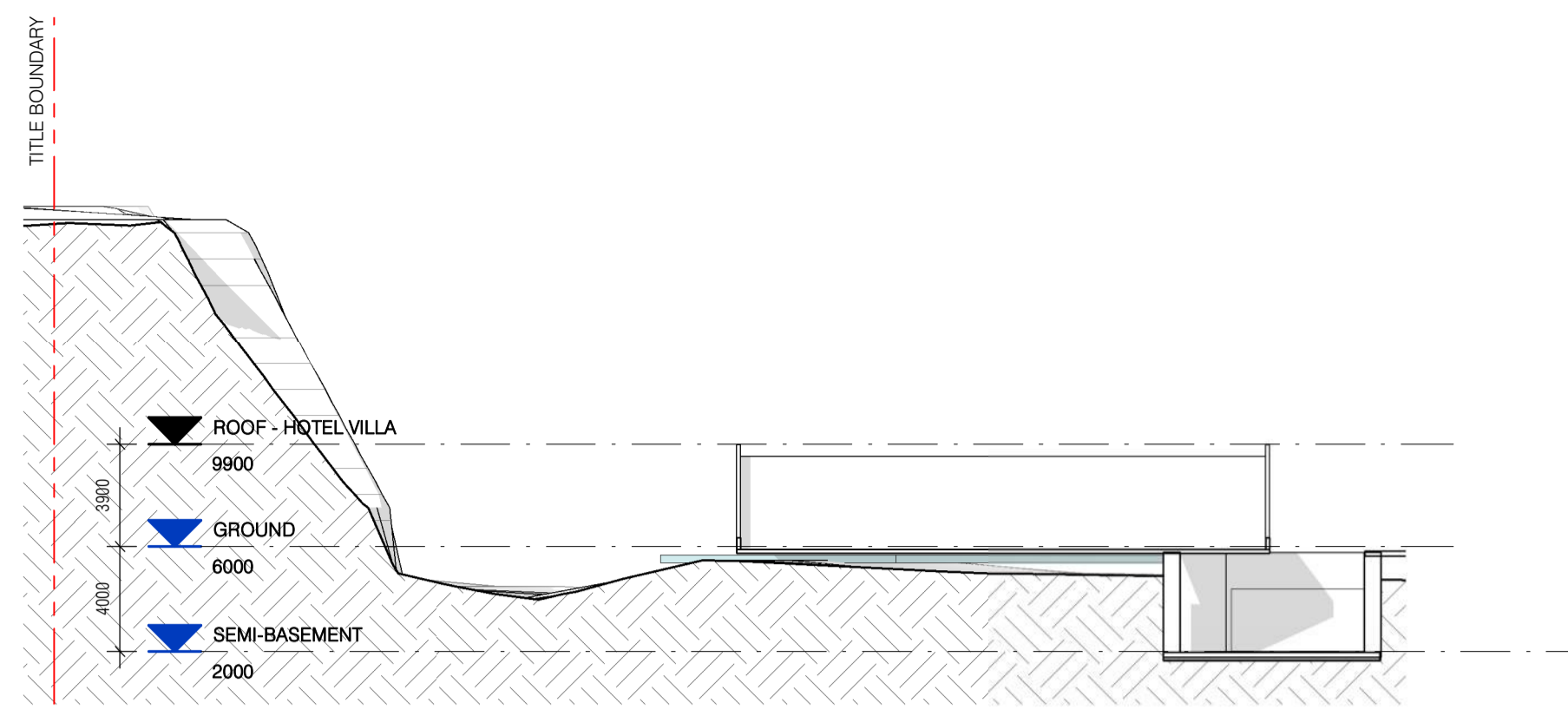
PROJECT NAME  
 LITTLE MINDIL

ISSUE FOR INFORMATION

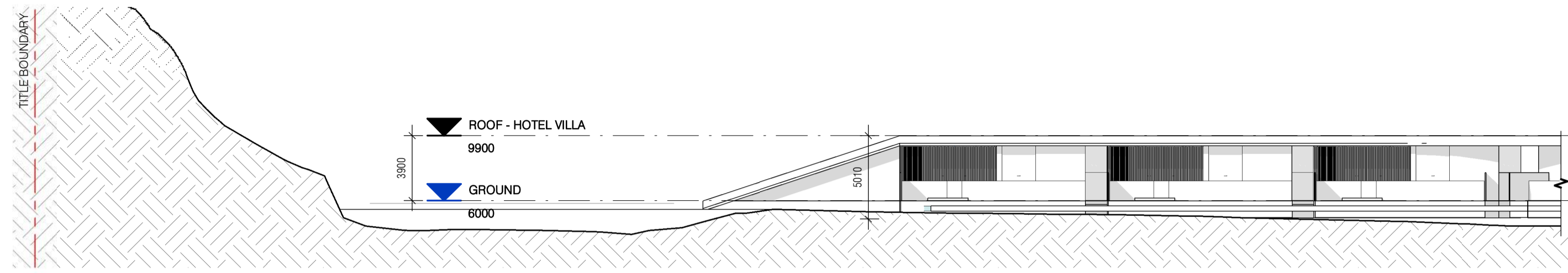
REVISION BUILDING / ATTRIBUTE  
**P11** 12°26'59" S  
 130°49'45" E

DRAWING NO.  
**TP2.03**





1 BUILDING ELEVATION - BURNETT VILLA 01  
1 : 250

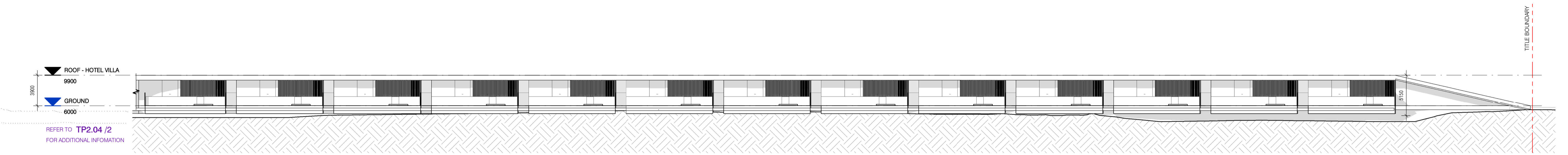


2 BUILDING ELEVATION - BURNETT VILLA 02  
1 : 250

LEGEND - EXTERNAL FINISHES

- M01 TIMBER BOARD FORMED CONCRETE
- M02 GREEN ROOF (REFER TO LANDSCAPE ARCH.)
- M03 FLUTED TERRACOTTA TILES (150mm x 900mm)
- M04 COLOURED GLAZED PODS
- M05 FULL HEIGHT GLAZING (RECESSED FRAMING, 40mm x 40mm FRONT GLAZED TIMBER MULLIONS 35x100mm)
- M06 FRAMELESS GLAZED BALUSTRADE
- M07 FRAMELESS BUTT JOINTED GLAZING
- M08 FEATURE TIMBER COLUMN & CEILING
- M09 CONCRETE PAVER (1200mm x 1200mm)
- M10 CLEAR ACRYLIC EDGE TO POOL
- M11 TIMBER SCREENING / LOUVRES
- M12 CONCRETE CRIB WALL WITH PLANTING
- M13 DARK GREY MOSAIC TILING
- M14 BAMBOO PRESSED CONCRETE (VERTICAL STRIPS)
- M15 VERTICAL TIMBER SCREEN (35x35mm WITH 50mm SPACING)

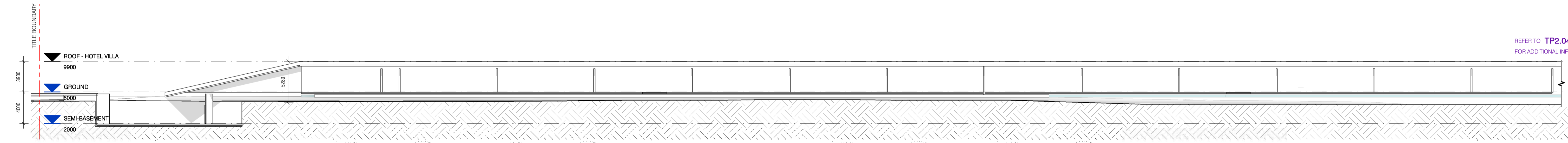
REFER TO TP2.04 /3 FOR ADDITIONAL INFORMATION



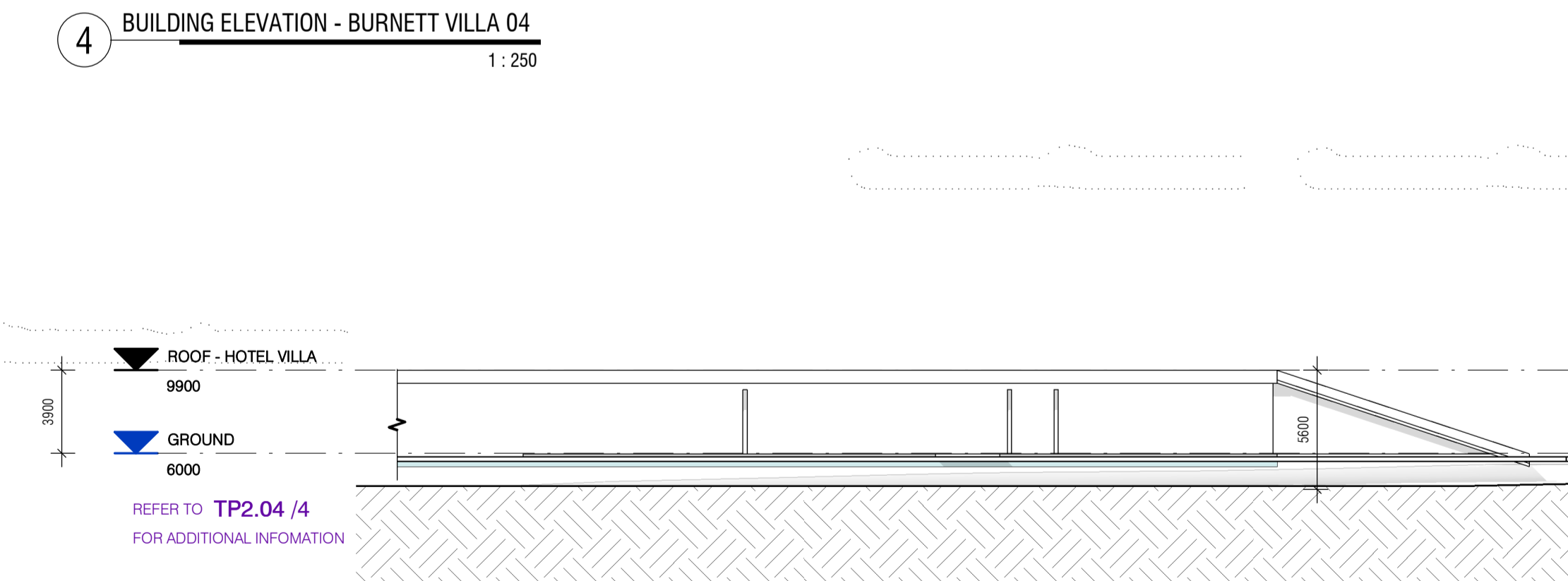
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REFER TO TP2.04 /2 FOR ADDITIONAL INFORMATION

REFER TO TP2.04 /5 FOR ADDITIONAL INFORMATION

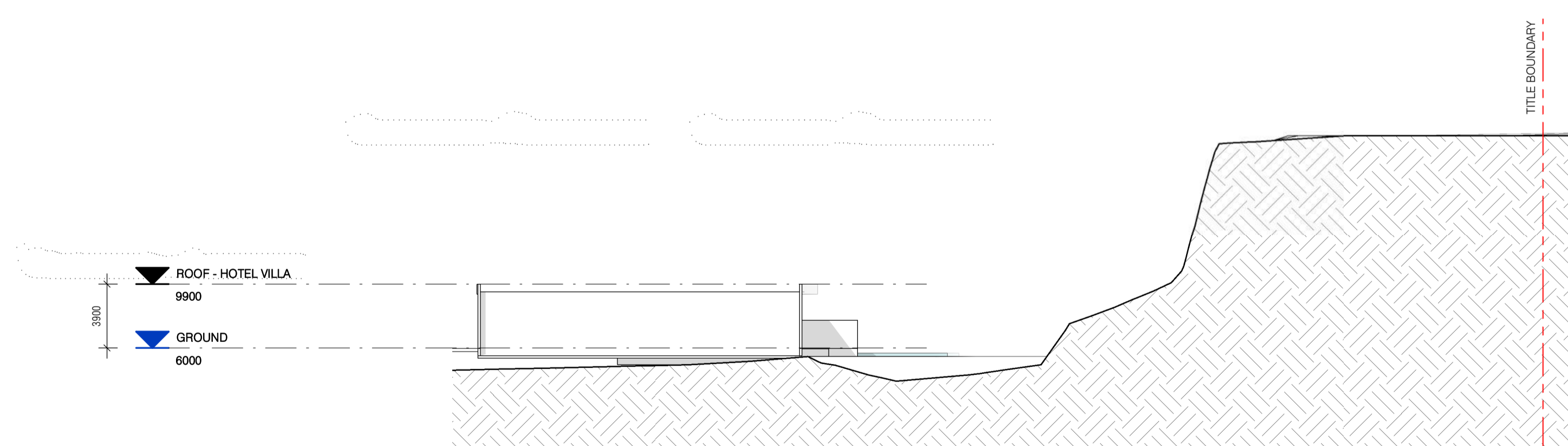


4 BUILDING ELEVATION - BURNETT VILLA 04  
1 : 250



5 BUILDING ELEVATION - BURNETT VILLA 05  
1 : 250

REFER TO TP2.04 /4 FOR ADDITIONAL INFORMATION

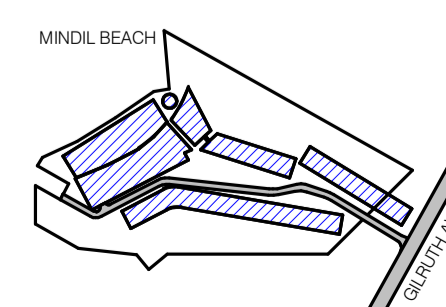


6 BUILDING ELEVATION - BURNETT VILLA 06  
1 : 250

HACHEM ARCHITECTURE INTERIOR MARKETING  
HACHEM.COM.AU LEVEL 3, 2 CREWERY PLACE 183 WESTON STREET  
INFO@HACHEM.COM.AU MELBOURNE 3000 BRUNSWICK EAST 3057  
STUDIO +61 1300 734 560 VICTORIA, AUSTRALIA VICTORIA, AUSTRALIA

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P11	ISSUE FOR COORDINATION	22/01/21
P10	ISSUE FOR INFORMATION	22/12/20



PROJECT LOCATION  
25 GILRUTH AVENUE,  
THE GARDENS, DARWIN

CLIENT  
DAVID DO AWI

DRAWING SCALE  
As indicated

DRAWING DATE  
14/12/20

SHEET SIZE  
A1

CHECK  
EP

PROJECT NO  
257

DRAWN  
KS



DRAWING TITLE  
OVERALL ELEVATIONS - LAGOON  
VILLAS

PROJECT NAME  
LITTLE MINDIL

ISSUE FOR INFORMATION

REVISION  
P11

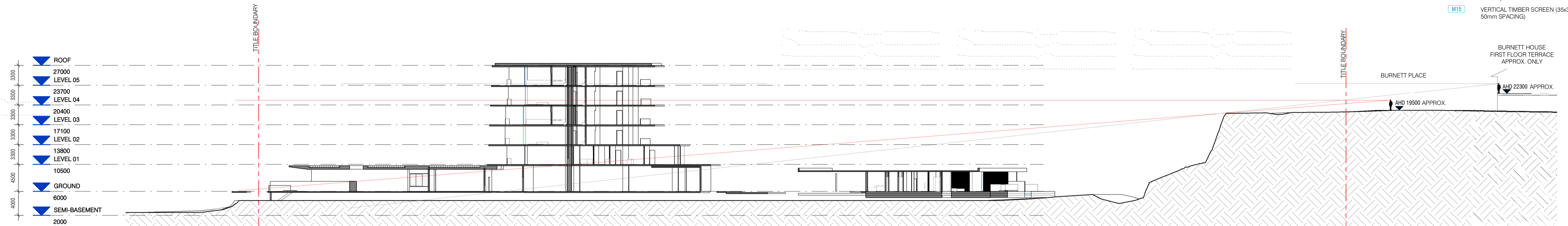
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TP2.04

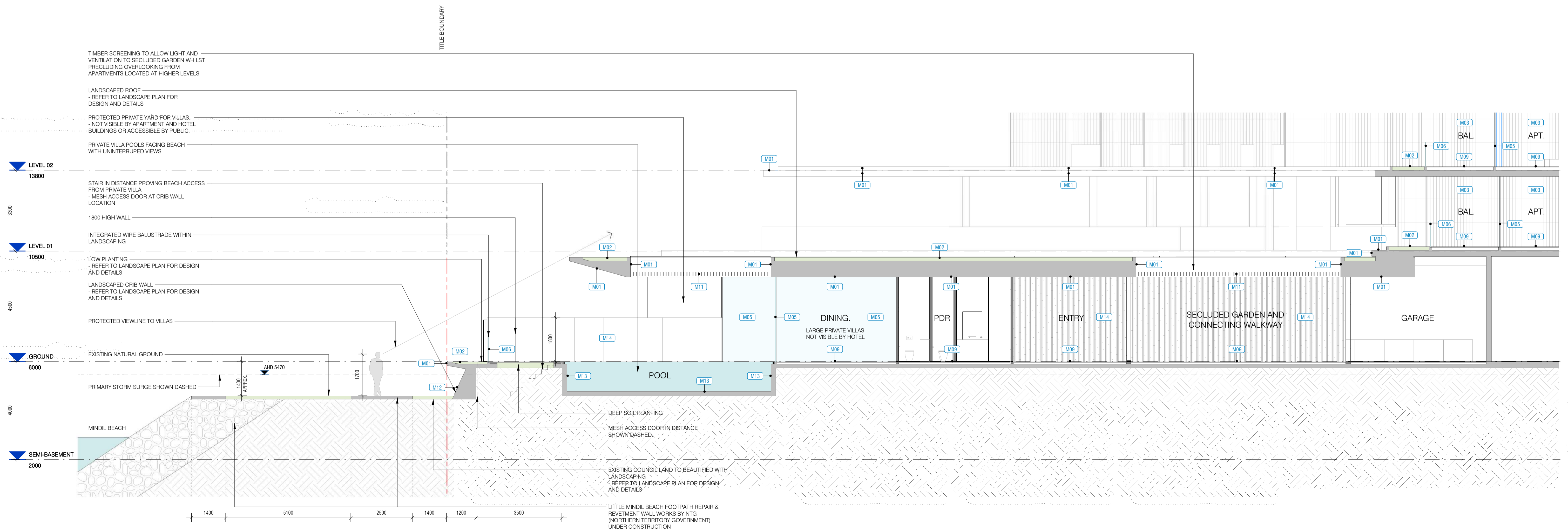


LEGEND - EXTERNAL FINISHES

- M01 TIMBER BOARD FORMED CONCRETE
- M02 GREEN ROOF (REFER TO LANDSCAPE ARCH.)
- M03 FLUTED TERRACOTTA TILES (150mm x 900mm)
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- M13 DARK GREY MOSAIC TILING
- M14 BAMBOO PRESSED CONCRETE (VERTICAL STRIPS)
- M15 VERTICAL TIMBER SCREEN (35x35mm WITH 50mm SPACING)



1 OVERALL SECTION - NORTH SOUTH 01  
1:350

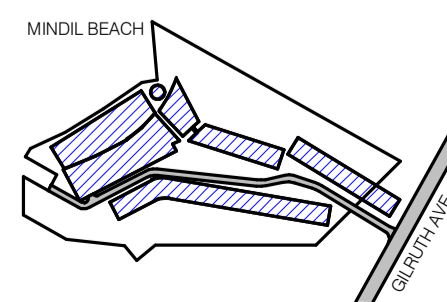


2 BUILDING SECTION - LUXURY VILLA  
1:80

HACHEM ARCHITECTURE INTERIOR MARKETING  
HACHEM.COM.AU INFO@HACHEM.COM.AU STUDIO +61 1300 734 560  
LEVEL 3, 2 CREWERY PLACE MELBOURNE 3000 VICTORIA, AUSTRALIA  
183 WESTON STREET BRUNSWICK EAST 3057 VICTORIA, AUSTRALIA

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P11	ISSUE FOR COORDINATION	22/01/21



PROJECT LOCATION  
25 GILRUTH AVENUE,  
THE GARDENS, DARWIN

DRAWING SCALE  
As indicated

SHEET SIZE  
A1

PROJECT NO  
257

CLIENT  
DAVID DO AWI

DRAWING DATE  
14/12/20

CHECK  
EP

DRAWN  
KS



DRAWING TITLE  
BUILDING SECTIONS - OVERALL /  
FORESHORE VILLA

PROJECT NAME  
LITTLE MINDIL

ISSUE FOR INFORMATION

REVISION  
P11

BUILDING / ATTRIBUTE  
12°26'59" S  
130°49'45" E

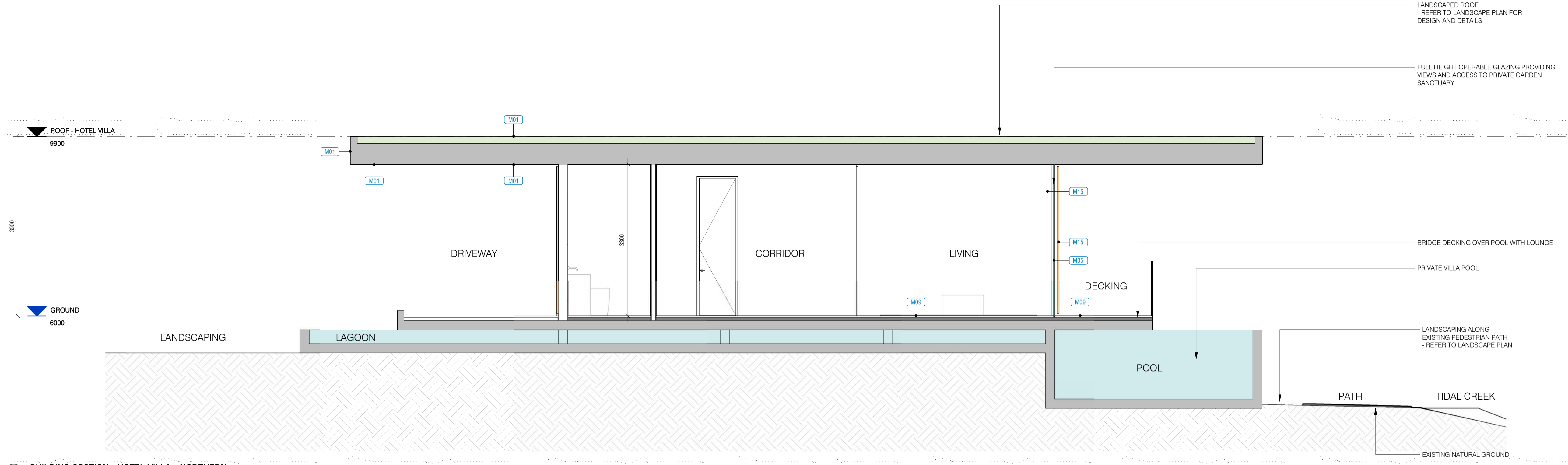
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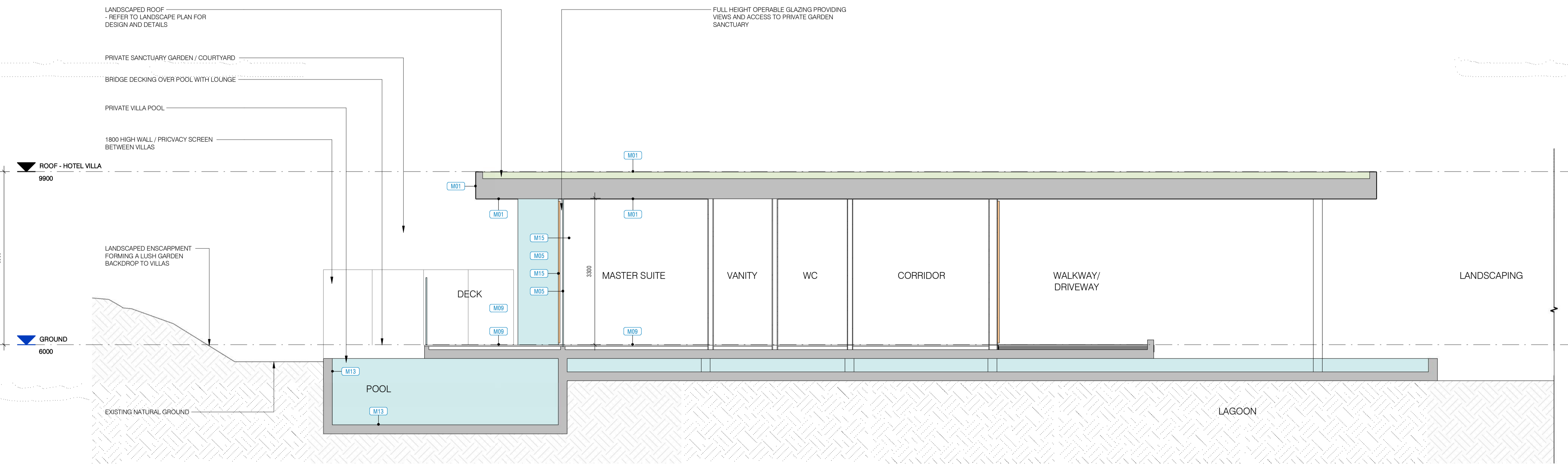


**LEGEND - EXTERNAL FINISHES**

- M01 TIMBER BOARD FORMED CONCRETE
- M02 GREEN ROOF (REFER TO LANDSCAPE ARCH.)
- M03 FLUTED TERRACOTTA TILES (150mm x 900mm)
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- M13 DARK GREY MOSAIC TILING
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- M15 VERTICAL TIMBER SCREEN (35x35mm WITH 50mm SPACING)



**1 BUILDING SECTION - HOTEL VILLA - NORTHERN**  
1:50

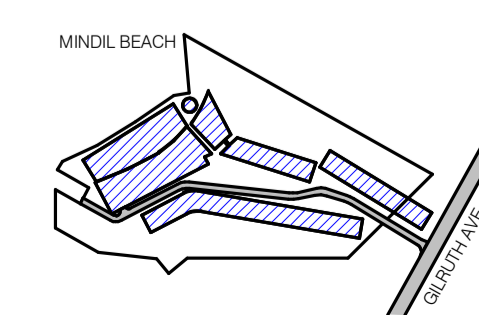


**2 BUILDING SECTION - HOTEL VILLA - SOUTHERN**  
1:50

**HACHEM ARCHITECTURE INTERIOR MARKETING**  
 HACHEM.COM.AU LEVEL 3, 2 DREWERY PLACE 183 WESTON STREET  
 INFO@HACHEM.COM.AU MELBOURNE 3000 BRUNSWICK EAST 3057  
 STUDIO +61 1300 734 560 VICTORIA, AUSTRALIA VICTORIA, AUSTRALIA

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P11	ISSUE FOR COORDINATION	22/01/21



PROJECT LOCATION  
 25 GILRUTH AVENUE,  
 THE GARDENS, DARWIN

CLIENT  
 DAVID DO AWI

DRAWING SCALE  
 As indicated

SHEET SIZE  
 A1

CHECK  
 EP

PROJECT NO  
 257

DRAWN  
 KS

DRAWING DATE  
 01/14/21



DRAWING TITLE  
 BUILDING SECTIONS - GARDEN &  
 LAGOON VILLA

PROJECT NAME  
 LITTLE MINDIL

REVISION  
 P11

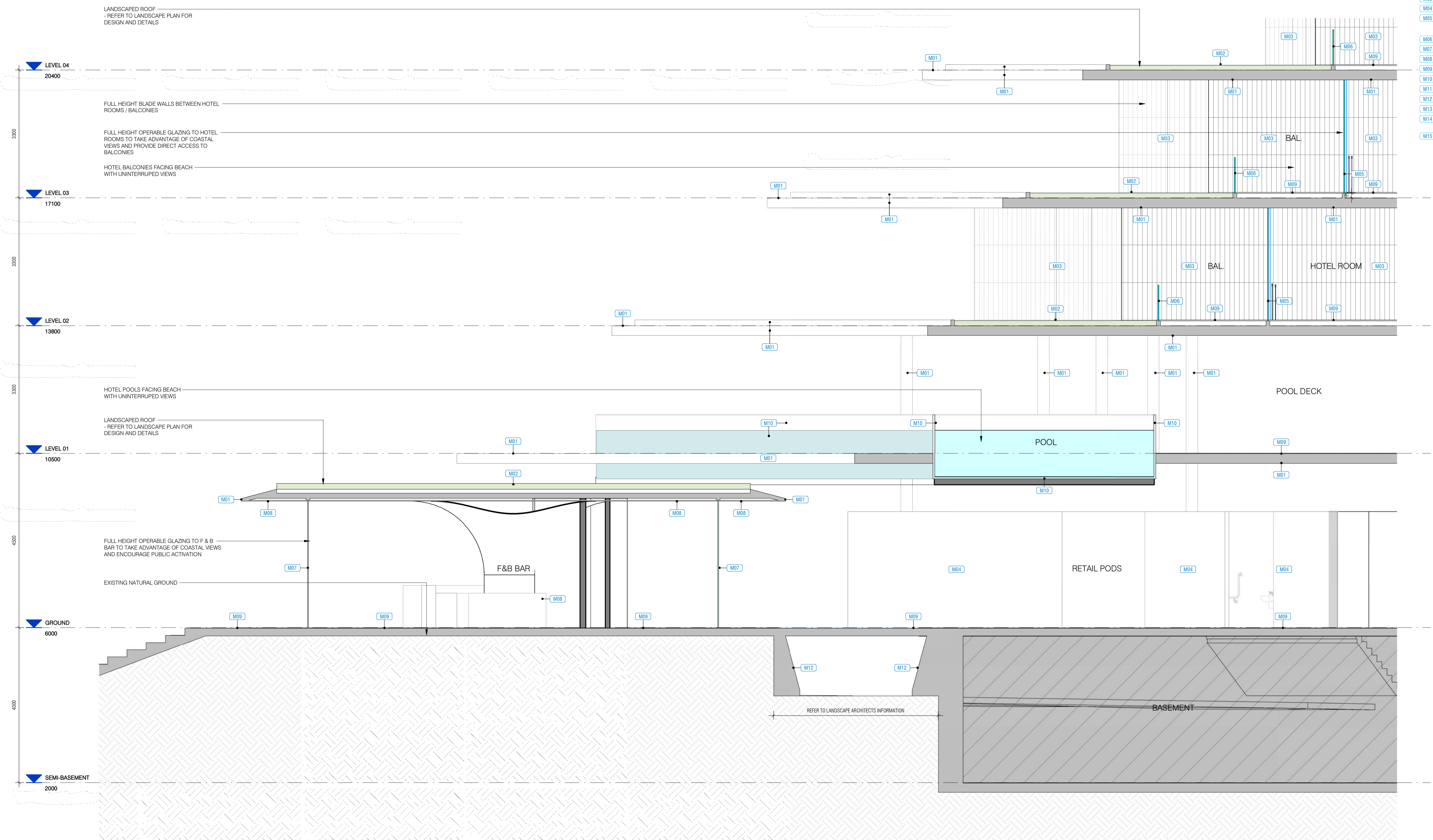
BUILDING / ATTRIBUTE  
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DRAWING NO.  
 TP3.02



LEGEND - EXTERNAL FINISHES

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- M02 GREEN ROOF (REFER TO LANDSCAPE ARCH.)
- M03 FLUTED TERRACOTTA TILES (150mm x 900mm)
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- M13 DARK GREY MOSAIC TILING
- M14 BAMBOO PRESSED CONCRETE (VERTICAL STRIPS)
- M15 VERTICAL TIMBER SCREEN (35x35mm WITH 50mm SPACING)

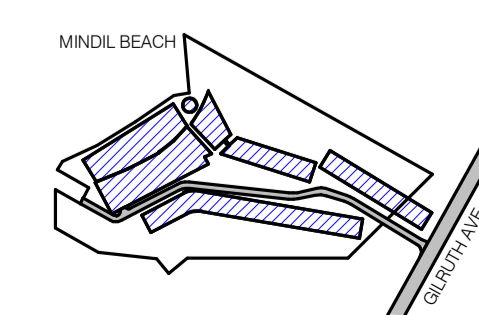


1 BUILDING SECTION - HOTEL / F&B BAR  
1:50

HACHEM ARCHITECTURE INTERIOR MARKETING  
HACHEM.COM.AU LEVEL 3, 2 CREWERY PLACE 183 WESTON STREET  
INFO@HACHEM.COM.AU MELBOURNE 3000 BRUNSWICK EAST 3057  
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PROJECT LOCATION  
25 GILRUTH AVENUE,  
THE GARDENS, DARWIN

DRAWING SCALE  
As indicated

SHEET SIZE  
A1

PROJECT NO.  
257

CLIENT  
DAVID DO AWI

DRAWING DATE  
14/01/20

CHECK  
EP

DRAWN  
KS



DRAWING TITLE  
BUILDING SECTION - HOTEL / F&B BAR

PROJECT NAME  
LITTLE MINDIL

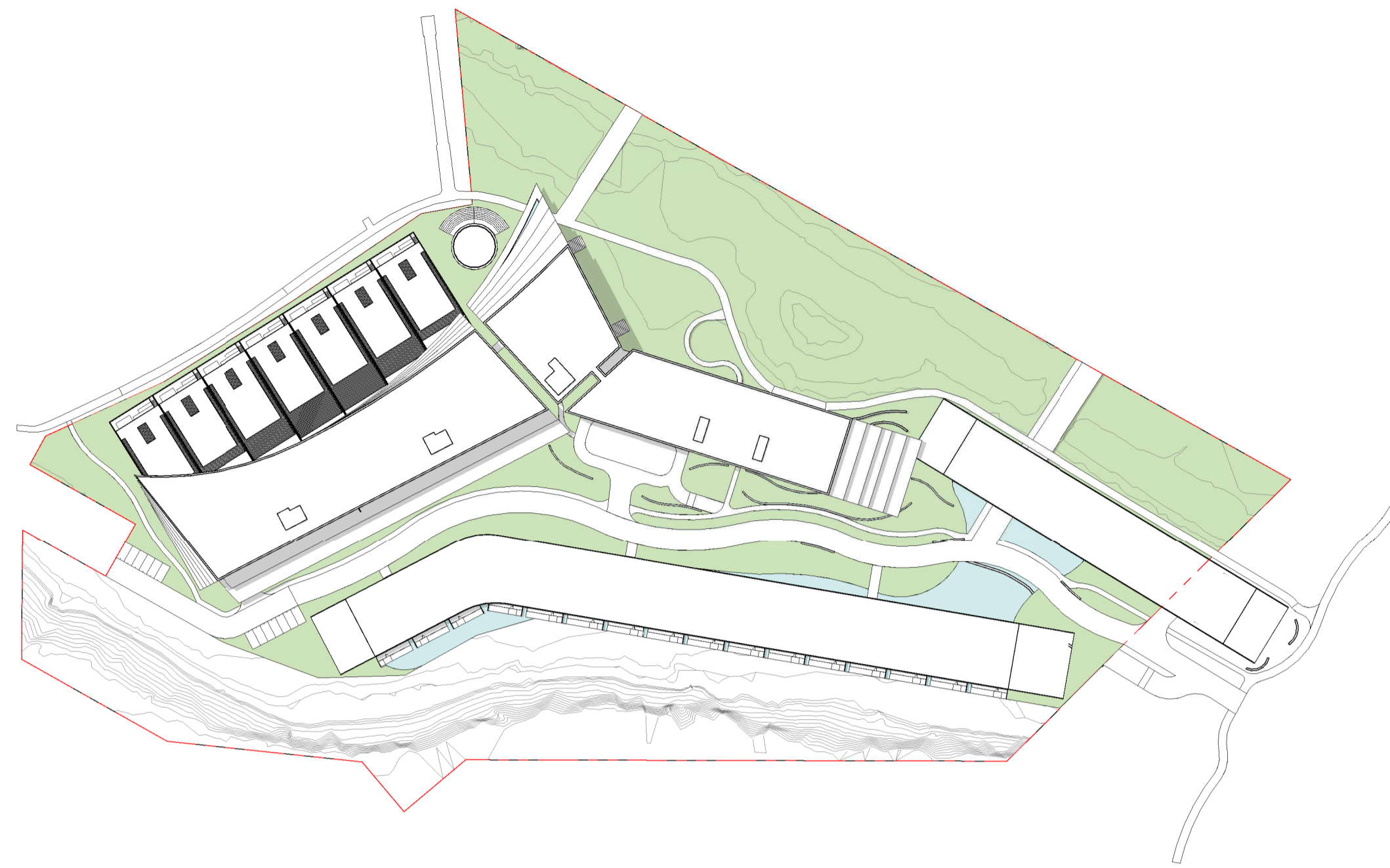
ISSUE FOR INFORMATION

REVISION  
P11

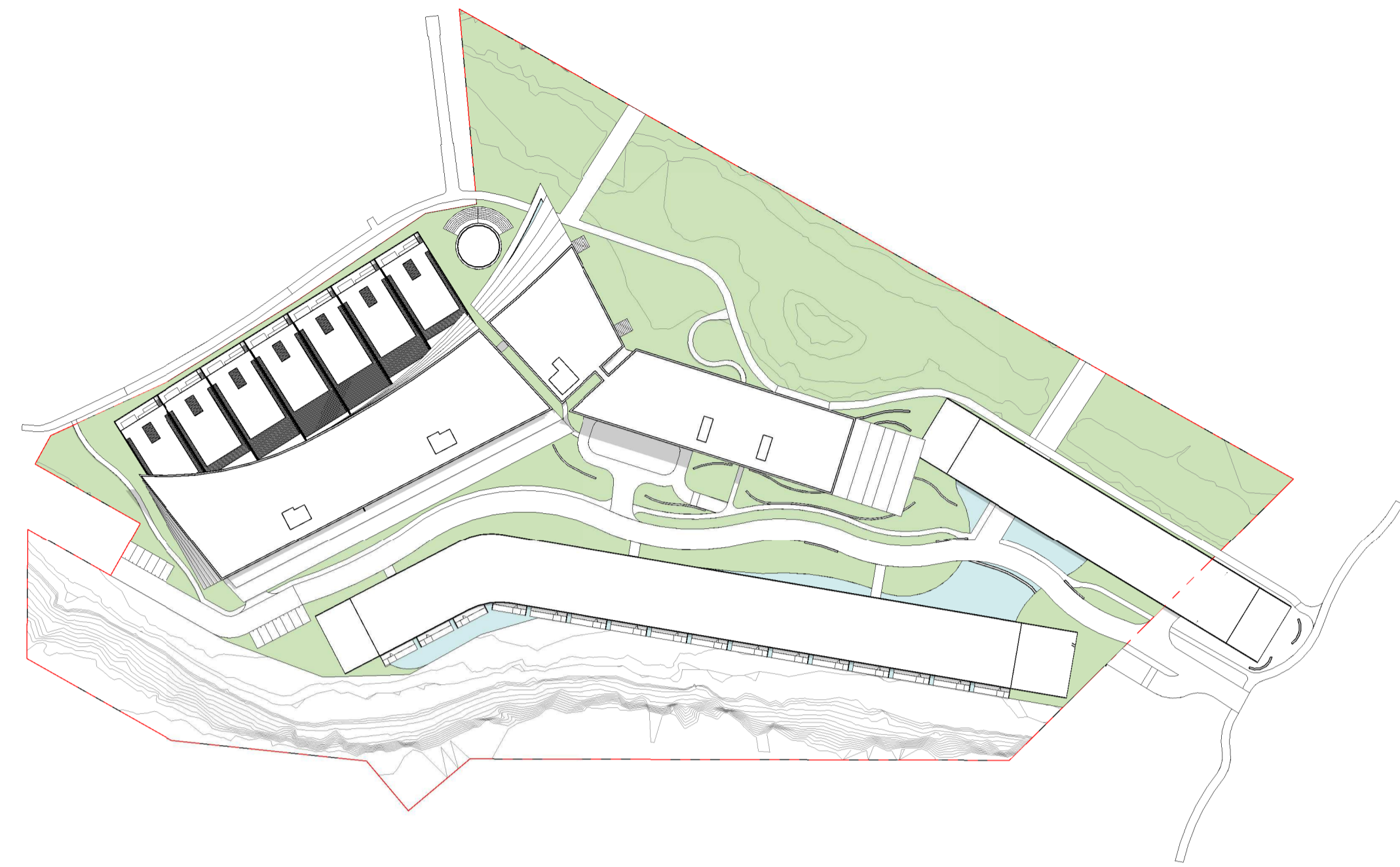
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DRAWING NO.  
TP3.03

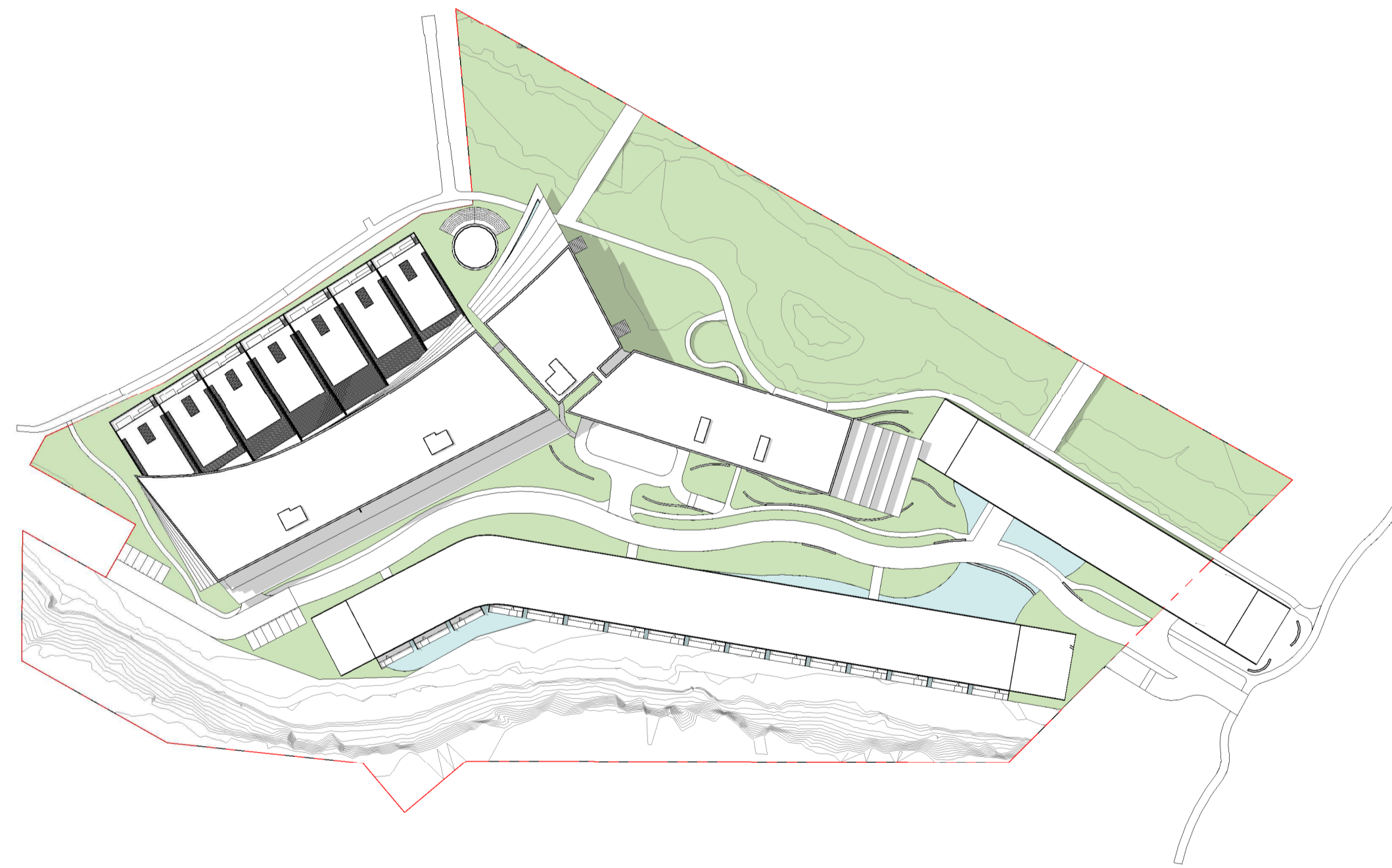




1 SHADOW DIAGRAM - PROPOSED - SEP 22 9AM  
1 : 1500



2 SHADOW DIAGRAM - PROPOSED - SEP 22 12PM  
1 : 1500



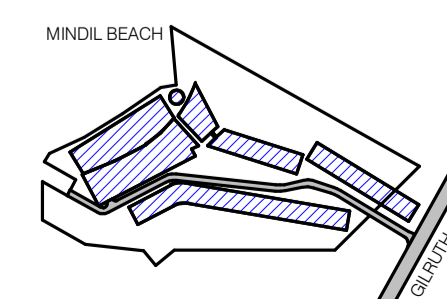
4 SHADOW DIAGRAM - PROPOSED - SEP 22 3PM  
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HACHEM ARCHITECTURE INTERIOR MARKETING

HACHEM.COM.AU LEVEL 3, 2 DREWERY PLACE 183 WESTON STREET  
INFO@HACHEM.COM.AU MELBOURNE 3000 BRUNSWICK EAST 3057  
STUDIO +61 1300 734 560 VICTORIA, AUSTRALIA VICTORIA, AUSTRALIA

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PROJECT LOCATION  
25 GILRUTH AVENUE,  
THE GARDENS, DARWIN

CLIENT  
DAVID DO AWI

DRAWING SCALE  
1 : 1500

DRAWING DATE  
14/12/20

SHEET SIZE  
A1

CHECK  
EP

PROJECT NO  
257

DRAWN  
KS



DRAWING TITLE  
PROPOSED SHADOW DIAGRAMS

PROJECT NAME  
LITTLE MINDIL

ISSUE FOR INFORMATION

REVISION  
P11

DRAWING NO.  
TP4.01

BUILDING / ATTRIBUTE  
12°26'59" S  
130°49'45" E

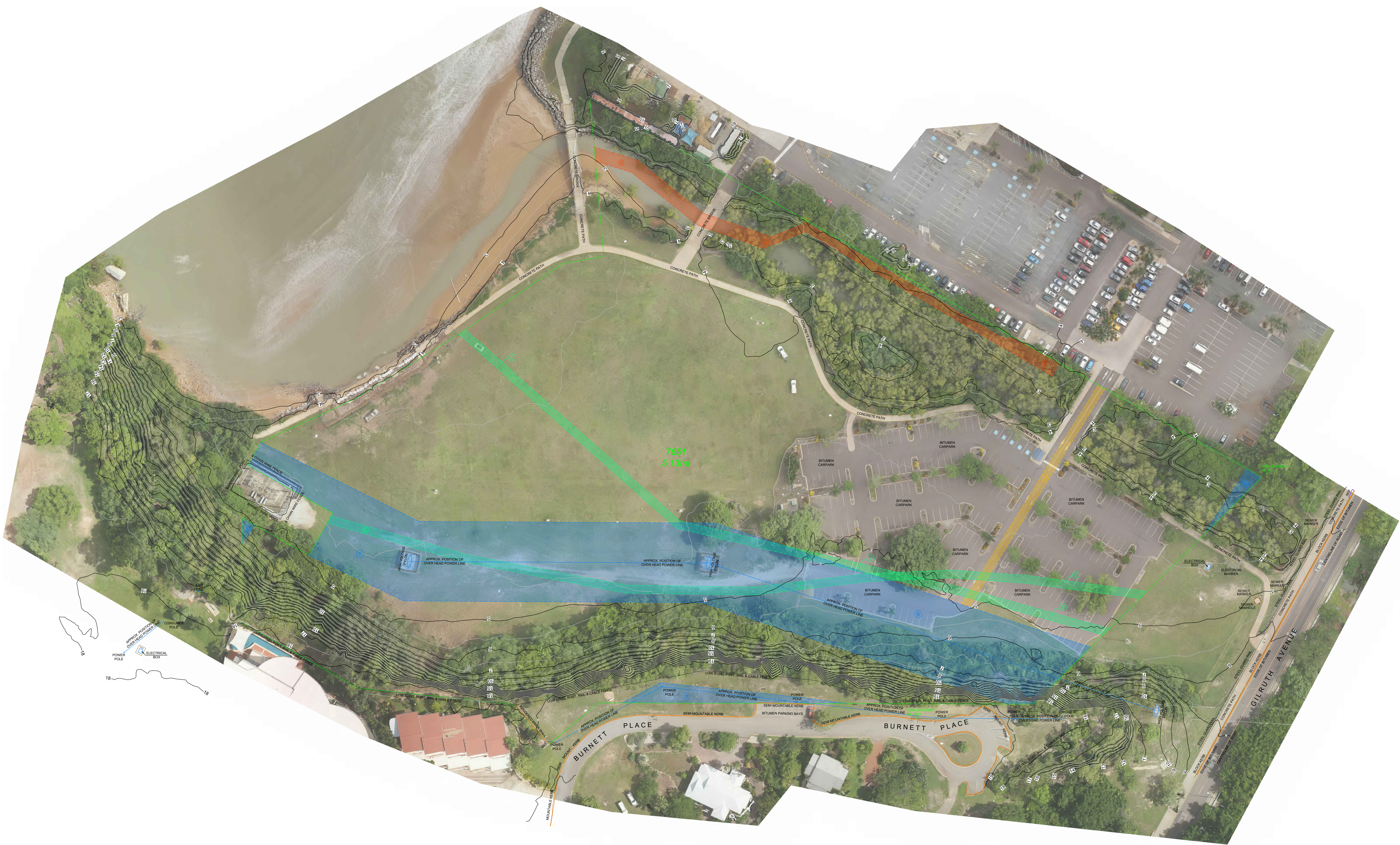
TP4.01



## Appendix B Site Survey



SERVICE LEGEND	
COMBO PIT	[Symbol]
GRATE	[Symbol]
SIDE ENTRY PIT	[Symbol]
STORM WATER MANHOLE	[Symbol]
ELECTRICITY	
CABLE MANHOLE	[Symbol]
CABLE PIT / BOX	[Symbol]
CONSUMER POLE	[Symbol]
LIGHT POLE	[Symbol]
POWER POLE	[Symbol]
STAY POLE	[Symbol]
STAY WIRE ANCHOR	[Symbol]
OHV POWER LINE	[Symbol]
GAS	
GAS MANHOLE	[Symbol]
GAS MARKER	[Symbol]
GAS METER	[Symbol]
GAS VALVE	[Symbol]
SEWERAGE	
SEWER MANHOLE	[Symbol]
PROPERTY CONNECTION	[Symbol]
SEWER LINE	[Symbol]
TELECOMMUNICATION	
TEL COMMS MANHOLE	[Symbol]
TEL COMMS MARKER	[Symbol]
TEL COMMS PIT	[Symbol]
WATER	
FLUSH POINT	[Symbol]
HYDRANT	[Symbol]
STOP VALVE	[Symbol]
TAP	[Symbol]
WATER MARKER	[Symbol]
WATER METER	[Symbol]
WATER LINE	[Symbol]
SURVEY	
DATUM	[Symbol]
PEG FOUND	[Symbol]
OTHER	
AWNING / LEAVES	[Symbol]
ROOF RIDGE	[Symbol]
FLOOR RL	[Symbol]
WINDOW / DOOR	[Symbol]
BANK - BOTTOM	[Symbol]
BANK - TOP	[Symbol]
SERVICE RECORD	
STATUS	[Table]
SERVICE	[Table]
WATER	[Table]
SEWERAGE	[Table]
GAS	[Table]
TEL COMM	[Table]
POWER	[Table]
SERVICES MARKED ON THIS PLAN ARE THE PROPERTY OF THE BUILDERS / CLIENTS TO CONFIRM POSITION AND AVAILABILITY ON SITE.	



BOUNDARY INFORMATION SOURCED FROM THE NORTHERN TERRITORY ATLAS & SPATIAL DATA DIRECTORY. BOUNDARY LINE WORK HAS BEEN CONVERTED TO MGA4 BASED ON CRM 995220043, WITH A SCALE FACTOR OF 1.00008948 AND A GRID CONVERGENCE OF 0'23.40.83". BEARINGS & DISTANCES SHOWN ARE FROM SURVEY PLAN S2009/255A

<b>(A)</b> = EASEMENT (SEWERAGE) BENEFIT TO THE POWER & WATER CORPORATION.	<b>CONTOUR LEGEND - 0.5m INTERVALS</b> MAJOR CONTOURS 00 MINOR CONTOURS
<b>(E)</b> = EASEMENT (ELECTRICITY SUPPLY) BENEFIT TO THE POWER & WATER CORPORATION.	<b>NOTE:</b> THIS PLAN HAS BEEN PREPARED WITH 2D VALUES AND HAS MGA4 ZONE 52 COORDINATES.
<b>(C)</b> = EASEMENT (ELECTRONIC COMMUNICATIONS SUPPLY) BENEFIT TO TELSTRA CORPORATION LTD.	<b>NOTE:</b> AHD LEVEL DERIVED FROM COORDINATED REFERENCE MARK 995220043 - RL = 19.267
<b>(D)</b> = EASEMENT (RIGHT OF WAY) BENEFIT TO THE POWER & WATER CORPORATION.	<b>SURVEY CONTROL COORDINATE LISTING MGA4 ZONE 52</b> NAME EASTING NORTHING ELEVATION CRM 995220043 886006.915 8822941.968 19.267

LOT : 7651 (# 25) GILRUTH AVENUE	SURVEY PLAN : S2009/255A	CLIENT : KTT INVESTMENTS PTY. LTD.
SUBURB : THE GARDENS	C/T : 832 / 126	SURVEYED ON : 14/02/2020
AUTHORITY : CITY OF DARWIN		SURVEYOR : LV / BZ
BUILDERS / CLIENTS: SITE SURVEY ONLY. THE INFORMATION SHOWN ON THIS PLAN IS SHOWN AT THE TIME OF SURVEY. VERIFY BOUNDARY INFORMATION, AND ANY OTHER INFORMATION, BEFORE CONSTRUCTION. CONSULT THE BUILDERS / CLIENTS FOR ANY CHANGES TO THE INFORMATION SHOWN ON THIS PLAN. CONFIRM LOCATION INFORMATION WITH THE BUILDERS / CLIENTS BEFORE CONSTRUCTION. CONSULT THE BUILDERS / CLIENTS FOR ANY CHANGES TO THE INFORMATION SHOWN ON THIS PLAN.		DRAFTER : MR
SCALE : 1:500		JOB No: 2000201
		PLAN: FS
		DRG: 001
		REV: A
		SHEET 1 OF 1

25113 Macdonald Road  
MINDALUP, NT 0820  
Telephone 081 8944 4076  
dave@landsurveys.com.au




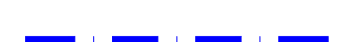




# Appendix C

## ADG Preliminary Plans

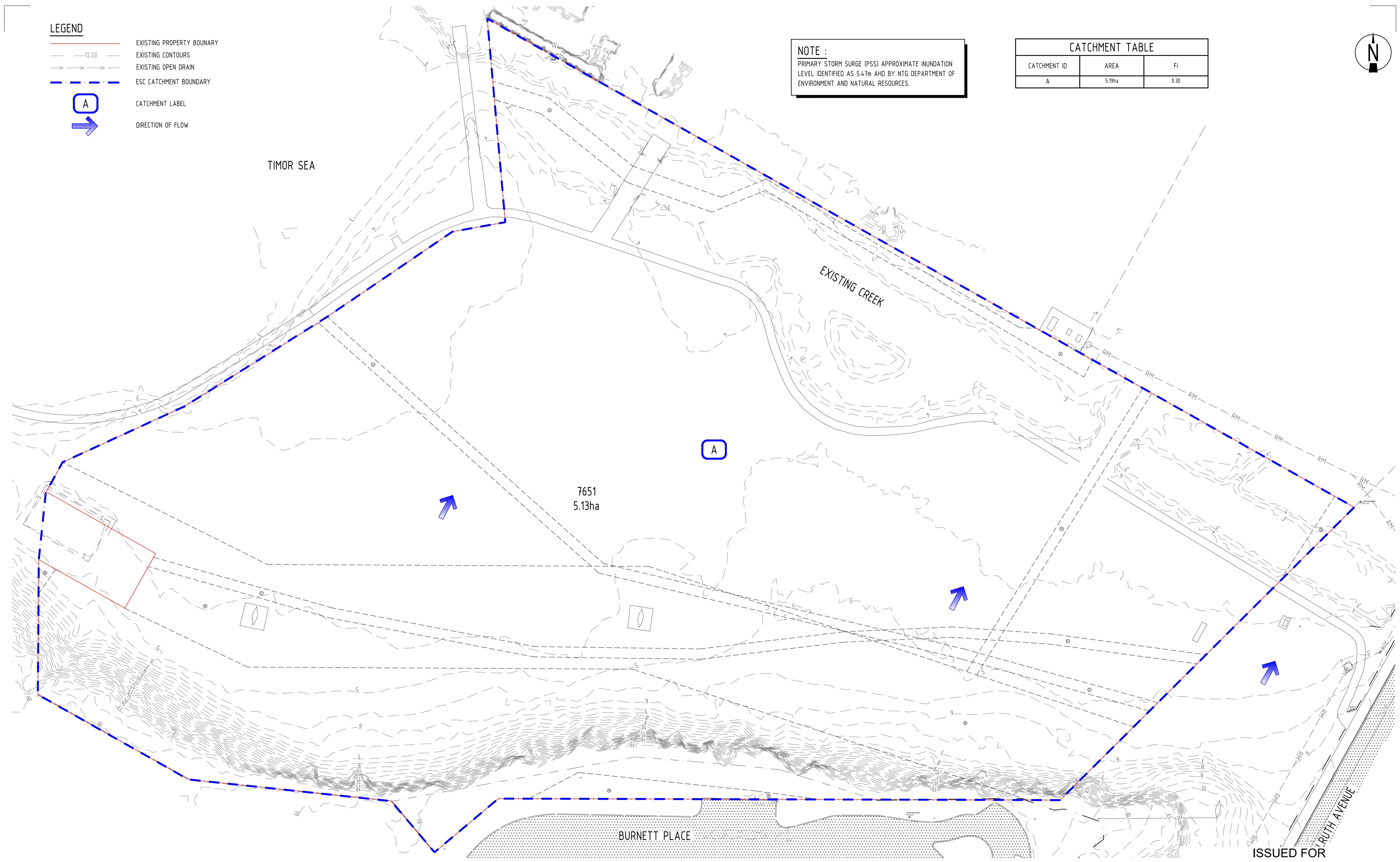
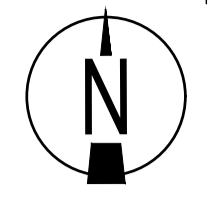


**LEGEND**

-  EXISTING PROPERTY BOUNDARY
-  EXISTING CONTOURS
-  EXISTING OPEN DRAIN
-  ESC CATCHMENT BOUNDARY
-  CATCHMENT LABEL
-  DIRECTION OF FLOW

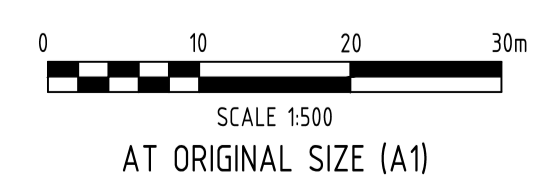
**NOTE :**  
 PRIMARY STORM SURGE (PSS) APPROXIMATE INUNDATION LEVEL IDENTIFIED AS 5.47m AHD BY NTG DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES.

CATCHMENT TABLE		
CATCHMENT ID	AREA	Fi
A	5.19ha	0.30



**ISSUED FOR INFORMATION ONLY**

Rev	Date	Description	By	Chk
C	17.06.21	ISSUED FOR DISCUSSION	AM	HD
B	01.02.21	ISSUED FOR DISCUSSION	JMB	HD
A	01.06.20	ISSUED FOR INFORMATION	JMB	HD



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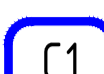

Client  
**KTT Investments Pty Ltd**  
 Project Name  
**LITTLE MINDIL BEACH  
 THE GARDENS, NORTHERN TERRITORY**

Discipline CIVIL	Status INFORMATION
Designed By HD	Checked By HD
Project No. 23085	Drawn By JMB
Scale at A1 1:1000	

Title <b>STORMWATER CATCHMENT PRE-DEVELOPMENT PLAN</b>	
Drawing No. <b>DA_C010</b>	Revision <b>C</b>

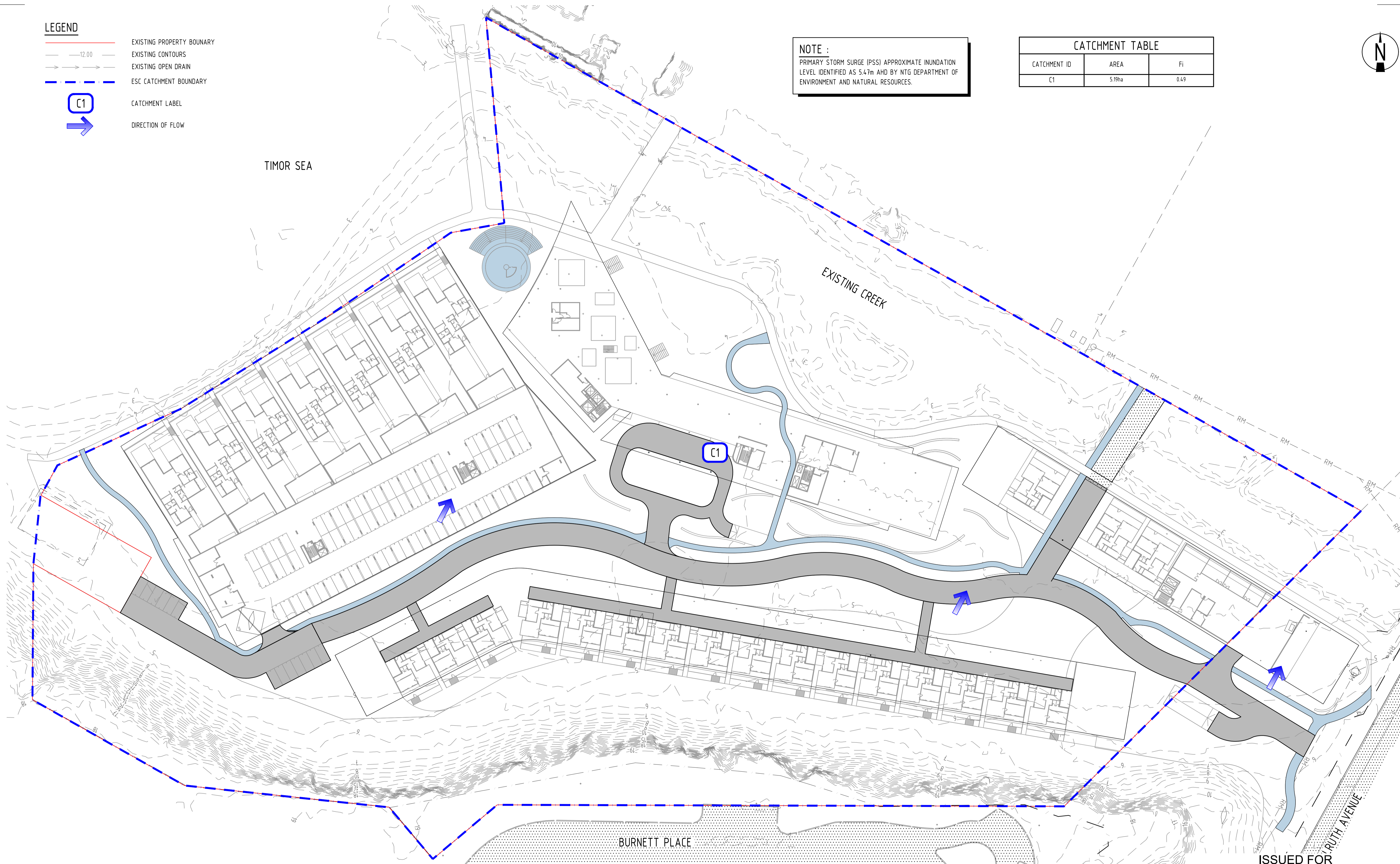
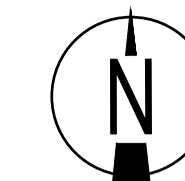


**LEGEND**

-  EXISTING PROPERTY BOUNDARY
-  EXISTING CONTOURS
-  EXISTING OPEN DRAIN
-  ESC CATCHMENT BOUNDARY
-  CATCHMENT LABEL
-  DIRECTION OF FLOW

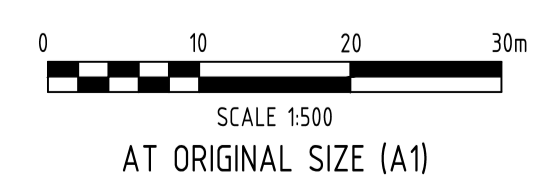
**NOTE :**  
 PRIMARY STORM SURGE (PSS) APPROXIMATE INUNDATION LEVEL IDENTIFIED AS 5.47m AHD BY NTG DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES.

CATCHMENT TABLE		
CATCHMENT ID	AREA	Fi
C1	5.19ha	0.49



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Rev	Date	Description	By	Chk
C	17.06.21	ISSUED FOR DISCUSSION	AM	HD
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A	01.06.20	ISSUED FOR INFORMATION	JMB	HD




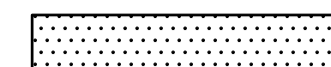






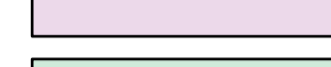

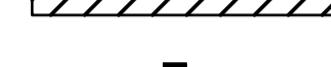

Client  
**KTT Investments Pty Ltd**  
 Project Name  
**LITTLE MINDIL BEACH  
 THE GARDENS, NORTHERN TERRITORY**

Discipline CIVIL	Status INFORMATION
Designed By HD	Checked By HD
Project No. 23085	Drawn By JMB
Approved By BL	
Scale at A1 1:1000	

Title <b>STORMWATER CATCHMENT POST-DEVELOPMENT PLAN</b>	
Drawing No. <b>DA_C011</b>	Revision <b>C</b>

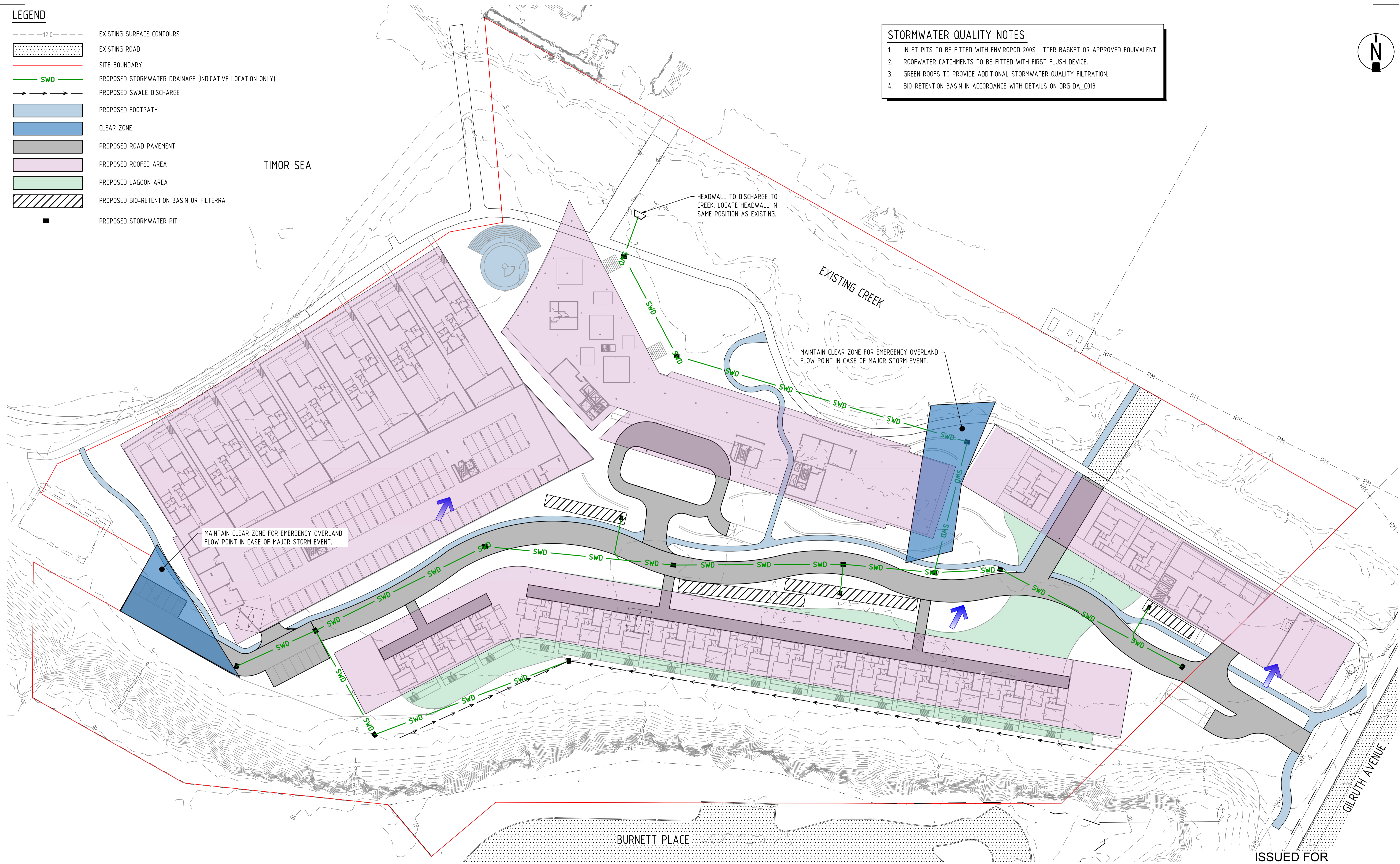
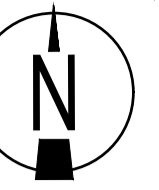


**LEGEND**

-  -12.0 EXISTING SURFACE CONTOURS
-  EXISTING ROAD
-  SITE BOUNDARY
-  PROPOSED STORMWATER DRAINAGE (INDICATIVE LOCATION ONLY)
-  PROPOSED SWALE DISCHARGE
-  PROPOSED FOOTPATH
-  CLEAR ZONE
-  PROPOSED ROAD PAVEMENT
-  PROPOSED ROOFED AREA
-  PROPOSED LAGOON AREA
-  PROPOSED BIO-RETENTION BASIN OR FILTERRA
-  PROPOSED STORMWATER PIT

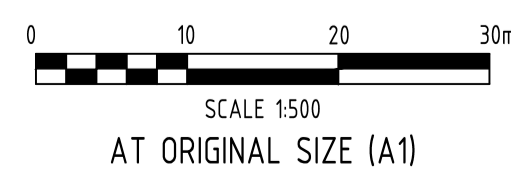
**STORMWATER QUALITY NOTES:**

1. INLET PITS TO BE FITTED WITH ENVIROPOD 200S LITTER BASKET OR APPROVED EQUIVALENT.
2. ROOFWATER CATCHMENTS TO BE FITTED WITH FIRST FLUSH DEVICE.
3. GREEN ROOFS TO PROVIDE ADDITIONAL STORMWATER QUALITY FILTRATION.
4. BIO-RETENTION BASIN IN ACCORDANCE WITH DETAILS ON DRG DA\_C013



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Rev	Date	Description	By	Chk
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Client  
**KTT Investments Pty Ltd**  
 Project Name  
**LITTLE MINDIL BEACH  
 THE GARDENS, NORTHERN TERRITORY**

Discipline CIVIL		Status INFORMATION
Designed By HD	Checked By HD	Approved By BL
Project No. 23085	Drawn By JMB	Scale at A1 1:1000
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Title <b>PRELIMINARY STORMWATER MANAGEMENT PLAN</b>	
Drawing No. DA_C012	Revision C



**BIO RETENTION NOTES:**

**INSPECTIONS:**

- CONTRACTOR TO CONTACT ADG ENGINEERS AT LEAST 48 HOURS PRIOR TO PLACEMENT OF EACH LAYER TO ORGANISE INSPECTION. EACH LAYER IS NOT TO BE PLACED UNTIL WRITTEN CONFIRMATION PROVIDED BY ADG ENGINEERS.

**FILTRATION LAYER:**

- CONTRACTOR TO PROVIDE ADG ENGINEERS WITH TEST INFORMATION OF PROPOSED FILTER MEDIA TO CONFIRM THE BELOW PARAMETERS.
- MATERIAL TO CONSIST OF SANDY LOAM OR EQUIVALENT MATERIAL.
- MATERIAL TO HAVE 5% - 10% ORGANIC CONTENT IN ACCORDANCE WITH AS1289.4.1.1

- MATERIAL TO HAVE AN AVERAGE PARTICAL SIZE (D50) OF 0.45mm.
- SATURATED HYDRAULIC CONDUCTIVITY TO BE BETWEEN 100-300mm/HR DETERMINED IN ACCORDANCE WITH AS 4419-1998 APPENDIX H SOIL PERMEABILITY.

- pH BETWEEN 6 & 7.
- TN CONTENT OF FILTER MEDIA TO BE <400mg/kg
- ORTHOPHOSPHATE CONTENT TO BE <50mg/kg

**DRAINAGE LAYER:**

- MATERIAL TO CONSIST OF 2-5mm GRAVEL.

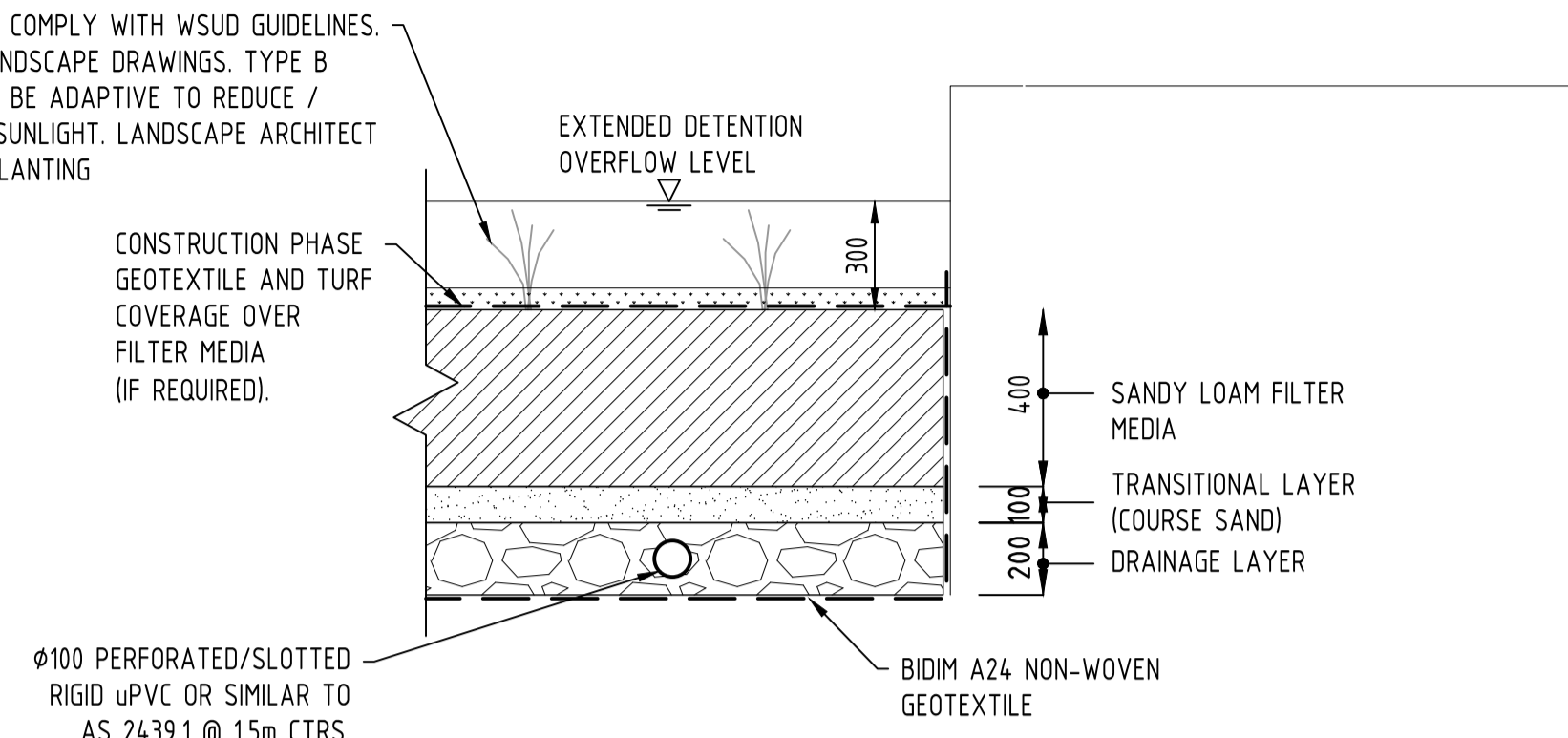
**PERFORATED PIPE:**

- 100Ø SLOTTED RIGID uPVC OR SIMILAR TO AS 2439.1 OR APPROVED EQUIVALENT MIN 0.5% GRADE @ 15m CTRS

**CONSTRUCTION PHASE:**

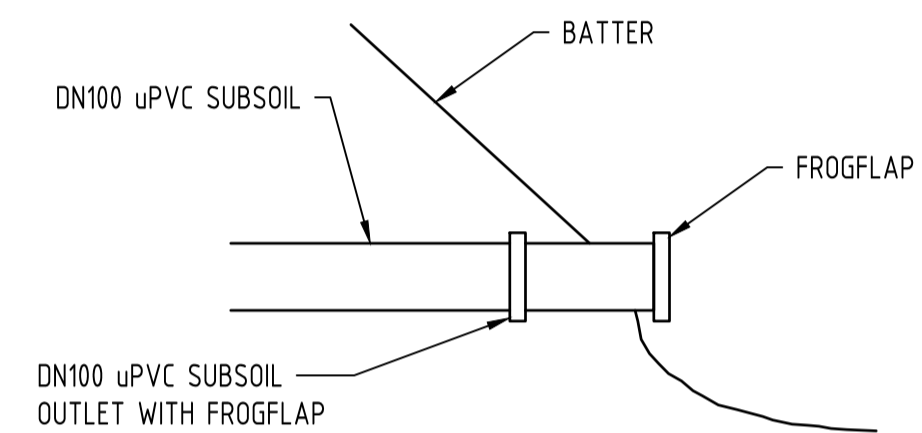
- COVER FILTRATION LAYER IN GEOTXTILE, 50mm TOPSOIL & TURF STRIPS PERPENDICULAR TO FLOW.
- GEOTEXTILE TO BE REMOVED ONLY WHEN UPSTREAM SEDIMENT LOADS ARE CONTROLLED.
- BASIN TO BE PLANTED AS PER THE APPROVED LANDSCAPE PLANS

PLANTING TO COMPLY WITH WSUD GUIDELINES. REFER TO LANDSCAPE DRAWINGS. TYPE B PLANTING TO BE ADAPTIVE TO REDUCE / RESTRICTED SUNLIGHT. LANDSCAPE ARCHITECT TO ADVISE PLANTING



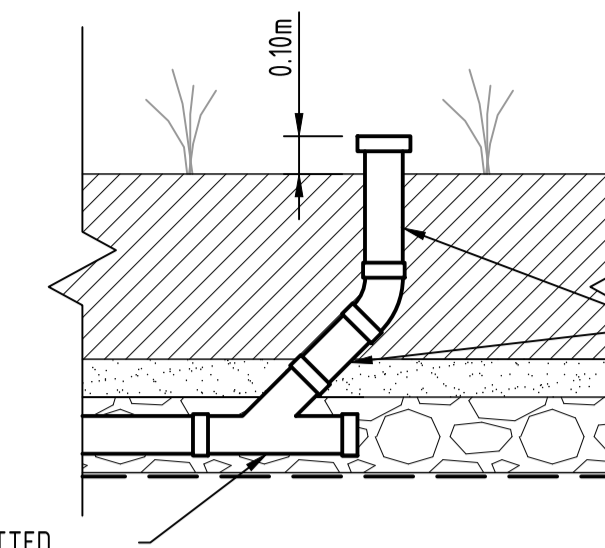
**BIO-RETENTION SPECIFICATION**

SCALE 1:20



**SUBSOIL DRAIN OUTLET TO BATTER/DRAIN**

N.T.S.



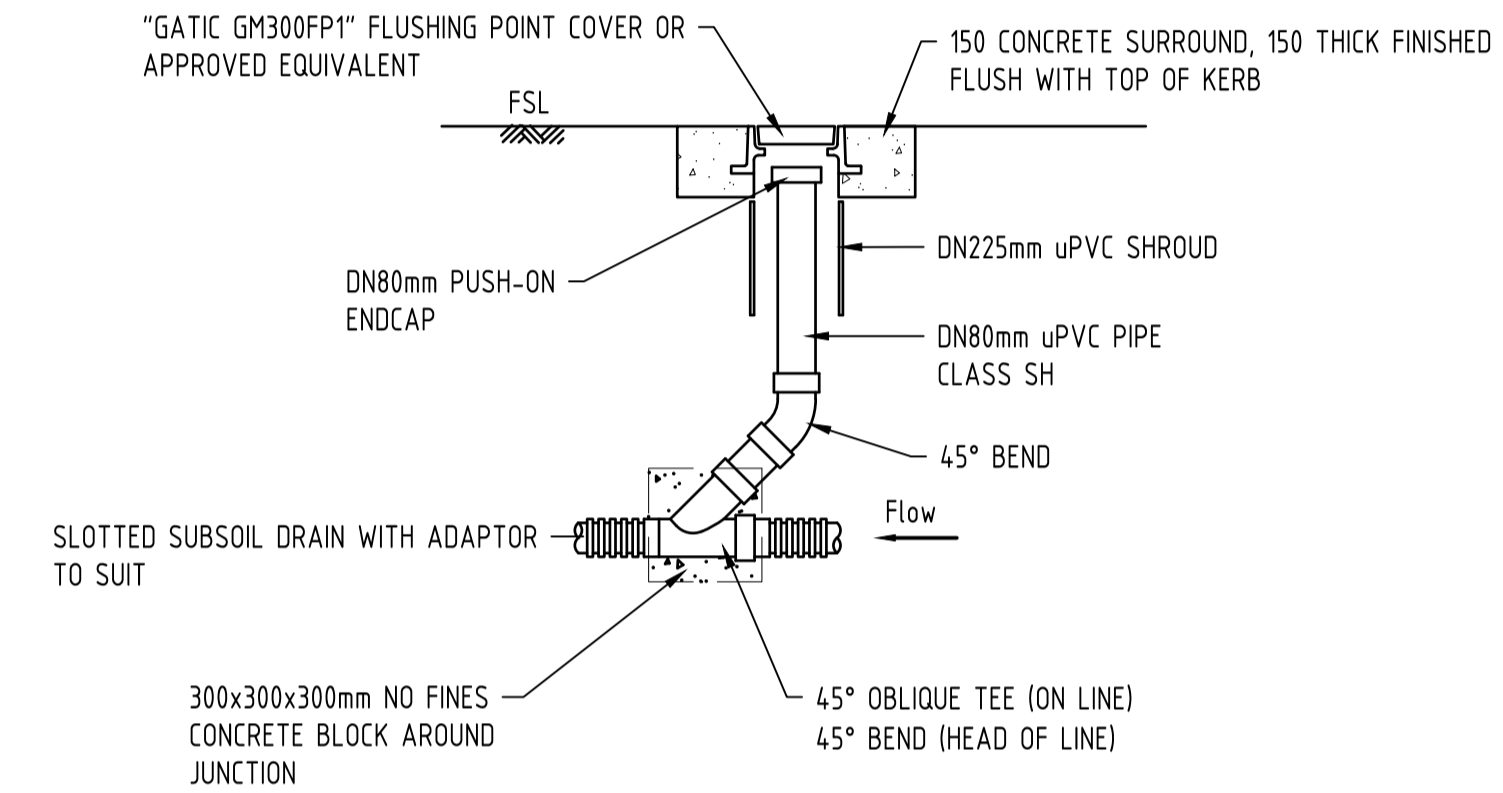
**SUBSOIL DRAINAGE CLEANOUT TYPICAL DETAIL**

(REFER STD IPWEAQ DETAIL ON DRG WSUD-003).

SCALE 1:20

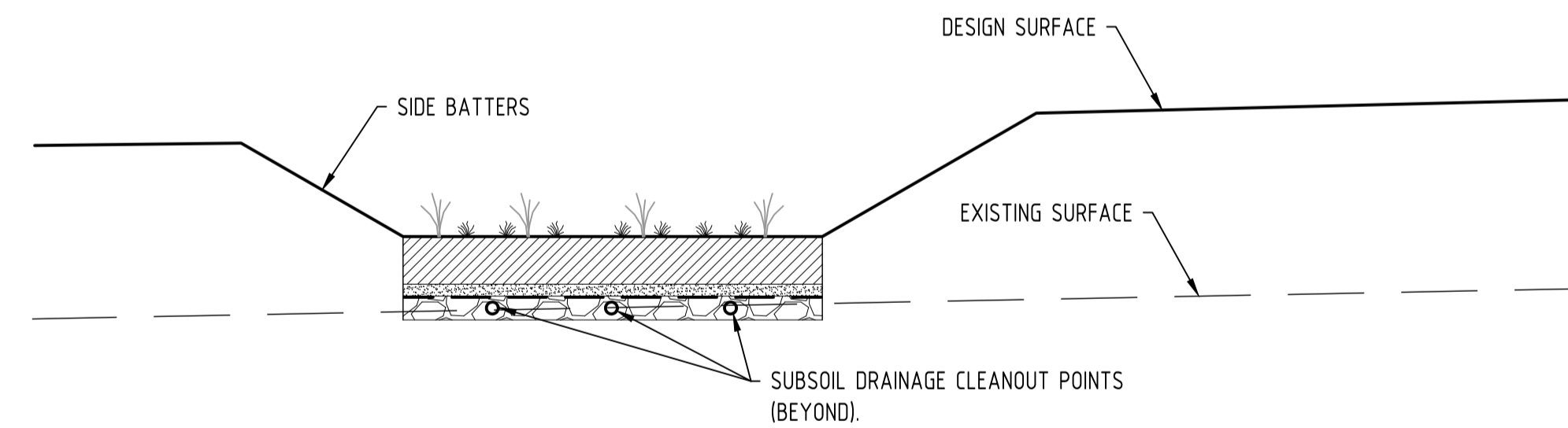
Ø100 PERFORATED/SLOTTED RIGID uPVC OR SIMILAR TO AS 2439.1 @ 1.5m CTRS.

PROVIDE STANDARD PVC PIPE (NON-PERFORATED) RISE TO 100mm ABOVE FILTER MEDIA SURFACE AND PROVIDE REMOVABLE SCREW CAP.



**SUBSOIL DRAIN FLUSHING POINT**

N.T.S.

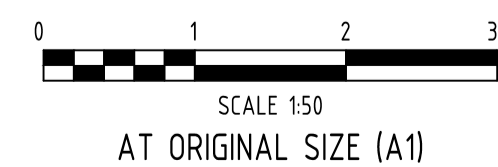


**TYPICAL BIO-RETENTION (TYPE A) SECTION**

SCALE 1:50

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A	01.02.21	ISSUED FOR DISCUSSION	JMB	HD



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Client KTT Investments Pty Ltd	Discipline CIVIL	Status INFORMATION
Project Name LITTLE MINDIL BEACH THE GARDENS, NORTHERN TERRITORY	Designed By HD	Checked By BL
	Project No. 23085	Drawn By AS SHOWN

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Title BIO-RETENTION BASIN DETAILS	
Drawing No. DA_C013	Revision B



# Appendix D

## Rational Method Calculations





# CIVIL DESIGN SPREADSHEETS

Project Little Mindil Beach	Job # 23085	Rev 0
Subject <b>Pre-Development Catchment Runoff</b>	Made by / date HD Apr-20	Checked / date SW Apr-20

## RATIONAL METHOD CALCULATIONS (PRE-DEVELOPMENT)

PRE-DEV CATCH- MENT ID	AREA (ha)	Fi	Impervious Area (ha)	Pervious Area (ha)	C10	C1	C100	CA100	Sheet Flow Length (m)	Slope (%)	Mannings "n"	Sheet Flow Time (mins)	Channel Flow Time (mins)	Time of Conc. "tc" (mins)	Q1 Rainfall Intensity (mm/hr)	Q100 Rainfall Intensity (mm/hr)	Q1 Peak Flow (m3/s)	Q10 Peak Flow (m3/s)	Q100 Peak Flow (m3/s)
EX1	5.190	0.30	1.557	3.633	0.76	0.61	0.912	4.733	150	1.33	0.035	19	0	18.8	89.7	217.8	0.786	1.641	2.864
Notes: 1) Rational method calculations are in accordance with QUDM (2013) Volume 1 Chapter 4.0 where $Q = CIA/360$ 2) Fraction Impervious and Mannings 'n' value estimated from site aerial imagery and topographical information 3) Intesity Frequency Duration Rainfall Data extracted from online Bureau of Meteorology 'Rainfall IFD Data System' 4) Time of concentration is sum of overland sheet flow time (Friend's eq.) plus channel time (Argue method) 5) C10 value for Fi values less than 0.10 assumes "medium" soil permeability and "poor" grass coverage																			

Project Little Mindil Beach	Job # 23085	Rev 0
Subject <b>Post-Development Catchment Runoff</b>	Made by / date HD Apr-20	Checked / date SW Apr-20

## RATIONAL METHOD CALCULATIONS (POST-DEVELOPMENT)

POST-DEV CATCH- MENT ID	AREA (ha)	Fi	Impervious Area (ha)	Pervious Area (ha)	C10	C1	C100	CA100	Sheet Flow Length (m)	Slope (%)	Mannings "n"	Sheet Flow Time (mins)	Channel Flow Time (mins)	Time of Conc. "tc" (mins)	Q1 Rainfall Intensity (mm/hr)	Q100 Rainfall Intensity (mm/hr)	Q1 Peak Flow (m3/s)	Q10 Peak Flow (m3/s)	Q100 Peak Flow (m3/s)
C1	5.190	0.49	2.543	2.647	0.80	0.64	0.96	4.982	0	0.00	0	0	10	10.0	113.9	280.4	1.051	2.212	3.881
Notes: 1) Rational method calculations are in accordance with QUDM (2013) Volume 1 Chapter 4.0 where $Q = CIA/360$ 2) Fraction Impervious and Mannings 'n' value estimated from site aerial imagery and topographical information 3) Intesity Frequency Duration Rainfall Data extracted from online Bureau of Meteorology 'Rainfall IFD Data System' 4) Time of concentration is sum of overland sheet flow time (Friend's eq.) plus channel time (Argue method) 5) C10 value for Fi values less than 0.10 assumes "medium" soil permeability and "poor" grass coverage																			



# Appendix E

## Storm Surge Flood Mapping and NTG Correspondence



## Request from Harris Davidson about Storm Surge Level for the property Parcel – 7651, Town of Darwin, NT

The Surface Water group in DENR has carried out desktop study on storm surge level and flooding levels query for the property (**Parcel 7651, Town of Darwin, NT**) and have made the following comments based on available (published) relevant Mappings such as Storm Surge Flood Mappings and digital data as GIS layer:

### SURFACE WATER COMMENTS:

- The lot of interest (**Parcel 7651** as shown in Figure 1 below) is affected by both Primary Storm Surge (PSS) and Secondary Storm Surge (SSS) inundation / flooding of 100 year and 1000 year ARI with approximate inundation levels as shown in Table 1 below (*Source: Darwin Area Storm Surge Inundation for 2100, November 2014 / prepared by GHD Pty Ltd for DLRM*).









Figure 1 Location of Primary and Secondary Storm Surge Levels (P – Primary; S – Secondary)

Table 1 Primary and Secondary Storm Surge Levels

Locations	Primary Storm Surge Level (PSS) (mAHD)	Secondary Storm Surge Level (SSS) (mAHD)
P1	5.46	-
P2	5.46	-
P3	5.47	-
P4	5.47	-
P5	5.47	-
P6	5.46	-
S1	-	5.75
S2	-	5.86
S3	-	5.85
S4	-	5.79
S5	-	5.75
S6	-	5.76

*This document contains information obtained through a desktop assessment. DENR has made every reasonable effort to provide current and accurate information, but it does not make any guarantees regarding the accuracy or completeness of the information. The information in this document does not constitute professional advice and should not be relied upon. You should obtain your own professional advice.*



# Appendix F

## MUSIC Modelling Results



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## MUSIC Model Information

### Introduction:

The quality of stormwater runoff and the impact of the proposed stormwater quality improvement measures were analyzed using MUSIC Version 6.3.0 according to the *MUSIC Modeling Guidelines Version 3.0, Water by Design 2018*. The source nodes in the model are split into various types and a summary of the area breakdown is presented below:

### Meteorological Data:

The MUSIC model was carried out using the following parameters:

- Modeling period should be 10 years with a time step of 6 minutes
- The nearest available 6 minute time step rainfall series to the subject site is Darwin, with a mean annual rainfall of 1728 mm, and data from: 1987 to 1996.

Evaporation was applied as monthly mean. The mean annual evaporation was 1427 mm.

### Source Nodes, Fractions Impervious:

The areas of the source nodes were estimated from the Functional Layout Plan as shown in **Appendix C**.

### Source Nodes - Pollutant Exports:

Rainfall runoff and pollutant export parameters were assigned per **Tables 3.7** and **3.8** of the Water by Design MUSIC Modeling Guidelines Version 1.0 (2010).

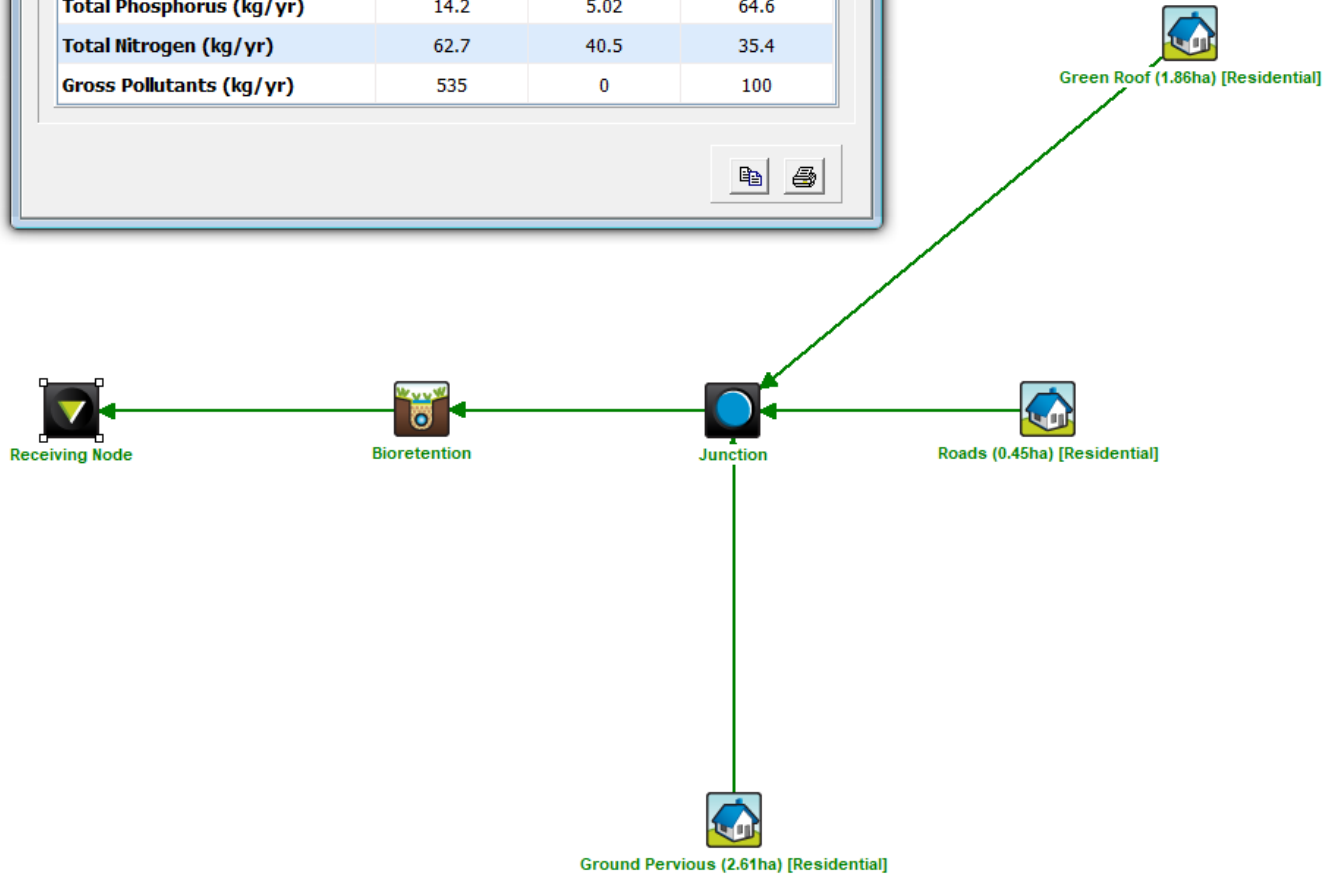
The rainfall runoff and pollutant export parameters for a residential development were adopted.



### Option 1 Treatment Train Diagrams & Results

Treatment Train Effectiveness - Receiving Node

	Sources	Residual Load	% Reduction
Flow (ML/yr)	29.6	28	5.5
Total Suspended Solids (kg/yr)	7710	1960	74.6
Total Phosphorus (kg/yr)	14.2	5.02	64.6
Total Nitrogen (kg/yr)	62.7	40.5	35.4
Gross Pollutants (kg/yr)	535	0	100





Option 1 Bio-retention Basin:

**Properties of Bioretention** ✕

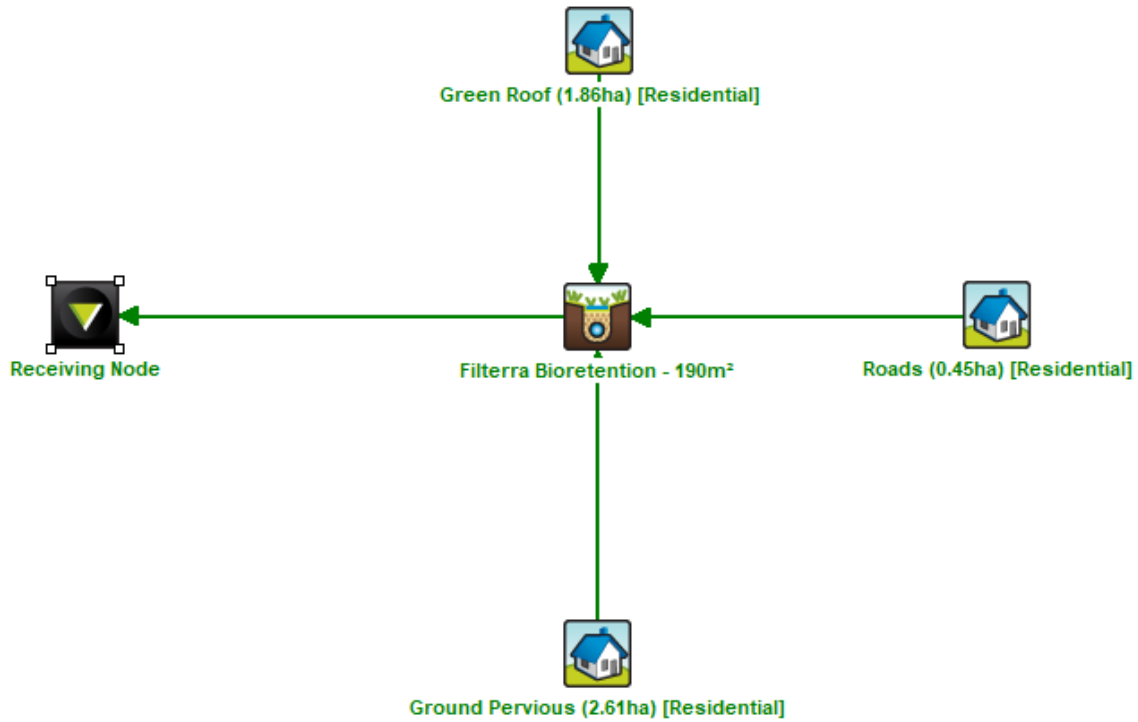
Location   [Products >>](#)

<b>Inlet Properties</b>	
Low Flow By-pass (cubic metres per sec)	<input type="text" value="0.000"/>
High Flow By-pass (cubic metres per sec)	<input type="text" value="100.000"/>
<b>Storage Properties</b>	
Extended Detention Depth (metres)	<input type="text" value="0.00"/>
Surface Area (square metres)	<input type="text" value="700.00"/>
<b>Filter and Media Properties</b>	
Filter Area (square metres)	<input type="text" value="700.00"/>
Unlined Filter Media Perimeter (metres)	<input type="text" value="113.00"/>
Saturated Hydraulic Conductivity (mm/hour)	<input type="text" value="200.00"/>
Filter Depth (metres)	<input type="text" value="0.40"/>
TN Content of Filter Media (mg/kg)	<input type="text" value="400"/>
Orthophosphate Content of Filter Media (mg/kg)	<input type="text" value="30.0"/>
<b>Infiltration Properties</b>	
Exfiltration Rate (mm/hr)	<input type="text" value="0.00"/>

<b>Lining Properties</b>	
Is Base Lined?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Vegetation Properties</b>	
<input checked="" type="radio"/> Vegetated with Effective Nutrient Removal Plants	
<input type="radio"/> Vegetated with Ineffective Nutrient Removal Plants	
<input type="radio"/> Unvegetated	
<b>Outlet Properties</b>	
Overflow Weir Width (metres)	<input type="text" value="2.00"/>
Underdrain Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Submerged Zone With Carbon Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Depth (metres)	<input type="text" value="0.45"/>



Option 2 Treatment Train Diagrams & Results



Treatment Train Effectiveness - Receiving Node

	Sources	Residual Load	% Reduction
<b>Flow (ML/yr)</b>	29.6	29.2	1.5
<b>Total Suspended Solids (kg/yr)</b>	8080	1980	75.5
<b>Total Phosphorus (kg/yr)</b>	15.6	4.81	69.2
<b>Total Nitrogen (kg/yr)</b>	61	29.4	51.8
<b>Gross Pollutants (kg/yr)</b>	535	0	100



Option 2 Filterra:

**Properties of Filterra Bioretention - 190m<sup>2</sup>**

Location:   Products >>

<b>Inlet Properties</b>		<b>Lining Properties</b>	
Low Flow By-pass (cubic metres per sec)	<input type="text" value="0.000"/>	Is Base Lined?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
High Flow By-pass (cubic metres per sec)	<input type="text" value="100.000"/>	<b>Vegetation Properties</b>	
<b>Storage Properties</b>		<input checked="" type="radio"/> Vegetated with Effective Nutrient Removal Plants <input type="radio"/> Vegetated with Ineffective Nutrient Removal Plants <input type="radio"/> Unvegetated	
Extended Detention Depth (metres)	<input type="text" value="0.15"/>	<b>Outlet Properties</b>	
Surface Area (square metres)	<input type="text" value="190.00"/>	Overflow Weir Width (metres)	<input type="text" value="14.80"/>
<b>Filter and Media Properties</b>		Underdrain Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Filter Area (square metres)	<input type="text" value="190.00"/>	Submerged Zone With Carbon Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Unlined Filter Media Perimeter (metres)	<input type="text" value="0.01"/>	Depth (metres)	<input type="text" value="0.45"/>
Saturated Hydraulic Conductivity (mm/hour)	<input type="text" value="3550.00"/>	<input type="button" value="Fluxes..."/> <input type="button" value="Notes..."/> <input type="button" value="More"/>	
Filter Depth (metres)	<input type="text" value="0.53"/>		
TN Content of Filter Media (mg/kg)	<input type="text" value="500"/>		
Orthophosphate Content of Filter Media (mg/kg)	<input type="text" value="1.0"/>		
<b>Infiltration Properties</b>			
Exfiltration Rate (mm/hr)	<input type="text" value="0.00"/>	<input type="button" value="Cancel"/> <input type="button" value="Back"/> <input type="button" value="Finish"/>	



---

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