

TRADE BREAKUP

Job Name : <u>DETAILED DESIGN1</u>		Job Description					
Client's Name: <u>Site Architects</u>		Katter Kich Discovery Centre					
Item No.	Item Description	+/- %	Quantity	Unit	Rate	Mark Up %	Amount
Trade : 52 Professional Fees & Disbursements							<i>(Continued)</i>
2	Professional fees - Post novation (See Builders Scope)			Note			
3	Disbursements - \$15,000 split 50/50 with post novation			Item			7,500.00
4	Subtotal						<u>336,880.00</u>
5	Sundry contingency 5%, as advised			Item			18,120.00
<u>Professional Fees & Disbursements</u> Total :							355,000.00
Trade : 53 Management Fees							
1	External project management fees - Excluded, as advised			Note			
<u>Management Fees</u> Total :							
Trade : 54 Escalation							
1	Escalation to February 2027, 3.4% based upon AIQS forecast indices			Item			395,000.00
<u>Escalation</u> Total :							395,000.00
Trade : 55 GST							
1	GST - Excluded			Note			
<u>GST</u> Total :							
Trade : 56 Subtotal							
<u>Subtotal</u> Total :							
Trade : 57 TOTAL							
1							
<u>TOTAL</u> Total :							
Trade : 58							
1							
Total :							

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Item No.	Item Description	+/- %	Quantity	Unit	Rate	Mark Up %	Amount
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Trade : **59 COST OPTIONS**

1							
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COST OPTIONS Total :

Trade : **60 COST OPTION: Demolition Works (By Client, no cost to project)**

	<u>Delete</u>						
	<u>Demolition</u>						
1	Remove trees and grub up roots - Excluded, to remain			Note			
2	Demolish existing sheds entirely		-150.00	m2	135.00		-20,250.00
3	E/o for verandah		-25.00	m2	90.00		-2,250.00
4	Remove existing concrete slab		-250.00	m2	60.00		-15,000.00
5	Remove existing crossover		-31.00	m2	75.00		-2,325.00
6	Remove existing stairs and landing			Item			-2,000.00
7	Remove existing timber retaining		-42.00	m	135.00		-5,670.00
8	Remove existing bollard fencing		-48.00	m	50.00		-2,400.00
9	Sundry demolition, including in ground pits, etc.			Item			-10,000.00
10	Allow for asbestos - Excluded, as advised			Note			
11	Subtotal						<u>-59,895.00</u>
	<u>Preliminaries</u>						
12	Preliminaries 15%			Item			-8,105.00
13	Subtotal						<u>-68,000.00</u>
	<u>Locality Allowance</u>						
14	Locality allowance for Hyden - Included above			Note			
15	TOTAL - Building Works						<u>-68,000.00</u>
	<u>Project Costs</u>						
16	Contingencies, escalation, etc. 22%		-1.00	Item	14,000.00		-14,000.00
17	TOTAL						<u>-82,000.00</u>
<u>COST OPTION: Demolition Works (By Client, no cost to project)</u> Total :							-82,000.00

Trade : **61 COST OPTION: Excavation works below building pad for clean fill (By Client, no cost to proje**

	<u>Delete</u>						
	<u>Site Preparation</u>						

TRADE BREAKUP

Job Name :	<u>DETAILED DESIGN1</u>	Job Description
Client's Name:	<u>Site Architects</u>	Katter Kich Discovery Centre

Item No.	Item Description	+/- %	Quantity	Unit	Rate	Mark Up %	Amount
Trade : 61 <u>COST OPTION: Excavation works below building pad for clean fill (By Client, no cost to proje</u> (Continued)							
1	Excavate below building pad for clean fill, dispose off site		-1.00	Item	75,000.00		-75,000.00
2	Subtotal						<u>-75,000.00</u>
	<u>Preliminaries</u>						
3	Preliminaries 15%			Item			
4	Subtotal						<u>-75,000.00</u>
	<u>Locality Allowance</u>						
5	Locality allowance for Hyden - Included above			Note			-11,000.00
6	TOTAL - Building Works						<u>-86,000.00</u>
	<u>Project Costs</u>						
7	Contingencies, escalation, etc. 22%			Item			-18,000.00
8	TOTAL						<u>-104,000.00</u>
<u>COST OPTION: Excavation works below building pad for clean fill (By Client, no cost to project)</u>						Total :	-104,000.00

Trade : 62 <u>COST OPTION: Supply & Deliver Clean Imported Fill (By Client, no cost to project)</u>							
	<u>Delete</u>						
1	Supply cost of clean imported fill		-1.00	Item	30,000.00		-30,000.00
2	Subtotal						<u>-30,000.00</u>
	<u>Preliminaries</u>						
3	Preliminaries 15%			Item			-4,000.00
4	Subtotal						<u>-34,000.00</u>
	<u>Locality Allowance</u>						
5	Locality allowance for Hyden - Included above			Note			
6	TOTAL - Building Works						<u>-34,000.00</u>
	<u>Project Costs</u>						
7	Contingencies, escalation, etc. 22%			Item			-7,000.00
8	TOTAL						<u>-41,000.00</u>
<u>COST OPTION: Supply & Deliver Clean Imported Fill (By Client, no cost to project)</u>						Total :	-41,000.00

Trade : 63 <u>COST OPTION: Digging In Rock (By Client, no cost to project)</u>							
	<u>Delete</u>						
	<u>Site Preparation</u>						

TRADE BREAKUP

Job Name : <u>DETAILED DESIGN1</u>		Job Description					
Client's Name: <u>Site Architects</u>		Katter Kich Discovery Centre					
Item No.	Item Description	+/- %	Quantity	Unit	Rate	Mark Up %	Amount
Trade : 63 <u>COST OPTION: Digging In Rock (By Client, no cost to project)</u>							(Continued)
1	Digging in rock - Provisional			Item			-75,000.00
2	Subtotal						<u>-75,000.00</u>
	<u>Preliminaries</u>						
3	Preliminaries 15%			Item			
4	Subtotal						<u>-75,000.00</u>
	<u>Locality Allowance</u>						
5	Locality allowance for Hyden - Included above			Note			-11,000.00
6	TOTAL - Building Works						<u>-86,000.00</u>
	<u>Project Costs</u>						
7	Contingencies, escalation, etc. 22%			Item			-18,000.00
8	TOTAL						<u>-104,000.00</u>
<u>COST OPTION: Digging In Rock (By Client, no cost to project)</u>							Total : -104,000.00
Trade : 64 <u>TOTAL - Cost Options</u>							
<u>TOTAL - Cost Options</u>							Total :

APPENDIX D

SUB CONSULTANT REPORTS

B.1

STRUCTURAL

B.2

ELECTRICAL

B.3

HYDRAULIC

B.4

MECHANICAL

B.5

LANDSCAPE

B.6

CIVIL

B.7

COMPLIANCE

B.8

ENERGY

B.9

SURVEY

B.10

GEOTECHNICAL

HYDEN PROGRESS ASSOCIATION KATTER KICH WAVE ROCK DISCOVERY CENTRE

AMASS / SITE

97

KATTER KICH DISCOVERY CENTRE

36 MARSHALL STREET, HYDEN WA 6359

REINFORCEMENT

- 1. ALL REINFORCEMENT MATERIAL SHALL BE SUPPLIED TO THE CONTRACTOR BY THE SUPPLIER.
- 2. REINFORCEMENT SHALL BE SUPPLIED TO THE CONTRACTOR BY THE SUPPLIER.
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- 10. REINFORCEMENT SHALL BE SUPPLIED TO THE CONTRACTOR BY THE SUPPLIER.

REINFORCEMENT

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF THE REINFORCEMENT.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF THE REINFORCEMENT.
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- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF THE REINFORCEMENT.

REINFORCEMENT DEVELOPMENT LENGTHS

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- 9. THE REINFORCEMENT DEVELOPMENT LENGTHS SHALL BE AS FOLLOWS:
- 10. THE REINFORCEMENT DEVELOPMENT LENGTHS SHALL BE AS FOLLOWS:

STRUCTURAL INSPECTIONS AND CERTIFICATION

- 1. THE FOLLOWING INSPECTIONS SHALL BE CONDUCTED BY A REGISTERED STRUCTURAL ENGINEER:
- 2. THE FOLLOWING INSPECTIONS SHALL BE CONDUCTED BY A REGISTERED STRUCTURAL ENGINEER:
- 3. THE FOLLOWING INSPECTIONS SHALL BE CONDUCTED BY A REGISTERED STRUCTURAL ENGINEER:
- 4. THE FOLLOWING INSPECTIONS SHALL BE CONDUCTED BY A REGISTERED STRUCTURAL ENGINEER:
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- 9. THE FOLLOWING INSPECTIONS SHALL BE CONDUCTED BY A REGISTERED STRUCTURAL ENGINEER:
- 10. THE FOLLOWING INSPECTIONS SHALL BE CONDUCTED BY A REGISTERED STRUCTURAL ENGINEER:

TEMPORARY WORKS

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF THE TEMPORARY WORKS.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF THE TEMPORARY WORKS.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF THE TEMPORARY WORKS.
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- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF THE TEMPORARY WORKS.

HIGH LEVEL
TENDER SUBMISSION
PRINT IN COLOUR



GENERAL NOTES

ADG PROJECT NO. 123456789

ADG PROJECT NAME: KATTER KICH DISCOVERY CENTRE

ADG PROJECT ADDRESS: 36 MARSHALL STREET, HYDEN WA 6359

ADG PROJECT SHEET NO. 501-02

ADG PROJECT DATE: 19 AUGUST 2026

ADG PROJECT DRAWN BY: [NAME]

ADG PROJECT CHECKED BY: [NAME]

ADG PROJECT APPROVED BY: [NAME]

ADG STRUCTURAL SERVICES

KATTER KICH DISCOVERY CENTRE

36 MARSHALL STREET, HYDEN WA 6359

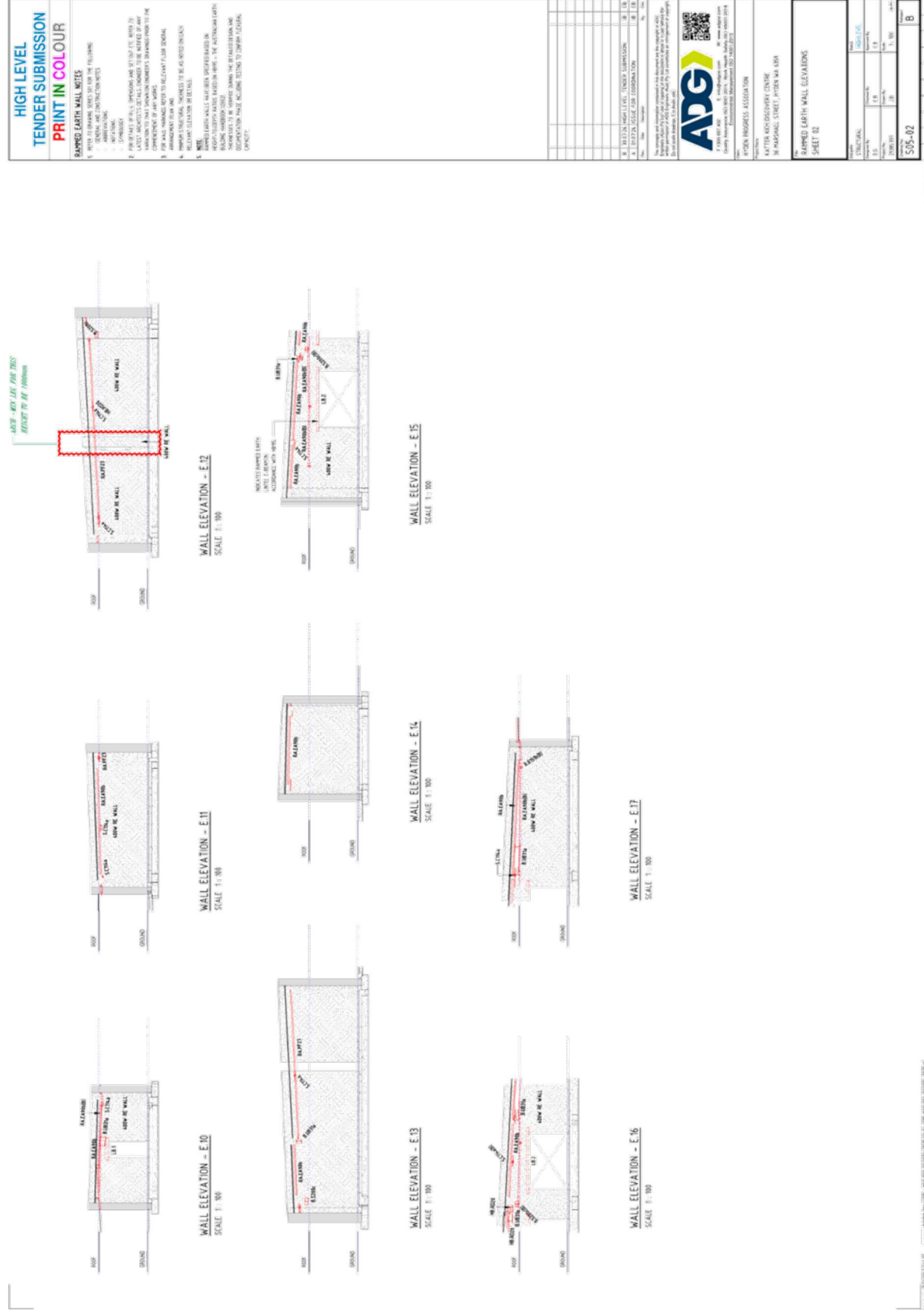


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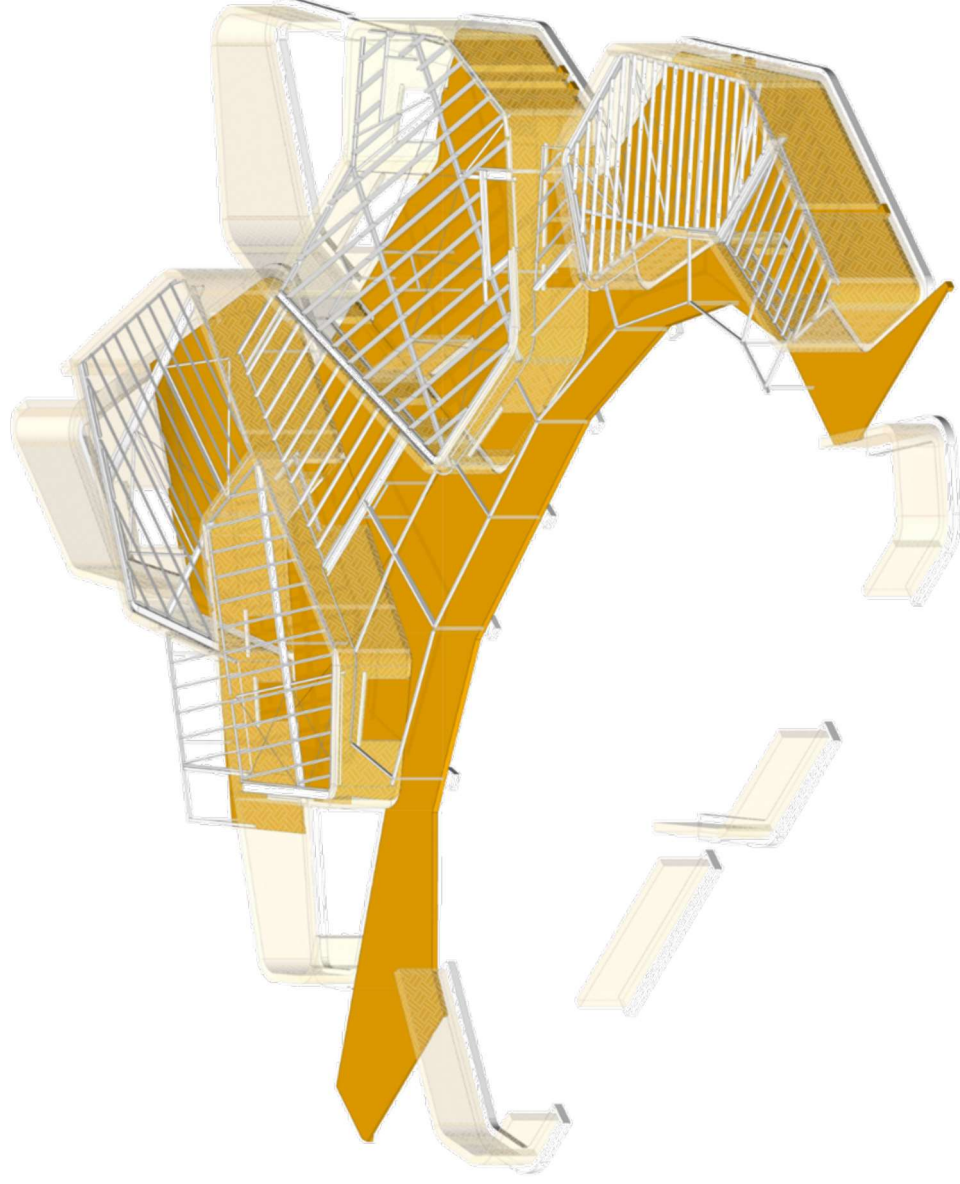
FOR CONTINUATION REFER TO SHEET 02

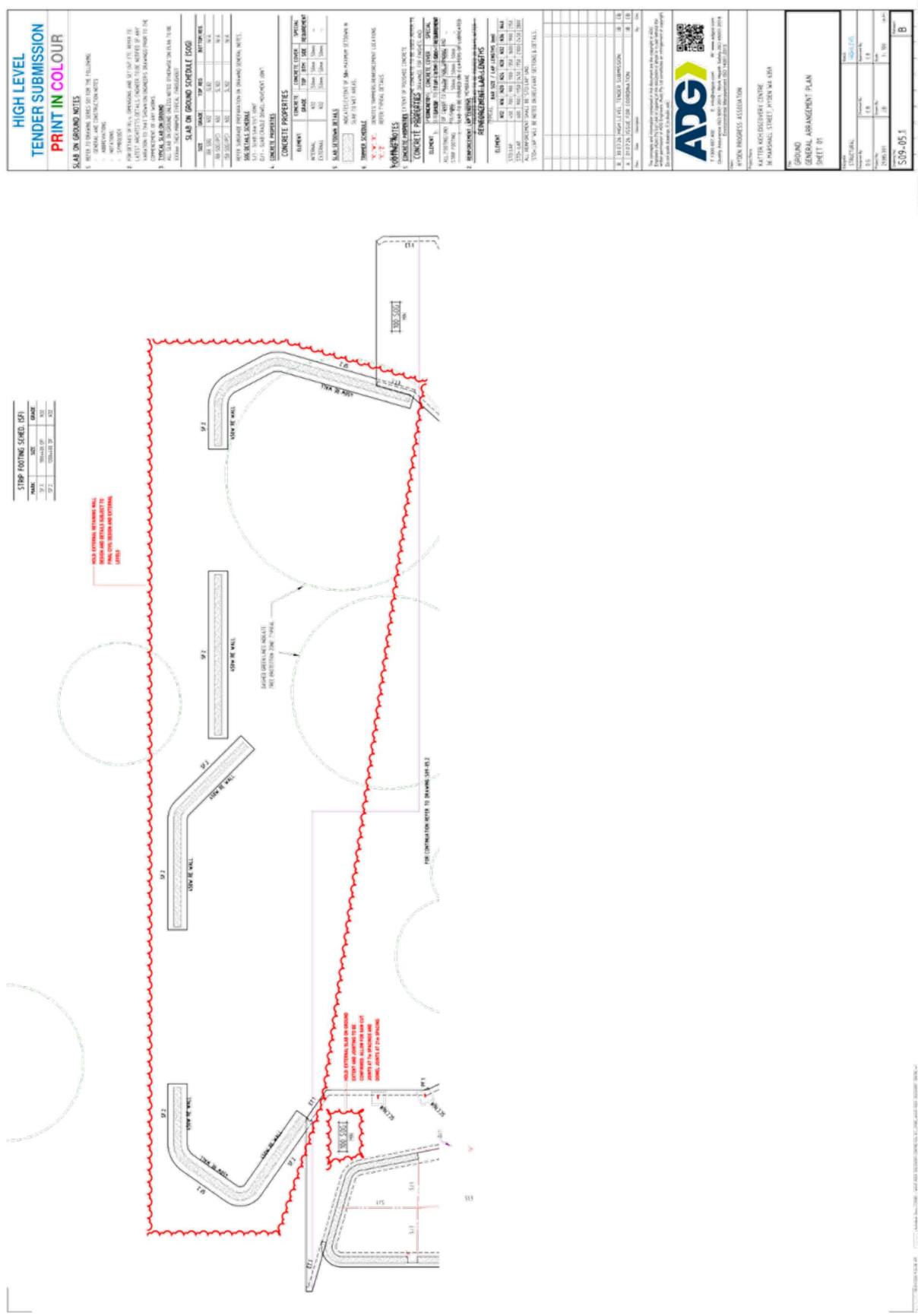
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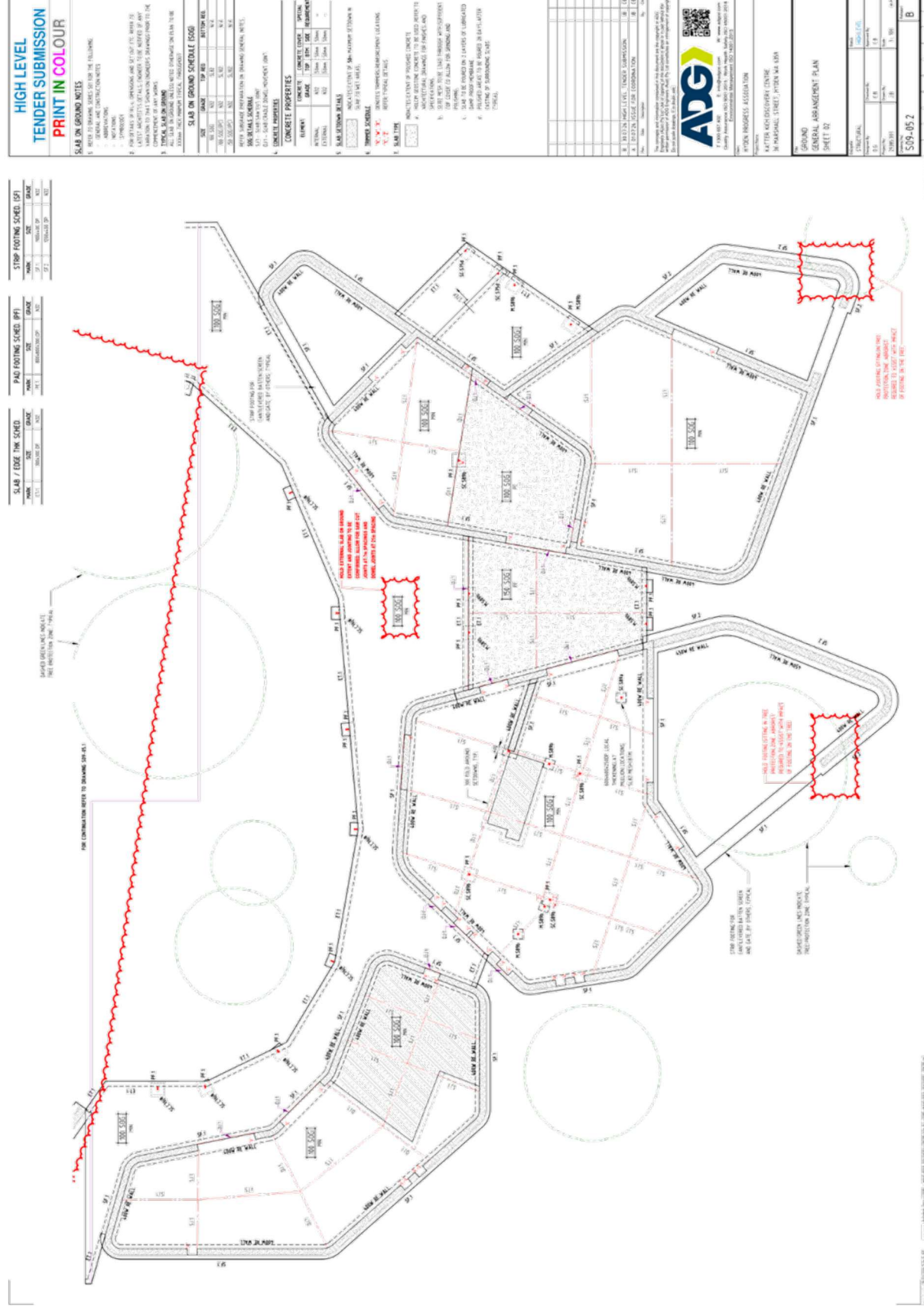


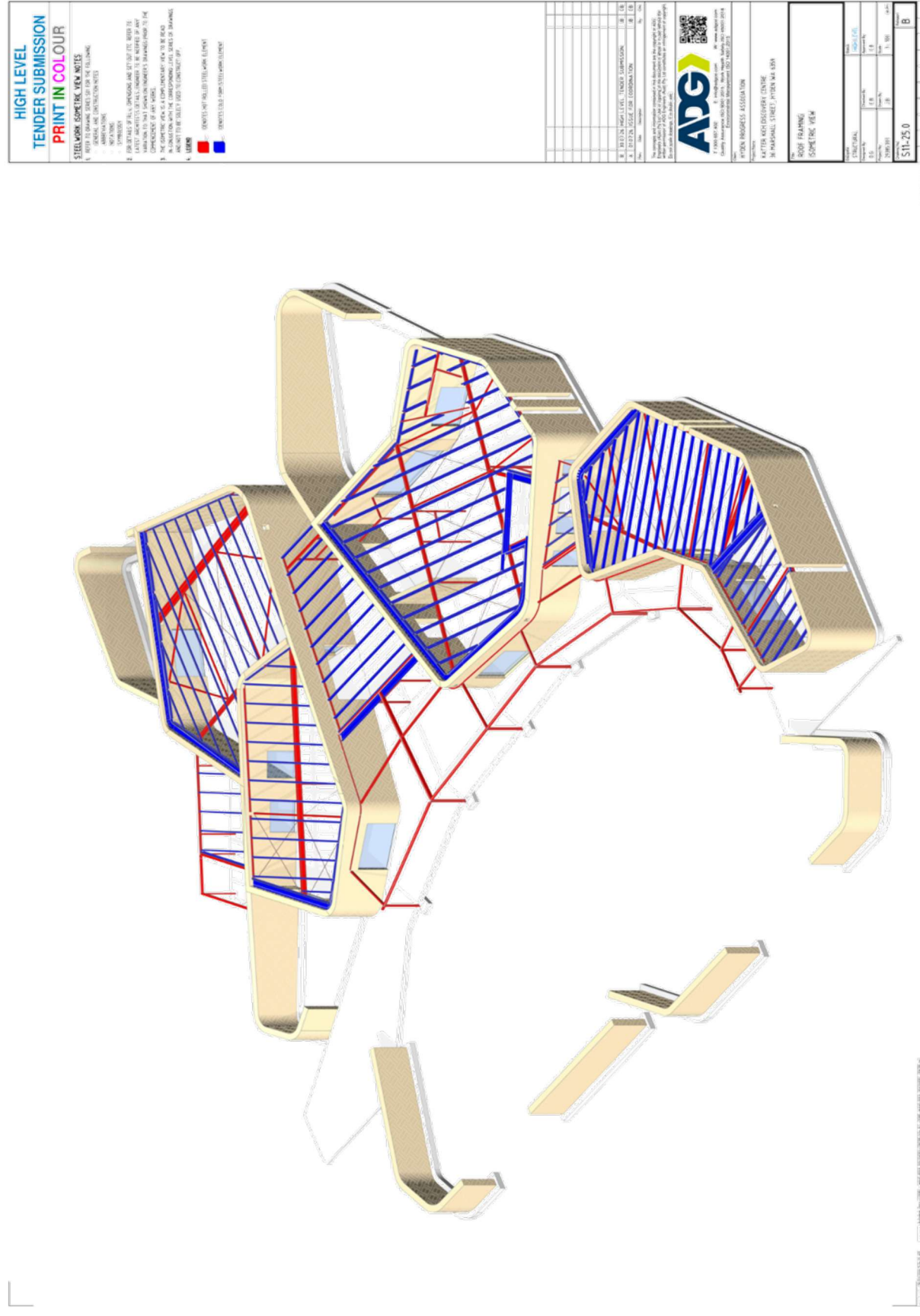


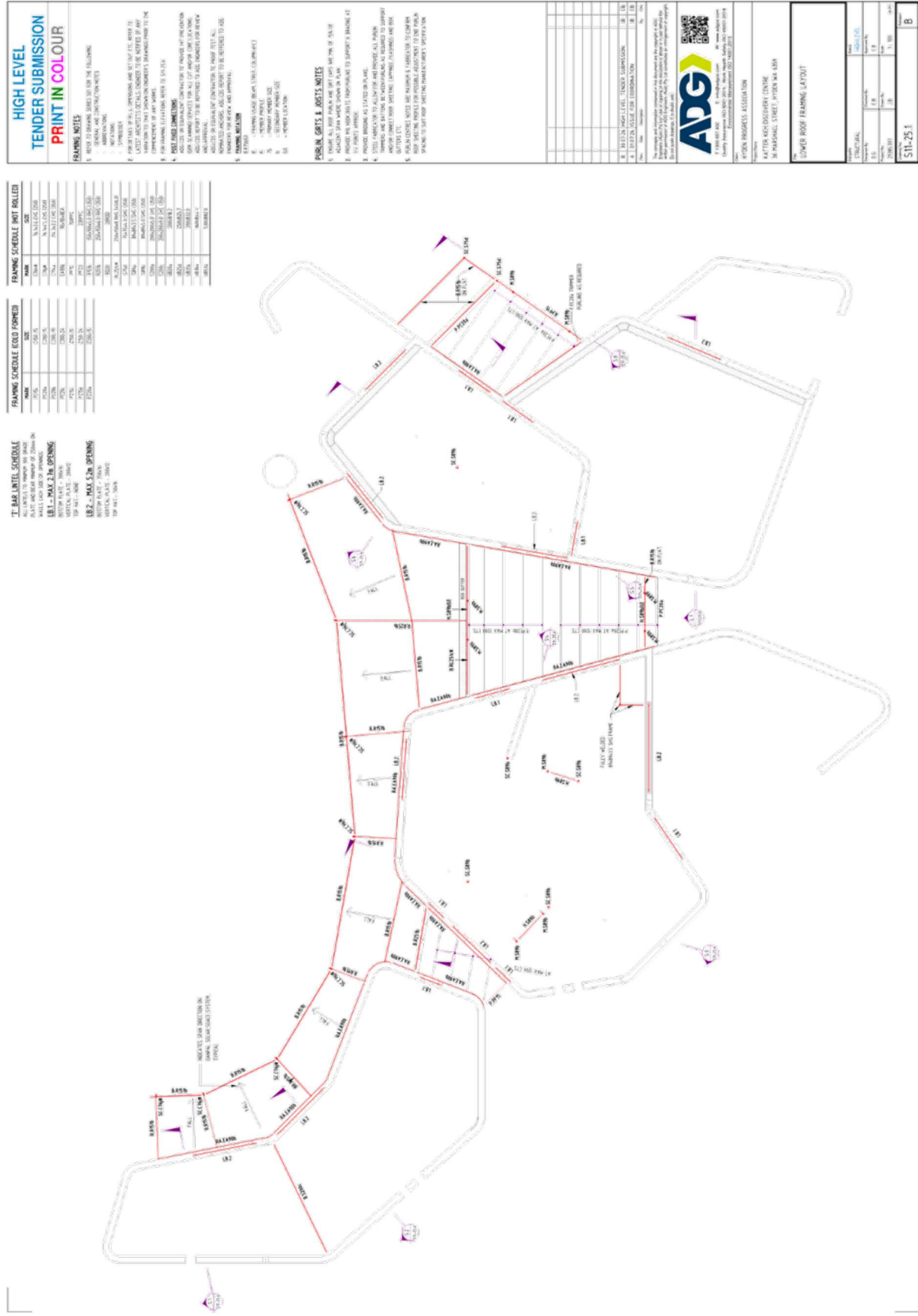
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HIGH LEVEL TENDER SUBMISSION PRINT IN COLOUR

FRAMING NOTES

1. REFER TO DRAWING SHEET 50 FOR THE FOLLOWING:
 1.1. FLOOR SLAB FINISH
 1.2. ROOF SLAB FINISH
 1.3. ROOF DRAINAGE
 1.4. ROOF VENTILATION
 1.5. ROOF INSULATION
 1.6. ROOF CLADDING
 1.7. ROOF STRUCTURE
 1.8. ROOF SUPPORTS
 1.9. ROOF BRACING
 1.10. ROOF CONNECTIONS
 1.11. ROOF ACCESS
 1.12. ROOF SAFETY
 1.13. ROOF MAINTENANCE
 1.14. ROOF REPAIRS
 1.15. ROOF REPLACEMENT
 1.16. ROOF DEMOLITION
 1.17. ROOF DISPOSAL
 1.18. ROOF STORAGE
 1.19. ROOF TRANSPORT
 1.20. ROOF HANDLING
 1.21. ROOF LIFTING
 1.22. ROOF LOWERING
 1.23. ROOF POSITIONING
 1.24. ROOF ALIGNMENT
 1.25. ROOF LEVELLING
 1.26. ROOF GRADING
 1.27. ROOF DRAINAGE
 1.28. ROOF VENTILATION
 1.29. ROOF INSULATION
 1.30. ROOF CLADDING
 1.31. ROOF STRUCTURE
 1.32. ROOF SUPPORTS
 1.33. ROOF BRACING
 1.34. ROOF CONNECTIONS
 1.35. ROOF ACCESS
 1.36. ROOF SAFETY
 1.37. ROOF MAINTENANCE
 1.38. ROOF REPAIRS
 1.39. ROOF REPLACEMENT
 1.40. ROOF DEMOLITION
 1.41. ROOF DISPOSAL
 1.42. ROOF STORAGE
 1.43. ROOF TRANSPORT
 1.44. ROOF HANDLING
 1.45. ROOF LIFTING
 1.46. ROOF LOWERING
 1.47. ROOF POSITIONING
 1.48. ROOF ALIGNMENT
 1.49. ROOF LEVELLING
 1.50. ROOF GRADING

FRAMING SCHEDULE (OLD FORMED)

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
1	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
2	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
3	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
4	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
5	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
6	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
7	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
8	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
9	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
10	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
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12	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
13	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
14	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
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16	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
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18	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
19	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
20	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
21	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
22	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
23	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
24	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
25	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
26	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
27	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
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34	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
35	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
36	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
37	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
38	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
39	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
40	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
41	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
42	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
43	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
44	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
45	FRAMING SCHEDULE (OLD FORMED)	UNIT	1	1000.00	1000.00
46	FRAMING SCHEDULE (OLD FORMED)	UNIT	1		





CONCEPT DESIGN REPORT ELECTRICAL SERVICES

KATTER KICH DISCOVERY CENTRE

📞 0408 721 167 ✉ info@focuswa.com.au 📍 PO Box 138, Leederville WA 6007

REVISION REGISTER

Rev	Date	Revision Details	Signatures		
			Originator	Reviewed	Approved
A	02.04.2026	For Information	FWA	PRJ	PRJ

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1 INTRODUCTION

1.1 General

This concept design report identifies the basis of the electrical, communications and general extra-low voltage design for the proposed Katter Kich Discovery Centre at Hyden, WA.

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1.2 Scope of Report

This report provides a description overview of:

- Existing Utility Connections
- Main site infrastructure related to the project
- Back up Generator provision.
- Power infrastructure reticulation
- General power services
- Internal lighting
- Emergency lighting
- External lighting
- Communications
- MATV services
- Electronic security services
- Photo Voltaic System

This report is not intended to identify specific components or elements of the services, it provides only the extent and level of service to be included, as such this report should not be used for tendering or construction.

1.3 Information Source

The information in this return brief is based on the following information:

- Site Inspection.
- Architectural design drawings
- Nearmaps, Google maps and Google street view images
- Dial Before You Dig information

1.4 Terminology

The following abbreviations are used throughout this document:

- SMSB: Site Main Switchboard
- BMSB: Building Main Switchboard
- RCD: Residual Current Device
- PoS: Point of Supply
- PoA: Point of Attachment
- MD: Maximum demand

2 PROJECT SITE

2.1 Location

The existing site is located at lots 23 & 24 Cnr of McPherson & Marshall Street, Hyden WA. The site is currently now accommodates one single building, which is the art studio / gallery.

Focus Consulting WA understands that the two lots will be amalgamated into one single lot.



Figure 1: Existing Site Location

3 ELECTRICAL SERVICES INFRASTRUCTURE

3.1 Existing Western Power Supply

There is an existing Western Power Uni-pillar located in the southwest corner of lot 23 which serves the site main switchboard located inside the art gallery.



Figure 2: Existing Western Power Uni-pillar & Overhead WPC services along Marshall St.

The estimated Western Power capacity to the site is 32Amps three phase which is a standard WPC connection.

There is existing overhead high voltage and low voltage Western Power services installed along Marshall Street and McPherson Street as indicated on the survey drawing. The proposed building will need to be setback from the overhead services to comply with Western Power standards.



Figure 3: Existing Western Power Overhead WPC services along McPherson St.

3.2 Proposed Western Power Supply

We understand the proposed building to be in the region of 900m² in floor area, based on 150VA/m² for commercial buildings with café facilities, the estimated project electrical demand will be in the region of 190Amps three phase.

A Western Power capacity upgrade will be required to cater for the increased power demand and should be provided through a pillar connection, negating the need for a transformer connection.

The pillar will need to be located in a dedicated 1m x 1m exclusion zone on the project lot, tight to the street boundary.

3.3 Site Main Switchboard

A new external site main switchboard will be required to be provided within 30m of the proposed Western Power pillar connection. The new SMSB will contain the Western Power site master meter and the Service Protective Device (SPD), in addition to circuit breakers protecting outgoing cabling to the following:

- A building main switchboard located adjacent to the main foyer.
- A distribution board for the proposed Multipurpose, theatre & kitchen building section.
- EV car charging stations
- Connection for a temporary diesel generator.

The Service Protective Device located within the switchboard must be accessible to Western Power at all times.

The site main switchboard will also accommodate provisions for the connection of a standby generator, should the client require the site to operate off the generator supply only as a temporary measure. The site main switchboard will be configured such that all outgoing circuitry can operate off the generator, i.e no 'essential' or 'non-essential' arrangement.

3.4 Cable Distribution

Power will be distributed to the Building Main Switchboard (BMSB) and distribution boards, originating from the SMSB by means of an underground conduit and pit system. The submain will be sized for initial power loads with 25% spare current carrying capacity.

3.5 Conduits

Spare conduits will be documented to facilitate moderate future requirements. All spare conduits will be provided with PVC insulated copper draw wiring.

The submain and conduit routes throughout the site will be installed into a common service trench where practicable, to reduce trenching costs and to limit the risk of damage during excavations for future work.

Conduits will be sealed to prevent water and insect ingress, and when entering buildings, they shall be sealed with 150mm of expansion foam.

Spare capacity within the underground conduit system will be provided for future oval sports lighting, however will need to be extended in the future as required.

3.6 Cable Pits

Cable pits shall be designed with a minimum load rating equivalent to Class C.

Cable pits will be provided with a minimum of 4 x 50mm holes to facilitate drainage.

Unless requested otherwise, cable pits will not be buried.

3.7 Proposed Building Main Switchboard

A Building Main Switchboard (BMSB) will be located within the proposed buildings and will supply local general power and lighting services.

The switchboard will be a painted metal, front access type generally located in a service cupboard central within the building for ease of access.

Equipment will be logically arranged with physical space and electrical capacity for 25% increase of outgoing circuits. All equipment will be clearly labelled.

Circuit breakers will be used for circuit protection, circuit protection devices will be selected for discrimination to prevent a fault from opening any protective device other than the device immediately upstream of the fault. The protective device selectivity will isolate any fault to one circuit and to ensure the remaining services within that area remain operational until the fault is cleared. Residual current devices (RCD's) will be installed on all switchboards to protect all socket outlets and lighting circuits. All direct connected appliances will be RCD protected in accordance with AS3000:2018.

Separate distribution chassis will be provided for:-

- Lighting
- General power
- Mechanical services

Transient surge protection will be provided to each building switchboard in the form of a shunt diversion device.

A power analyser will be provided within the building main switchboard to enable checking of instantaneous voltage and current values of each phase. The power analyser will also be capable of logging peak current demand of each phase.

Power will be distributed to the Building Main Switchboard (BMSB) by means of an underground conduit and pit system or cable trays with ceiling and roof voids. The submain will be sized for initial power loads with 25% spare current carrying capacity. Spare conduits will be documented to any electrical service trench to facilitate moderate future requirements.

3.8 Standby Generator

Space needs to be provided for a external free standing standby generator whether temporary or permanent and to include truck access for delivery, pick up and re-fueling.

4 GENERAL LIGHTING

4.1 General

LED lighting will be provided throughout all areas of the project.

Luminaires will be provided to all internal areas utilising surface and recessed luminaires to provide lighting levels in accordance with AS1680 for general interior spaces.

Luminaire installation types, i.e. surface mounted, recessed or suspended will be selected to suit the projects reflected ceiling plans and acoustic requirements.

The lighting will be designed to achieve maintained illuminance values as recommended by AS 1680.2.31 Interior and workplace lighting, the key areas summarised as follows;

Area	Illumination Value (Lux)
General use (Multi-Purpose rooms etc)	240
Food prep & cooking	240
Offices / Reception / Library	320 – Dimmable.
Toilets/Changerooms	80
Corridors and other circulation spaces	40 (minimum)
Gift Shop	240Lux – Dimmable.
Exhibition / Gallery / Theatre	240Lux – Dimmable with scene selection

4.2 Exit and Emergency Lighting

In accordance with NCC Part E4, single point standalone exit signs and emergency lights are required throughout the new buildings. The function of the emergency lighting is to provide illumination to the requirements of the Building Code of Australia, to all designated egress routes.

Manually initiated automated test facilities will be provided within each respective switchboard to control all emergency lighting circuits, in accordance with AS 2293.

4.3 Car Park lighting

The car park lighting will be designed to meet the criteria's outlined below and as defined in AS 1158 (Lighting For Roads and Public Spaces) and utilise pole mounted LED luminaires designed to minimise light spillage.

The lighting will be designed in accordance with AS 1158.1 2020;

- PC3 for carparks
- PCD for disabled carpark bays

Pole mounted luminaires will be designed to provide general and security lighting to the carpark, designed to minimise spill lighting to adjacent properties.

4.4 External Lighting

Artificial lighting will be provided externally to illuminate access ways, open areas providing both functional and security lighting during non-daylight hours.

The external lighting will be designed and effectively used to create atmosphere and the desired welcoming accessible ambience and contribute to a successful development.

Luminaire selection will consider vandal resistance and appearance to compliment the architectural design and shall have a light source efficacy exceeding 50lm/W.

The external lights will be controlled via new timeclock control system, located within the proposed building main switchboard.

4.5 Plant and Service Areas

Impact and robust lighting will be provided to all plant and service areas.

4.6 Lighting Control System

An intelligent lighting control system such as DALI is recommended to control the interior and exterior lighting for the project. The intelligent lighting control system will include motion sensors for energy control, scene control for events and time schedules to suit the clients requirements. Touch screens and manual switches will be provided to suit the desired space.

5 GENERAL POWER SERVICES**5.1 General Power Outlets**

Power outlets located at 500mm above finished floor.

All outlets will be protected by residual current devices (earth leakage circuit breakers/safety switches) located within the main switchboard of the respective building.

All outlets will be marked with circuit numbers for maintenance purposes.

Outlets will be provided as required to the kitchen and specialist areas to suit the needs of the facility.

External service outlets will be provided around the building perimeter for connection of general cleaning equipment. External socket outlets will be lockable.

5.2 Power to Third Party Services

Power supplies will be provided mechanical and hydraulic services as required.

6 COMMUNICATIONS**6.1 Carrier Services**

The lot is currently not provided with any telecommunications services connection from Telstra/NBN.

A new Telstra / NBN lead-in service will be required for the development.

6.2 General

The building infrastructure will provide a flexible high-speed platform for the data communication network with a facility to integrate IP telephony, audio visual and other media services.

The cabling network will be a totally flexible solution utilising fully patchable Cat 6 unshielded, copper twisted pair mediums.

A fully patchable system simplifies moves and changes within the network. PC's, workstations and telephones can be reassigned by re-patching local patch panels or outlets added by cabling to the local patch panel, thus eliminating disruptions and expensive cable reconfigurations.

The data cabling network infrastructure excludes electronic equipment and software necessary to effect connection between users and host/services (i.e. Hubs, routers, file servers, software/configuration, user licenses and the like).

6.3 Voice and Data Cabling System within Buildings

From the communication enclosure 4 pair Cat 6 unshielded twisted pair cable will be provided to each communications outlet. The Cat 6 cable will terminate at the communications enclosure on a patch panel. The patch panel will consist of multiple Cat 6, RJ45 sockets, one socket for each field outlet, mounted on a 19" free standing rack.

The voice and data cable system will be designed such that any outlet in the field can either be a voice or data outlet determined by the patching configuration at the patch panel.

The voice and data cabling system will support 1000 base T with all cable runs to outlets less than 85 metres.

6.4 Wireless Access Points

Data outlets will be positioned throughout the proposed development to facilitate future connection of wireless access routers.

7 MASTER ANTENNA TV

A Master Antennae Television (MATV) system will be provided throughout the proposed development. The system will deliver local Free to Air digital TV signals.

8 DIGITAL AUDIO-VISUAL SERVICES

Cabling will be provided to support video projection equipment or LED TV screens.

Focus Consulting WA will liaise with the nominated AV specialist installer to determine a solution for the Theatre, Gallery & Exhibition spaces.

9 SECURITY SYSTEMS

The new development will be provided with a new intruder detection system. The new system and shall comprise of the following:

- Security control panel.
- Access Control system.
- Data gathering panels located within the buildings.
- Infra-red motion detection devices throughout, connected to the security alarm panel.
- Magnetic reed switches located on all external doors which do not have motion detectors within rooms, e.g. stores, toilets, cleaners rooms, etc and are connected to the security alarm panel.
- Remote arming station near main building entry.
- Smoke detectors connected to individual 24 hour monitored zones on the security panel.
- Electronic access control to external doors as required.
- Video surveillance systems.

The preferred intruder detection and access control systems would be based on the Gallagher system or similar. When the system is switched ON, movement within the area covered by the motion detectors, unauthorized opening of any security device, or detection of smoke will cause an alarm. The alarm condition will report the alarm condition to the Central Monitoring Station via the telephone network.

Video surveillance will be provided to the external perimeter of the building and to all internal public spaces.

10 PHOTOVOLTAIC SYSTEM

Focus Consulting WA understand that a new photovoltaic system is required to site. The required capacity of the photovoltaic system at this stage is estimated to be 30kW.

11 FIRE DETECTION SYSTEM & OCCUPANT WARNING

An AS1670.1 fire detection system is not deemed required based on the building being Class 9b and less than 3-storeys.

12 ELECTRICAL VEHICLE CHARGING

EV charging is deemed not to be required as the carpark is external. The building certifier will need to confirm if EV charging provision is required. Costs are excluded at this stage.

13 PROBABLE ORDER OF COST

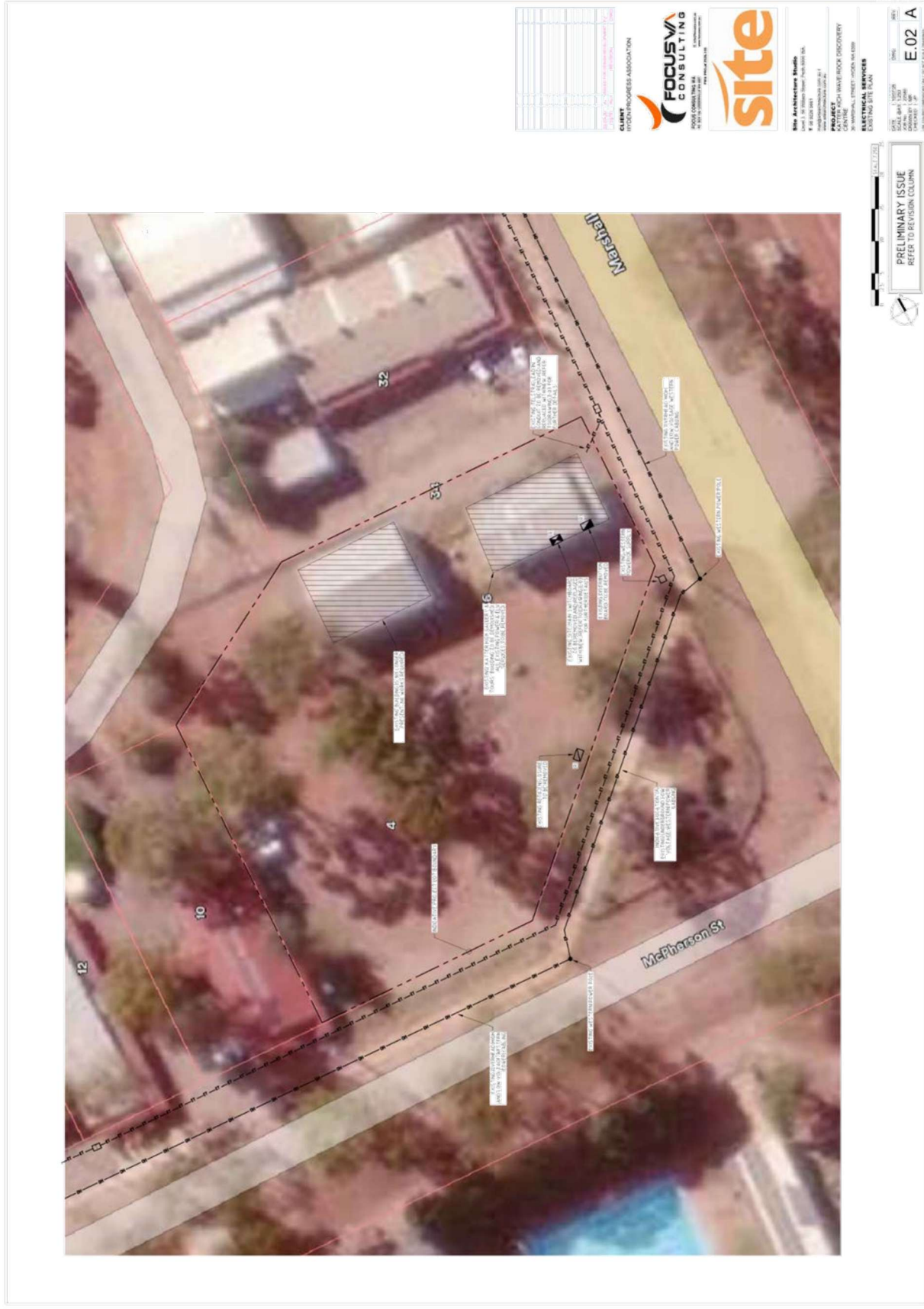
The preliminary probable order of costs for the electrical services installation is provided below:

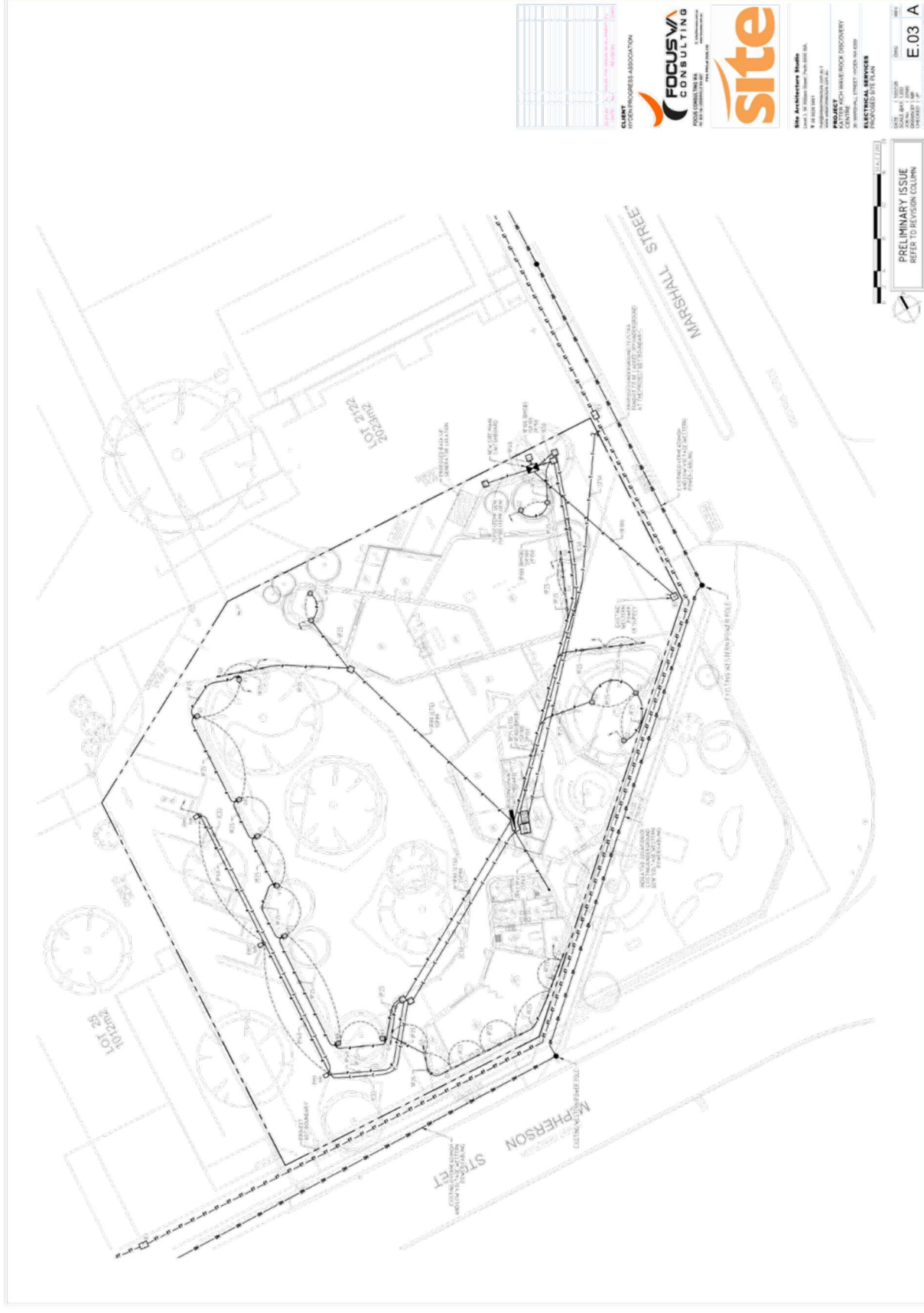
Project Katter Kich Discovery Centre			Revision A				
Project Reference 2526-155			Issue Date 2/04/2026				
Electrical Order of Probable Cost							
Description	Unit	Quantity	Rate		Cost		Total
			Labour	Material	Labour	Material	
Authorities & Preliminary Costs							
Western Power Headworks (Estimate only)	Qty	1	\$ 55,000.00	\$ 55,000.00	\$ 25,000.00	\$ 25,000.00	\$ 50,000.00
Relstra / NBN Headworks (Estimate only)	Qty	1	\$ 20,000.00	\$ 20,000.00	\$ 10,000.00	\$ 10,000.00	\$ 20,000.00
As-Constructed & Manuals	Qty	1	\$ 1,500.00	\$ 1,000.00	\$ 1,500.00	\$ 1,000.00	\$ 2,500.00
Site Establishment costs	Qty	1	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	\$ 4,000.00
Authorities & Preliminary Costs Subtotal							\$ 76,500.00
Site Infrastructure							
Building Main Switchboard	Qty	1	\$ 10,000.00	\$ 40,000.00	\$ 10,000.00	\$ 40,000.00	\$ 50,000.00
New submain from SWSB to BWSB (Based on 50m)	CCC	10000	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 12,000.00
Building Distribution Board	Qty	1	\$ 10,000.00	\$ 20,000.00	\$ 10,000.00	\$ 20,000.00	\$ 30,000.00
New submain from SWSB to DB (Based on 80m)	CCC	16000	\$ 9,600.00	\$ 9,600.00	\$ 9,600.00	\$ 9,600.00	\$ 19,200.00
New underground conduits (LV)	Qty	400	\$ 7.50	\$ 7.50	\$ 3,000.00	\$ 3,000.00	\$ 6,000.00
New underground conduits (ELV)	Qty	400	\$ 7.50	\$ 7.50	\$ 3,000.00	\$ 3,000.00	\$ 6,000.00
New cable pits	Qty	6	\$ 600.00	\$ 800.00	\$ 3,600.00	\$ 4,800.00	\$ 8,400.00
Trenching for new underground conduits (LV) (Based on 100m)	Qty	100	\$ 35.00	\$ 35.00	\$ 3,500.00	\$ 3,500.00	\$ 7,000.00
Trenching for new underground conduits (ELV) (Based on 100m)	Qty	100	\$ 35.00	\$ 35.00	\$ 3,500.00	\$ 3,500.00	\$ 7,000.00
New 30kW PV System	CCC	1	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 40,000.00
Landscape Lighting	Qty	1	\$ 15,000.00	\$ 15,000.00	\$ 15,000.00	\$ 15,000.00	\$ 30,000.00
Site Infrastructure Subtotal							\$ 215,600.00
Proposed Building: Based on \$/m2 Rates Only							
Proposed Development	(\$350/m2)	900 m2			\$350/m2		\$ 315,000.00
Proposed Buildings Subtotal							\$ 315,000.00
TOTAL (Excluding GST)							\$ 607,100.00
Exclusions:							
• GST							
• Builders work Items							
• Contingency Allowance							
• EV Charging Provision							
• Carpark Lighting							
• Regional Allowance -- Prices Based on Perth Metro Rates							
• Back up Diesel Generator							
• Specialist Audio Visual Systems							

End of Report.

KATTER KICH WAVE ROCK DISCOVERY CENTRE
ELECTRICAL SERVICES

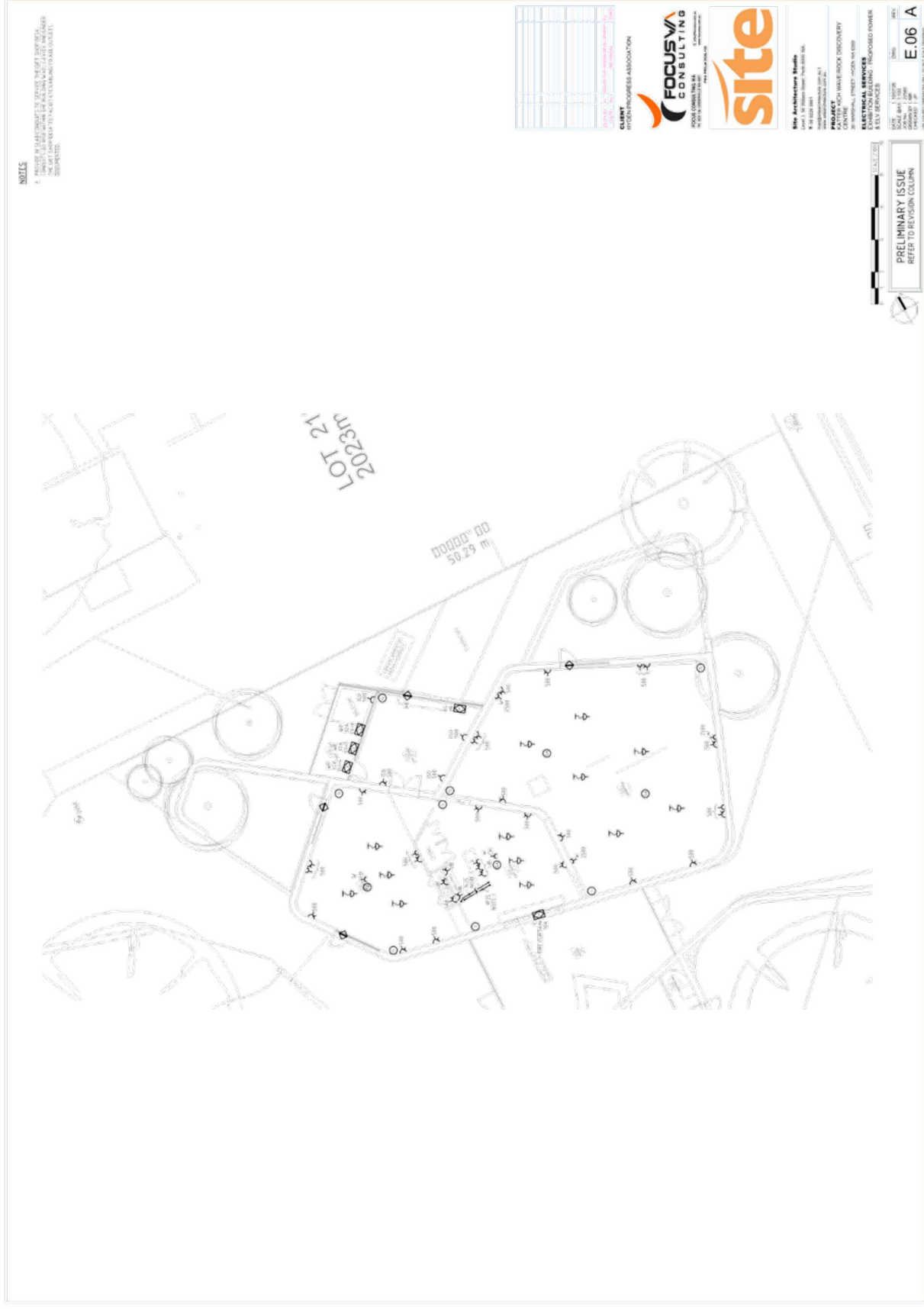
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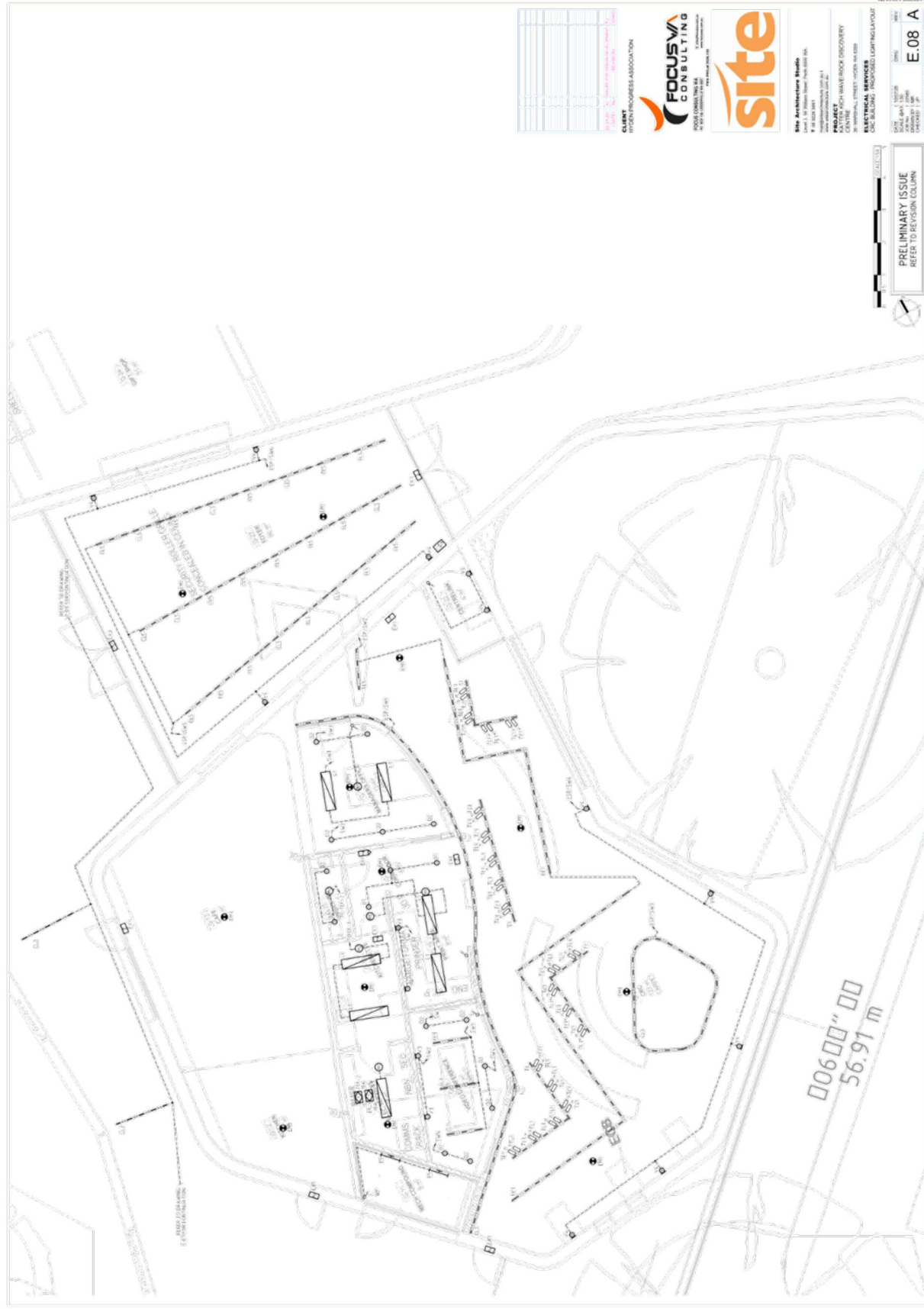


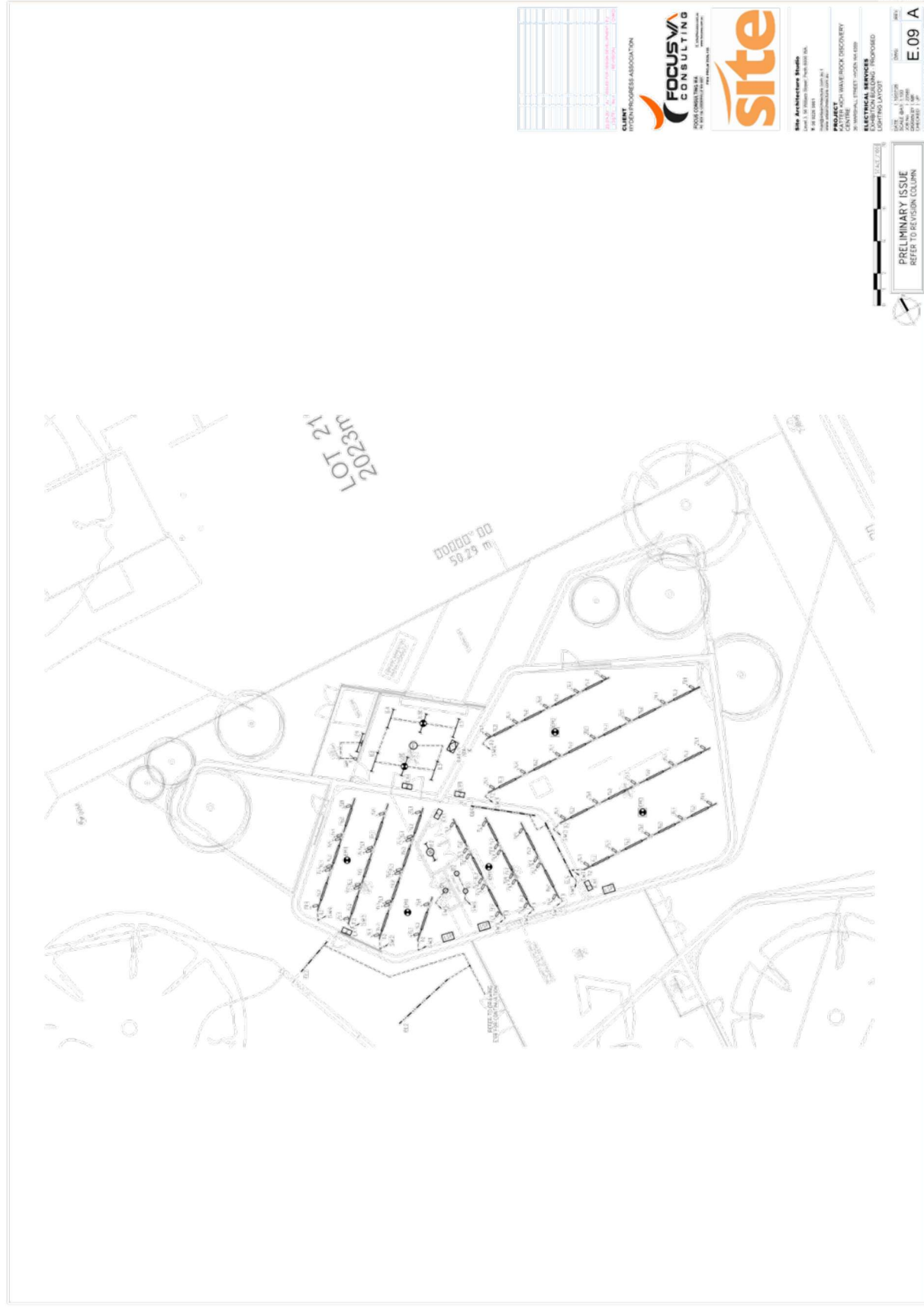


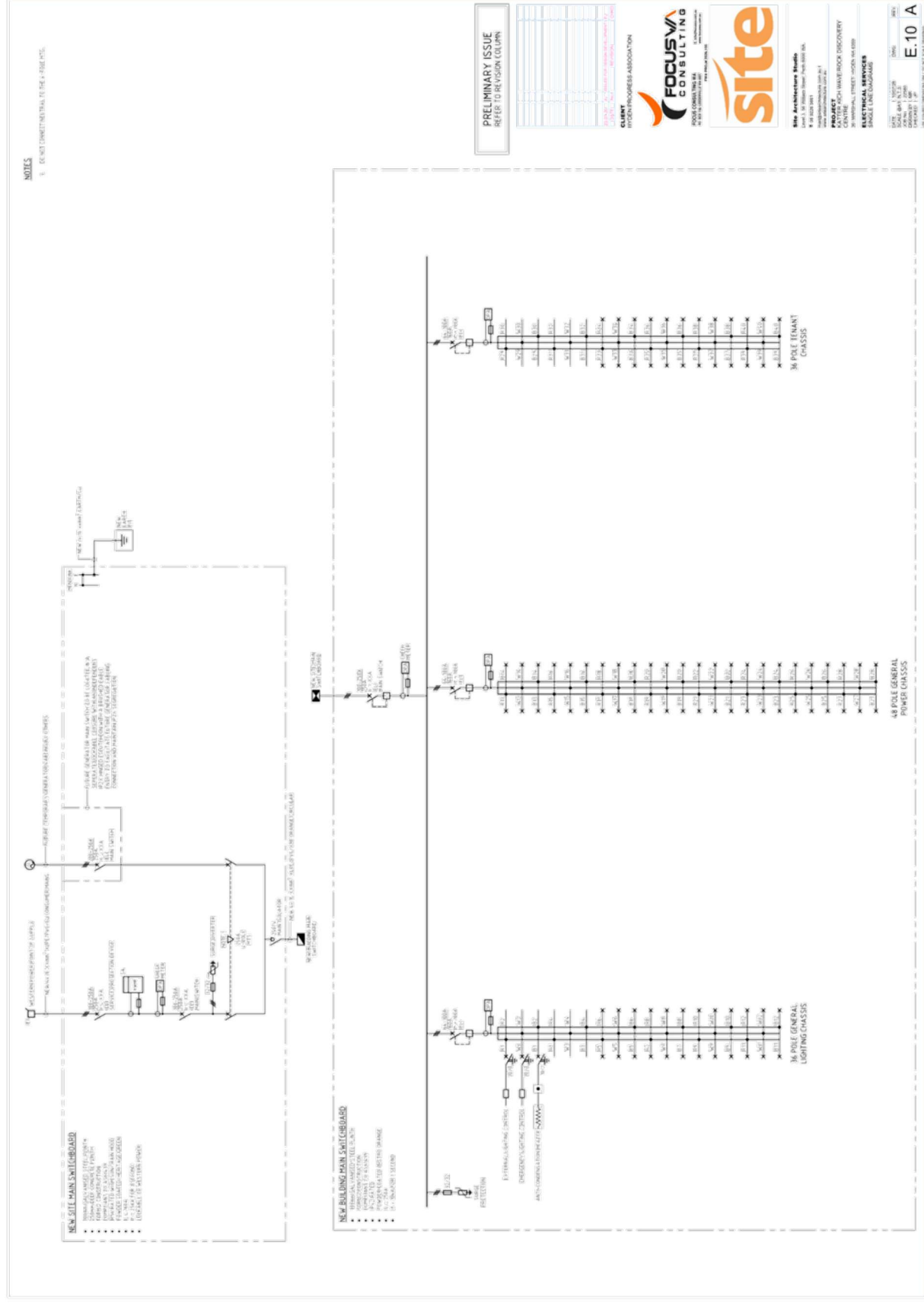


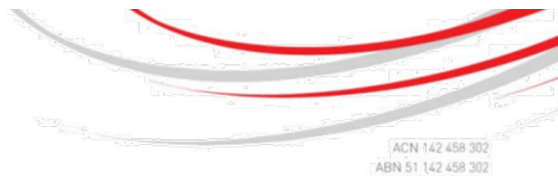












26TH MARCH 2026

SITE ARCHITECTURE
LEVEL 3
56 WILLIAM STREET
PERTH WA 6000

ATTENTION: MICHAEL TYLER-HARE
OUR REF: 26-019

Dear Michael,

RE: **WAVE ROCK VISITORS CENTRE**
CONCEPT DESIGN REPORT AND OPINION OF PROBABLE COST

Please find attached the Hydraulic Services Concept Design report and OPC for this project. The report shall be read in conjunction with the attached Hydraulic Services Concept Drawings HS1-HS4 Rev A inclusive

I trust the enclosed meets with your requirements. Should you require any further information or clarification please do not hesitate to contact the undersigned.

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'P. M. White', is placed over a grid of small squares.

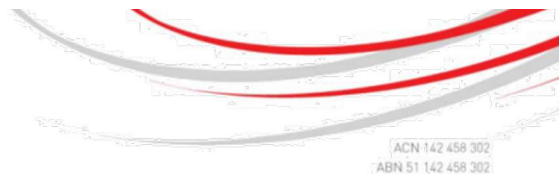
PAUL M WHITE JP LMAHSCA FIPA
DIRECTOR
CONSTRUCTION HYDRAULIC DESIGN PTY LTD

8A / 663 Newcastle Street, Leederville WA 6007
PO Box 358, North Perth WA 6906

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1. PROPERTY SEWER WASTES AND DRAINS

An existing Water Corporation main reticulated gravity sewer is currently located within the lane at the rear of the property. There are 2 No x existing 100 diameter sewer junction connections available for this development to connect to.

All property sewer shall be of uPVC and installed on gravity to either of the 2 existing Water Corporation sewer junction connections.

As Constructed information obtained for the Water Corporation indicates that the existing junctions are approximately 2200mm below ground level. Given this depth gravity connection of the new development property sewer will be able to be achieved.

2. SANITARY PLUMBING

All sanitary plumbing shall be constructed of uPVC. Pipework shall connect to new fixtures and outlets and in turn connect to the below ground gravity property sewer.

A grease arrestor shall be incorporated within the design to collect and treat waste from the proposed commercial kitchen.

3. DOMESTIC COLD WATER

An existing Water Corporation reticulated water main is currently located within the lane at the rear of the property. A new domestic water connection and meter sized to adequately provide water to the development shall be provided from this main.

Domestic water service pipework shall be extended from the new meter to isolation valves at the various wet areas. Domestic water services shall be extended from the isolation valves and connect to all required fixtures and outlets within the designated wet area.

Backflow Prevention valves shall be provided at the boundary meter and other locations in accordance with Water corporation legislation and AS3500 Plumbing standard.

4. DOMESTIC HOT WATER

Hot water to sanitary fixtures shall be provided from a mixture of electric single phase storage and three phase electric hot water units. The hot water units shall be located centrally to the required wet areas.

Tempering valves shall be installed to the outlets of all hot water units and thermostatic mixing valves installed to UAT fixtures.

5. FIXTURES AND TAPWARE

All sanitary fixtures shall be fit for purpose applicable to the various areas they are serving. Pans, cisterns and basins shall be of white vitreous china. Sinks and cleaners sinks shall be of stainless steel.

Tapware shall be chrome plated lead free brass and of types applicable to the purpose in each wet area.

6. LP GAS SERVICE

There is no requirement for the inclusion or implementation of LP Gas within this project.

7. FIRE HYDRANT AND FIRE HOSE REEL SERVICES

The Architectural design has been undertaken in such a way that the development consists of 2 separate buildings each with a habitable floor area of less than 500m². By having this arrangement there is no requirement for fire hydrants and fire hose reel systems for this project.

8. STORMWATER DRAINAGE

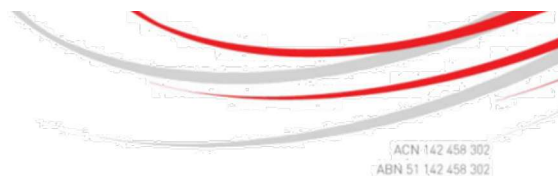
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Refer to Civil Engineers report for description and design requirements for all stormwater drainage scope for carparks and roof water

9. SOIL CONDITIONS

Early advice received indicates that the existing site soil conditions will be Class M to S. Therefore all below ground pipework for property sewer and water services where they exit the building line shall be fitted with approved type flexible joints to enable ground movement around the services pipework without causing breakages for the fixed exit points.

All services installed within the Class M/S soils shall be laid on clean bed sand with clean sand compacted backfill in all trenches to finished ground level.

10. OPINION OF PROBABLE COST

Please find set out below the Opinion of Probable Cost for the Concept Design Stage for the Hydraulic Services for this project based on the aforementioned Services Scope Report and Hydraulic drawings HS1a-HS4A inclusive:

EXTERNAL SERVICES

- Cold water service	\$12 200.00
- Grease Arrestor	\$15 000.00
- Property sewer	\$12 600.00
TOTAL	\$39 700.00

The Probable Opinion of Cost excludes the following items -

1. Applicable Builder's Work
2. Applicable Government GST
3. Regional district allowances
4. Water Corporation headworks fees (TBA)
5. Rock/Clay excavation and spoils disposal from site
6. Dewatering
7. Rainwater reuse systems
8. Electrical connections to equipment/HWU's.
9. Stormwater drainage to carparks and Building roof. Refer civil Engineers report
10. Fixtures and Tapware to building
11. Hot water units to building
12. Internal sanitary plumbing and cold water services to fixtures

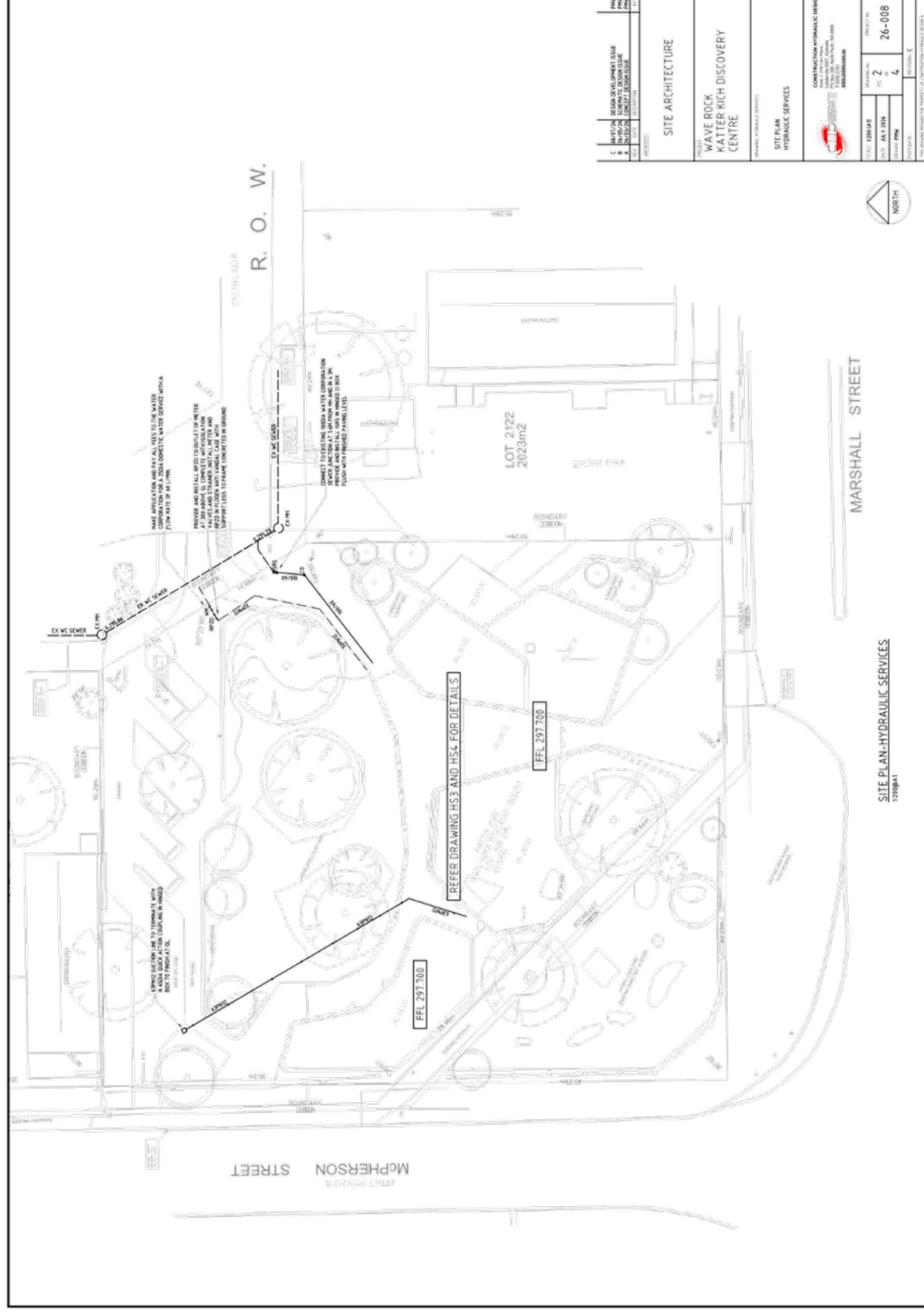
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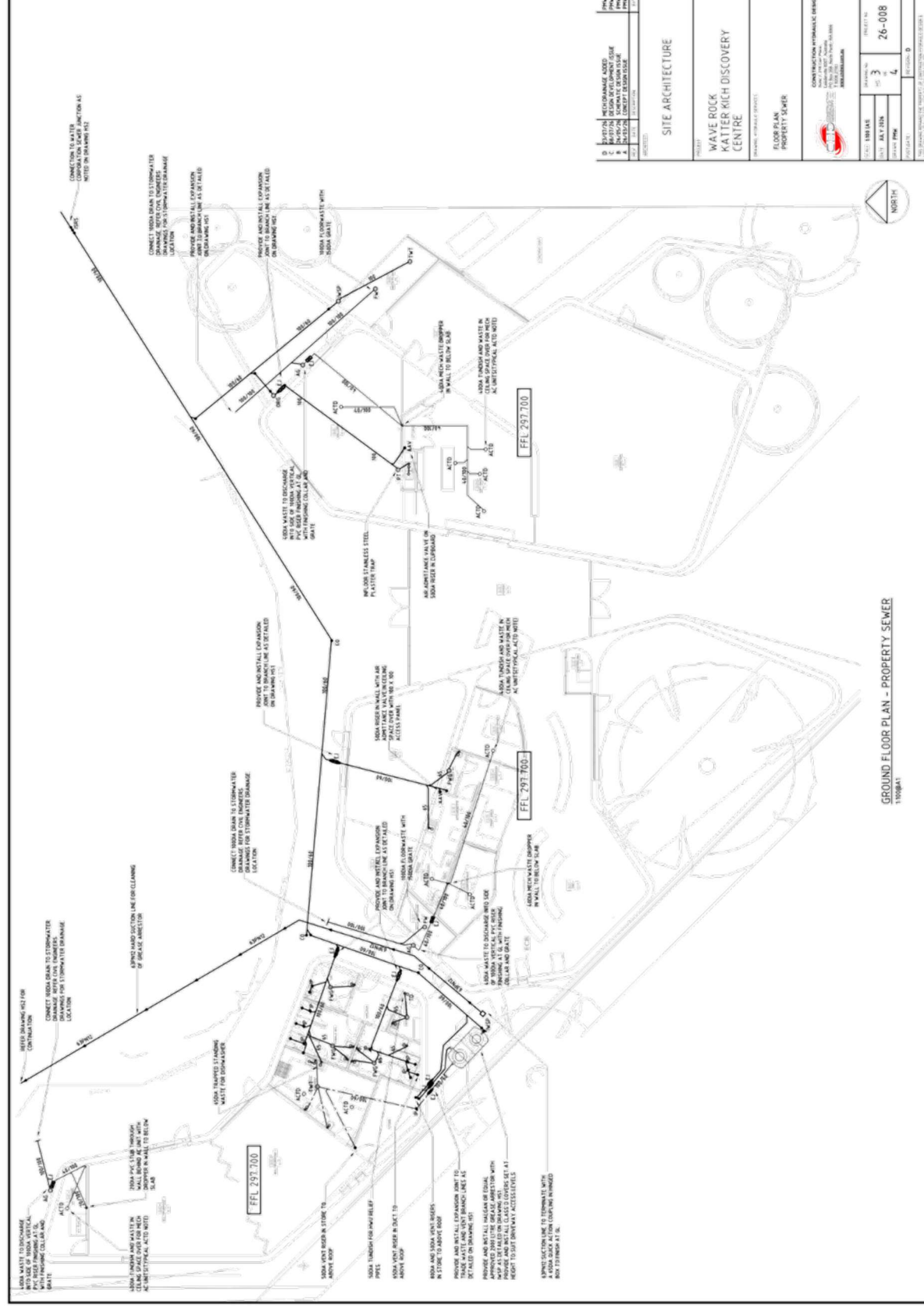
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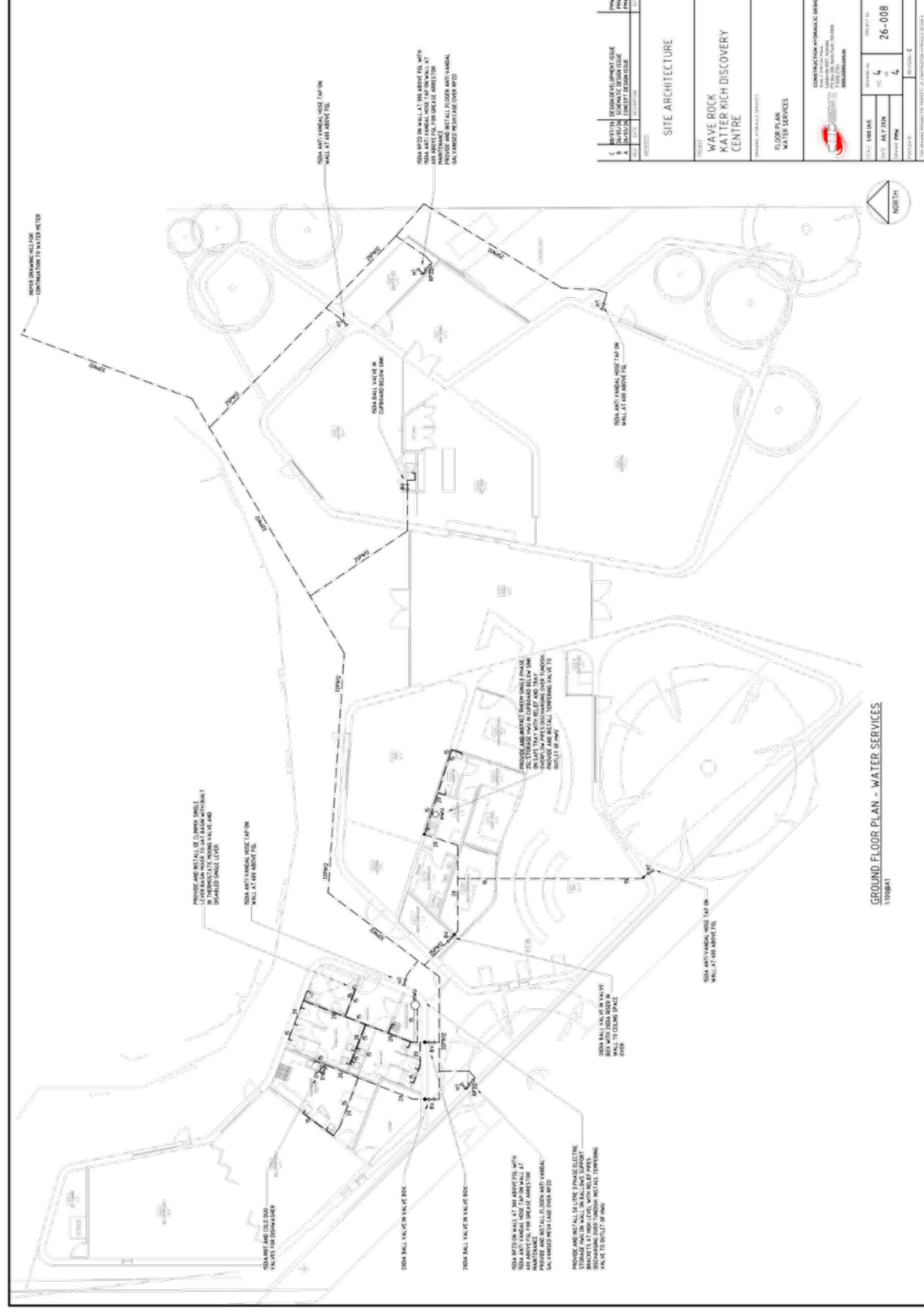
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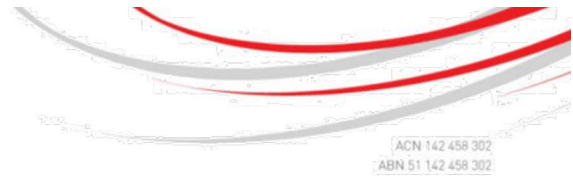


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8TH JULY 2026

**SITE ARCHITECTURE
LEVEL 3
56 WILLIAM STREET
PERTH WA 6000**

**ATTENTION: ROSALYND BAIRD
OUR REF: 26-008**

Dear Rosalynd,

**RE: WAVE ROCK KATTER KITCH DISCOVERY CENTRE
DESIGN DEVELOPMENT OPINION OF PROBABLE COST**

Please find set out below the Opinion of Probable Cost being the Pre Tender Estimate for the Hydraulic Services for this project.

- Property Sewer and Trade Waste	\$35 400.00
- Cold Water service and boundary RPZD	\$18 600.00
- Fixtures and Tapware	\$50 600.00
- Hot Water Service	\$10 900.00
- Mechanical Services drainage	\$ 5 500.00
- Water Corporation Headworks	\$33 873.00
TOTAL	\$154 873.00

The Probable Opinion of Cost excludes the following items -

1. Applicable Builder's Work
2. Applicable Government GST
3. Electrical connections to hot water units
4. Clay and rock excavation of site
5. Applicable Regional loadings and allowances

I trust the enclosed meets with your requirements. Should you require any further information or clarification please do not hesitate to contact the undersigned.

Yours faithfully,

**PAUL M WHITE JP LMAHSCA FIPA
DIRECTOR
CONSTRUCTION HYDRAULIC DESIGN PTY LTD**

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PO Box 358, North Perth WA 6906

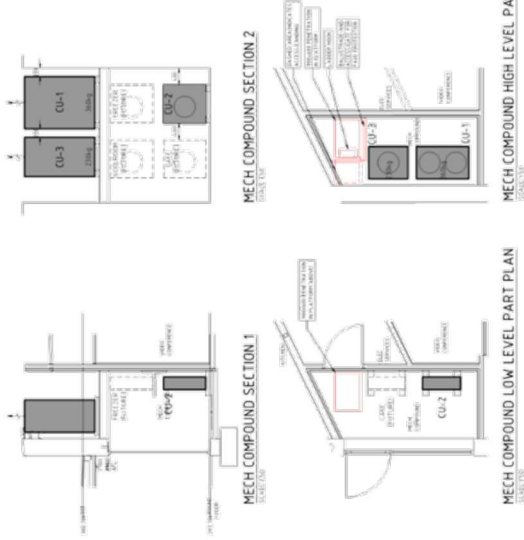
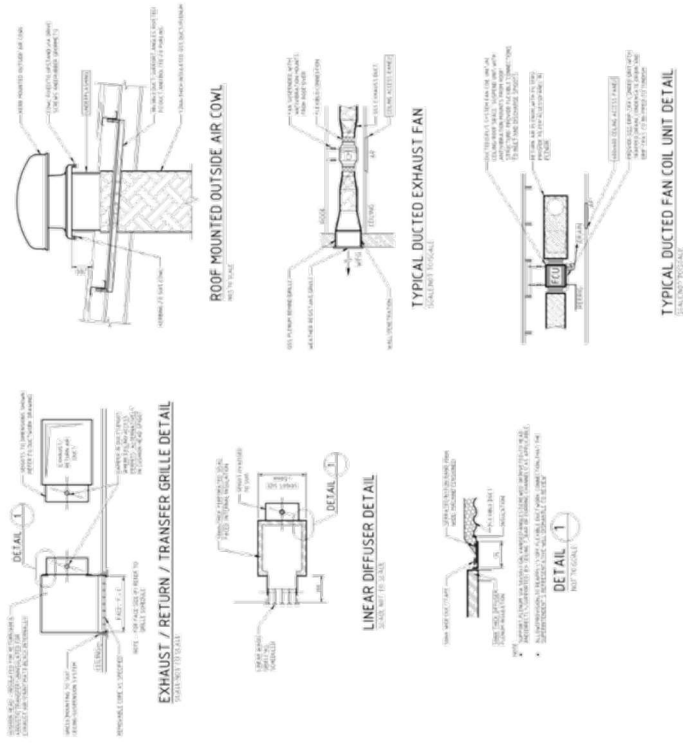
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PERFORMANCE SUMMARY: 2023-2024 (CONTRACT NO. 123456789)									
Contract ID	Contract Name	Contract Type	Financial Performance			Operational Performance			Overall Status
			Budget (USD)	Actual (USD)	Variance (%)	Tasks Completed	On-Time Delivery (%)	Client Satisfaction (%)	
001	Project Alpha	Construction	1,200,000	1,150,000	-4.2%	15	95%	92%	On Track
002	Project Beta	IT Services	800,000	820,000	2.5%	10	90%	88%	Minor Delay
003	Project Gamma	Manufacturing	2,500,000	2,400,000	-4.0%	20	98%	95%	On Track
004	Project Delta	Logistics	600,000	610,000	1.7%	8	85%	80%	At Risk
005	Project Epsilon	Marketing	300,000	290,000	-3.3%	5	99%	97%	On Track
006	Project Zeta	Research & Dev	1,800,000	1,750,000	-2.8%	12	92%	90%	On Track
007	Project Eta	Operations	900,000	920,000	2.2%	7	88%	85%	Minor Delay
008	Project Theta	Consulting	400,000	390,000	-2.5%	3	95%	93%	On Track
009	Project Iota	Software	1,100,000	1,120,000	1.8%	9	91%	89%	Minor Delay
010	Project Kappa	Infrastructure	3,200,000	3,100,000	-3.1%	25	97%	94%	On Track
011	Project Lambda	Human Resources	500,000	510,000	2.0%	4	80%	75%	At Risk
012	Project Mu	Finance	700,000	690,000	-1.4%	6	93%	91%	On Track
013	Project Nu	Legal	200,000	195,000	-2.5%	2	90%	88%	On Track
014	Project Xi	Compliance	350,000	340,000	-2.9%	3	94%	92%	On Track
015	Project Omicron	Security	1,500,000	1,450,000	-3.3%	11	96%	94%	On Track
016	Project Pi	Quality Assurance	650,000	640,000	-1.5%	7	92%	90%	On Track
017	Project Rho	Customer Support	450,000	460,000	2.2%	5	87%	85%	Minor Delay
018	Project Sigma	Product Development	1,300,000	1,280,000	-1.5%	10	94%	92%	On Track
019	Project Tau	System Integration	2,100,000	2,050,000	-2.4%	18	96%	93%	On Track
020	Project Upsilon	Network Expansion	1,700,000	1,680,000	-1.2%	14	95%	92%	On Track
021	Project Phi	Cloud Migration	2,800,000	2,700,000	-3.6%	22	97%	94%	On Track
022	Project Chi	Data Analytics	950,000	930,000	-2.1%	9	91%	89%	On Track
023	Project Psi	AI Research	1,600,000	1,550,000	-3.1%	13	93%	90%	On Track
024	Project Omega	Blockchain	1,400,000	1,380,000	-1.4%	11	92%	89%	On Track
025	Project A	IoT Solutions	1,200,000	1,180,000	-1.7%	10	90%	88%	On Track
026	Project B	AR/VR	1,100,000	1,080,000	-1.8%	9	89%	87%	On Track
027	Project C	Quantum Computing	1,300,000	1,250,000	-3.8%	12	94%	91%	On Track
028	Project D	Space Exploration	1,500,000	1,480,000	-1.3%	13	93%	90%	On Track
029	Project E	Autonomous Vehicles	1,700,000	1,650,000	-2.9%	15	95%	92%	On Track
030	Project F	Robotics	1,900,000	1,850,000	-2.6%	16	94%	91%	On Track
031	Project G	Biotechnology	2,000,000	1,950,000	-2.5%	17	93%	90%	On Track
032	Project H	Environmental Science	2,200,000	2,150,000	-2.3%	18	92%	89%	On Track
033	Project I	Healthcare	2,400,000	2,350,000	-2.1%	19	91%	88%	On Track
034	Project J	Education	2,600,000	2,550,000	-1.9%	20	90%	87%	On Track
035	Project K	Energy	2,800,000	2,750,000	-1.8%	21	89%	86%	On Track
036	Project L	Transportation	3,000,000	2,950,000	-1.7%	22	88%	85%	On Track
037	Project M	Telecommunications	3,200,000	3,150,000	-1.6%	23	87%	84%	On Track
038	Project N	Media	3,400,000	3,350,000	-1.5%	24	86%	83%	On Track
039	Project O	Retail	3,600,000	3,					

[illegible][illegible]



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J. CRONIN
E. LAM

4222 ltr 02 - KKDC OPC.doc

27th of July 2026

Site Architecture Studio
Level 3
56 William Street
PERTH WA 6000

ATTENTION: ROSALYND BAIRD

Dear Rosalynd,

**KATTER KICH DISCOVERY CENTRE, HYDEN
MECHANICAL SERVICES
OPINION OF PROBABLE COST**

Initial schematic design documents have been prepared for the above project and the Opinion of Probable Cost has been calculated as follows: -

Theatre, Multipurpose, Heat/Serve Kitchen and Toilets	\$130,000 + GST
Library, Comms, Video Conference and Managers Office	\$120,000 + GST
Foyer, Exhibition, Gallery and Gift Shop	\$240,000 + GST

Total Opinion of Probable Cost for Mechanical Services: - \$490,000 + GST

Note:

- 1) Budget does not include for regional uplift (Perth Based Price), builder's margin, builder's work associated with mechanical services.
- 2) Budget does not include for services associated with Café air conditioning, Café kitchen exhaust, Coolroom or Freezer.

Yours faithfully
SMW&C PTY LTD

Shane Wilson
DIRECTOR



Landscape Concept

A landscape of discovery

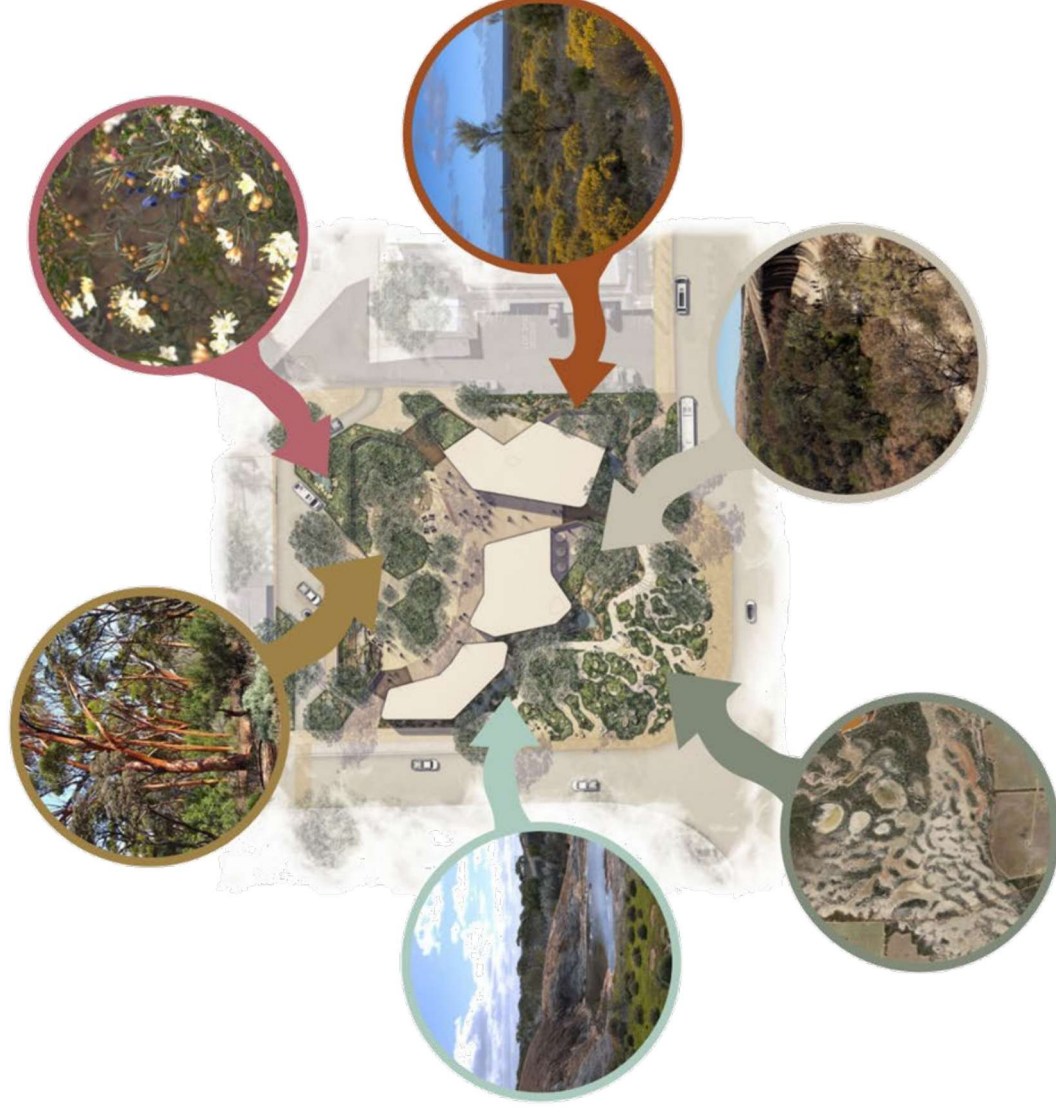
This is a landscape of discovery.

On the sites doorstep lies the largest temperate Mediterranean woodland in the world with the surrounding area is comprised of gentle undulating plains, salt lake chains, and a diverse mosaic of soils and geology.

The design draws these diverse landscapes into the site and offers places for gathering, lingering, and discovery.

The surrounding landscape includes mallee woodlands, halophytic plants that thrive in high salt environments) shrublands, proteaceous scrub-heath, and large mallet (gimlets, salmon gums etc) woodlands on the valley floors.

These landscapes are interpreted on site to enhance visitors and locals experience by embodying the value of discovery. The proposed design reveals and re-establishes these local landscape ecologies.



MORO

1/7

Landscape Plan

LEGEND

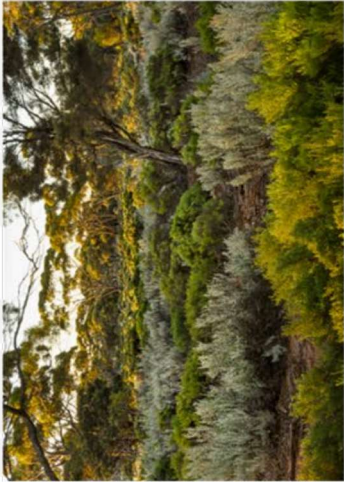
- 1. Arrival Forecourt
- 2. Informal Drainage Zone
- 3. Welcome Area / Alfresco
- 4. Courtyard Gardens
- 5. Terraced Rock Seating
- 6. Gravel Seating Area
- 7. Raised Shaded Seating
- 8. Discovery Landscape
- 9. Discovery Path
- 10. Native Landscape Garden
- 11. Secondary Entry
- 12. Rear Entry Access
- 13. Back of House
- Plot Boundary

MORO



Look and Feel Imagery

Landscape that calms and cues



New rhythm, familiar tone



Local materials



Rocky foreground

MORO

Surfaces & Materials Plan

LEGEND

- 1 Exposed aggregate concrete
 - 2 Recycled hardwood decking
 - 3 Compacted summerstone fines
 - 4 Compacted red gravel fines
 - 5 Red asphalt
 - 6 Custom recycled timber seating
 - 7 Local granite seating rocks
 - 8 Feature local granite rocks
 - 9 Local gravel mulch (to all garden beds)
- Plot Boundary

NOTE:
Refer to following pages for more
information on materials and finishes.

MORO



Surface Finishes

Simple, robust, low-maintenance materials

The material selections prioritise durability and simplicity, and considers the ongoing use and maintenance requirements of the landscape.

The material palette draws from the tones, textures and processes of the surrounding landscape, grounding the project in the character of Hyden and the wider Western Woodlands.

The timber decking and concrete surfaces provide contrast and clarity through key arrival spaces and primary pathways.

Compacted gravels are used on secondary pathways and encourage exploration and discovery within the landscape spaces.

Earth-based materials such as local gravel and granite reference the site's geology, while rammed earth and timber elements reinforce a sense of permanence and connection to place.

NOTE: All quantities are approximate.

PAVING

NOTE: Numbers refer to 'Surfaces and Materials Plan' locations.



Material: Exposed Aggregate Insitu Concrete
Colour: Grey Base
Location: Primary pathways
Approximate Area: 700m²



Material: Recycled Hardwood Decking, with natural oil finish.
Colour: Natural
Location: Entry thresholds
Approximate Area: 210m²



Material: Summerstone Gravel Fines
Colour: Natural
Location: Secondary pathways
Approximate Area: 140m²



Material: Compacted Local Gravel Fines
Colour: Natural
Location: Secondary pathways
Approximate Area: 550m²

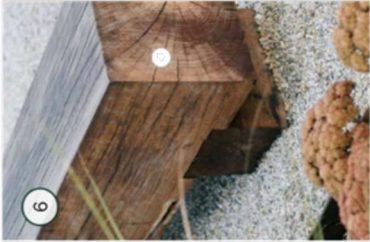


Material: Red asphalt with grey concrete kerb edge.
Colour: Red asphalt
Location: Northern car parking
Approximate Area: 450m²

MORO

Furniture and Materials

SEATING



Material: Custom recycled timber railway sleepers, with natural oil finish.
Colour: Natural.
Location: Central courtyard
Approximate Length: 15 Lm



Material: Local granite seating rocks(400-800mm length)
Colour: Natural
Location: Northern courtyard
Approximate number: 40



Material: Feature local rocks (sizing 100-1800mm length)
Colour: Natural
Location: Throughout
Approximate number: 20



Material: Local gravel mulch (5-25mm size) used on all garden beds to 50mm depth
Colour: Natural
Location: Garden beds
Approximate Area: 1800m²

FEATURES

MULCH

NOTE: Numbers refer to 'Surfaces and Materials Plan' locations.

NOTE: All quantities are approximate.

MORO

Planting

The planting selections prioritise local species, and considers the ongoing use and maintenance requirements. The planting palette below provides examples of key plant species that are local to the area and suitable for use in the landscape design. The use of these plants draws from the surrounding landscapes, grounding the project in the character of Hyden and the wider Western Woodlands.

TREES



Name: Eucalyptus salubris
'Gimlet'
Pot Size: 90L



Name: Eucalyptus salmonphloia
'Salmon Gum'
Pot Size: 90L



Name: Eucalyptus alpes
'Hyden Mallet'
Pot Size: 45L



Name: Cratystylis conocephala
'False bluebush'
Pot Size: 140ml



Name: Kunzea pulchella
'Granite Kunzea'
Pot Size: Tubestock

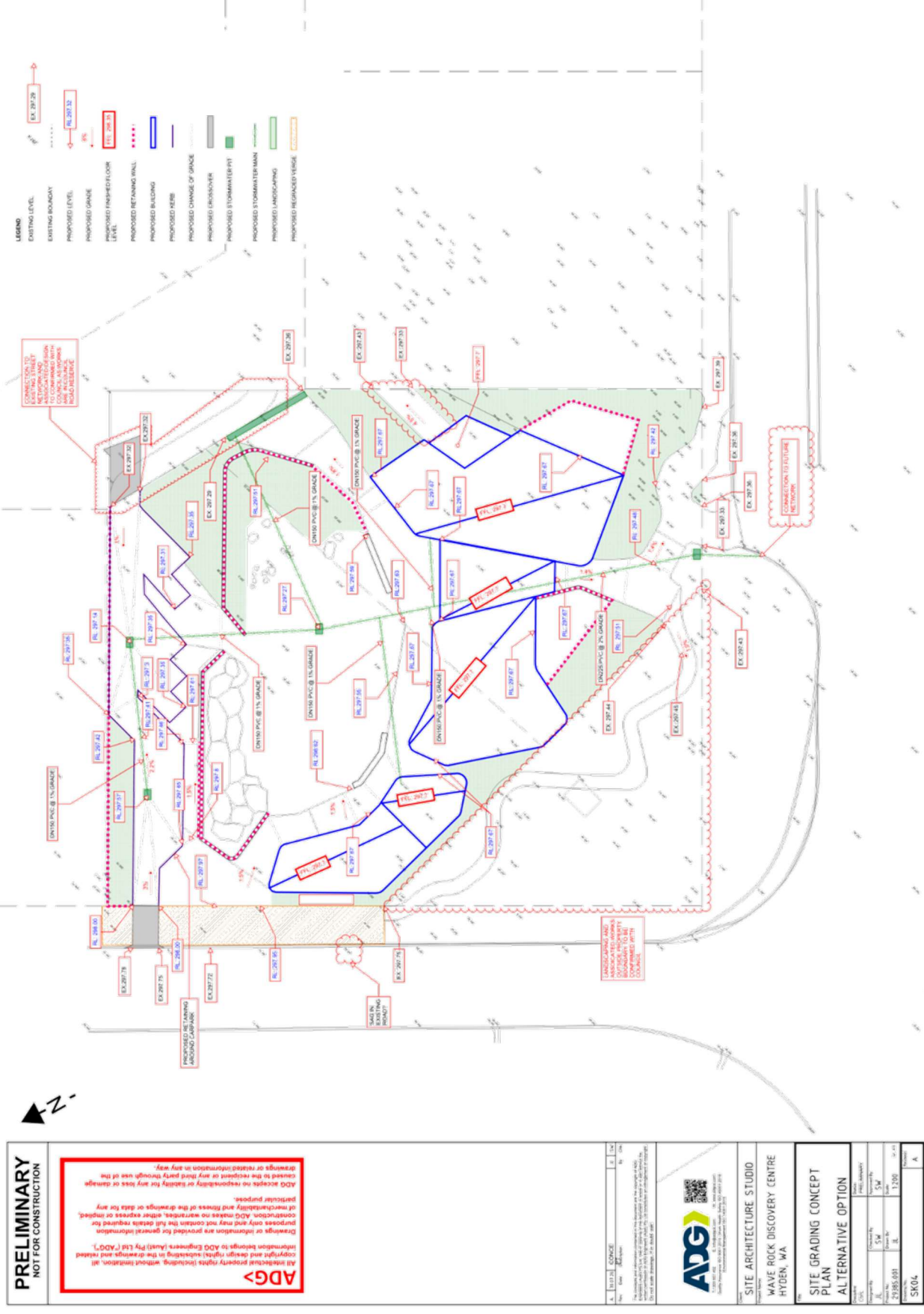


Name: Austrostipa elegantissima
'Feather spear-grass'
Pot Size: Tubestock

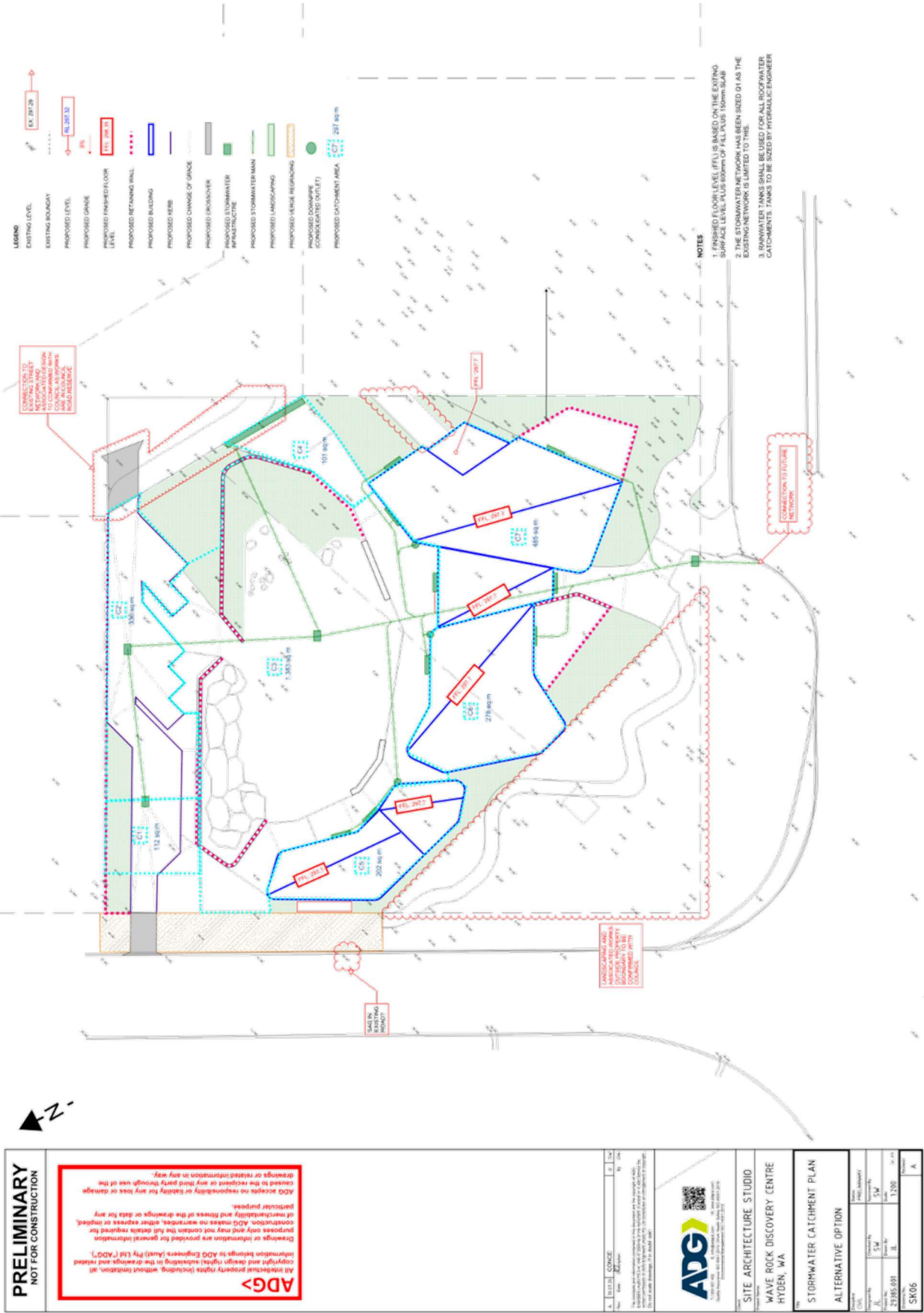
Approximate quantities for landscape areas

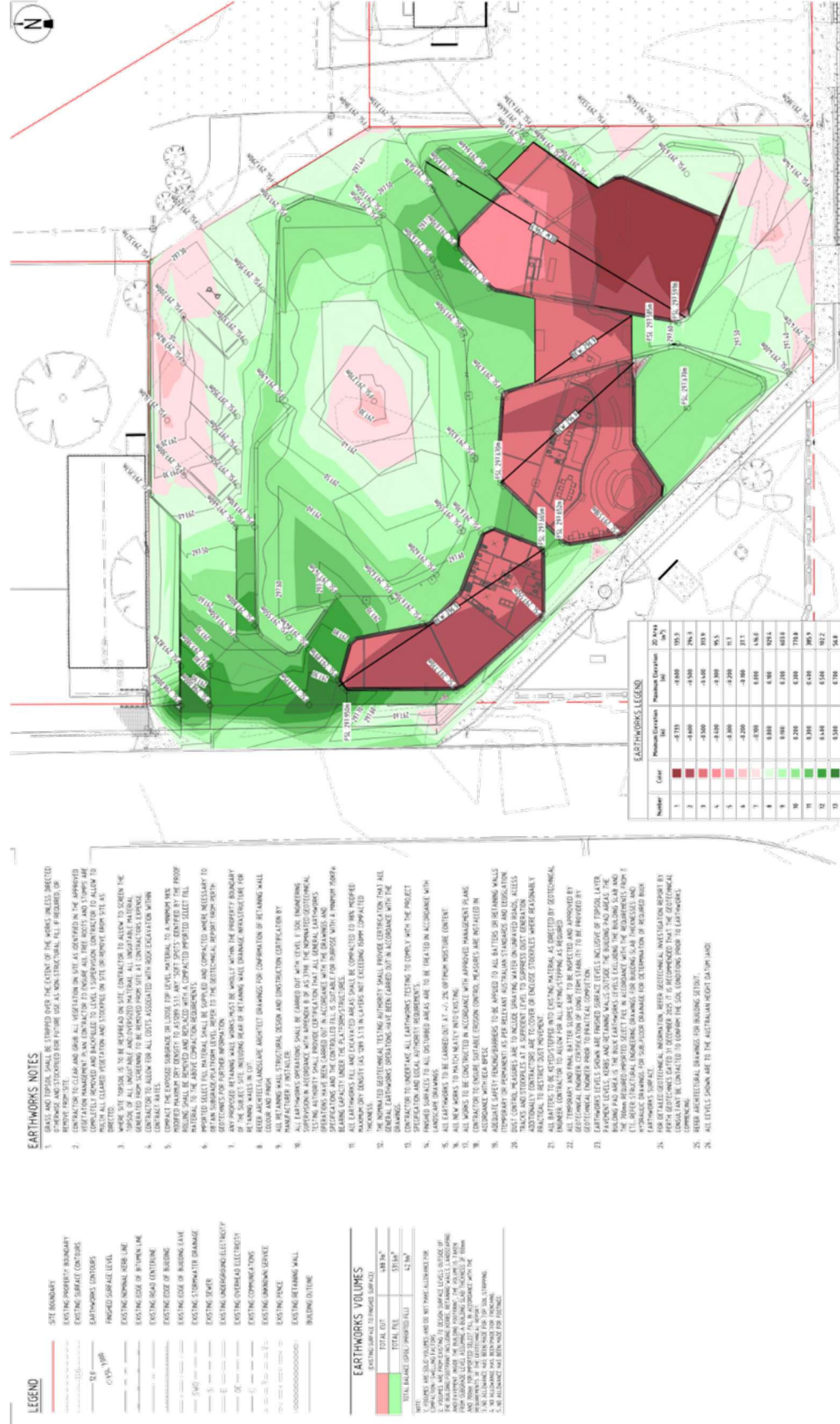
- 90L Trees x 20
- 45L trees x 15
- 140ml pot x 2000
- Tubestock x 4000

MORO



[illegible]





NCC Compliance Report CW2696

For:

Wave Rock Discovery Centre

To:

SITE Architecture Studio

Date:

29 June 2026

Status and Revision:

Concept - Rev A

ComplyWest

Building Surveyors

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CW2696 - Wave Rock Discovery Centre
SITE Architecture Studio

29 June 2026
Rev A

1.0 Quality Information

Project: Wave Rock Discovery Centre
Client: SITE Architecture Studio
Project Number: CW2696
Date: 29 June 2026
Report Status and Revision: Concept Rev A

1.1. Drawings:

The NCC Compliance Report has been prepared based on the following project stage and/or documentation.

Discipline	Title	Revision	Date
Architectural	various	DA	5.06.26

1.2. Document Register:

Audit Title	Revision	Date	Revision Comment
NCC Compliance Report	A	29/06/2026	Concept review

1.3. Purpose:

The purpose of the Concept NCC Compliance Report is to provide the initial advice on the compliance requirements for the design of the proposed building in relation to the deemed-to-satisfy provisions of the Building Code of Australia; Vol 1 2022.

This document will serve as the compliance Report and approach anticipated from the design team. It is the responsibility of the design team to advise of any proposed alternative compliance approach and that the design satisfies the requirements set out in this document.

A further detailed NCC Compliance Report can be undertaken upon receipt of detailed architectural and specialist drawings and documentation.

A Certificate of Design Compliance by ComplyWest Building Surveyors is subject to verification from the design team that the building has been designed and documented to comply with the NCC as outlined in the Compliance Report.

Prepared By:

Brad Pike
DIRECTOR
B. Bldg Surv (CQU)
AIBS National Accreditation No. 7530
Building Surveyor Practitioner Level 1 Reg No. 350
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CW2696 - Wave Rock Discovery Centre
SITE Architecture Studio

29 June 2026
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3.0 Executive Summary

3.1. General

The BCA Compliance Report has been prepared by ComplyWest Building Surveyors for SITE Architecture Studio and sets out the applicable deemed-to-satisfy provisions of the Building Code of Australia (BCA), Vol 1 2022 of the National Construction Code (NCC) for the Wave Rock Discovery Centre.

The Wave Rock Discovery Centre consists of Exhibition, CRC, Multipurpose, Gallery gift Shop and Café. The building has a Class 9b classification, has a Rise in Storeys of 1 and is to be Type C construction. The building is to be designed with BCA Importance Level 2.

This BCA Compliance Report outlines how the proposed Wave Rock Discovery Centre is to meet the performance requirements of the BCA by complying with the Deemed-to-Satisfy (DtS) as set out in the Building Code Requirements section of this report subject to the following.

All relevant Architectural, Electrical, Hydraulic and Fire Services drawings and documents are required to be submitted to the Fire & Emergency Services Authority (DFES) for comment NOT LESS THAN 15 DAYS prior to submission with the Permit Authority.

A Certificate of Design Compliance by ComplyWest Building Surveyors is subject to verification from the design team that the building has been designed and documented to comply with the BCA as outlined in the BCA Compliance Report.

4.0 Introduction

4.1. General

This document prepared for SITE Architecture Studio sets out the NCC Compliance Review for the design of Wave Rock Discovery Centre.

4.2. Project Description

The Wave Rock Discovery Centre consists of Exhibition, CRC, Multipurpose, Gallery, Gift Shop and Café.

The building has a Class 9b classification, has a Rise in Storeys of 1 and is to be Type C construction. The building is to be designed with BCA Importance Level 2.

4.3. Purpose of the Concept NCC Compliance Report

This Concept NCC Compliance Report identifies the BCA deemed-to-satisfy provisions applicable to the proposed development based on an initial review of DA architectural drawings.

4.4. NCC Governing Requirements

Compliance with the NCC is subject to the mandatory administrative Governing Requirements (NCC, Section A) and the technical Performance Requirements of the NCC.

All elements of the design must be demonstrated through the applicable assessment methods set out in the NCC that a Performance Solution or Deemed-to-Satisfy solution meets the mandatory Performance Requirements in accordance with the NCC Governing Requirements.

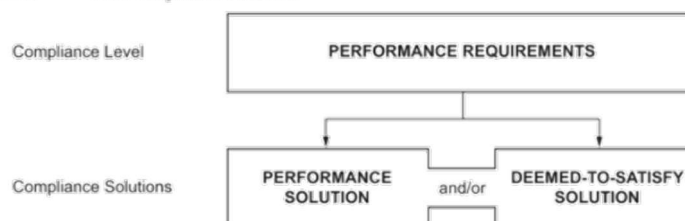
A Deemed-to-Satisfy solution consist of compliance with applicable deemed-to-satisfy provisions of the NCC and/or reference documents listed in Table 1 of Schedule 2 of the NCC. Care shall be taken on the different forms of reference documents viz: design input, design response, material specification and installation, or testing documents. Demonstrating compliance against

A2G1 Compliance

[2019: A2.0, A2.1]

- (1) Compliance with the NCC is achieved by complying with—
 - (a) the Governing Requirements of the NCC; and
 - (b) the *Performance Requirements*.
- (2) *Performance Requirements* are satisfied by one of the following, as shown in Figure A2G1:
 - (a) *Performance Solution*.
 - (b) *Deemed-to-Satisfy Solution*.
 - (c) A combination of (a) and (b).

Figure A2G1: NCC compliance structure



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4.5. Applicable Building Code

The applicable National Construction Code (Building Code of Australia) for this NCC Compliance Report is BCA 2022 Volume 1.

4.6. NCC 2025 Transitional arrangements (Western Australian)

The 2025 edition of the National Construction Code (NCC 2025) was published by the Australian Building Codes Board (ABCB) on 1 May 2026.

The WA Government has drafted transitional regulation where Volume One of the NCC 2025 will become mandatory in WA on 1 May 2027. The use of NCC 2025 until this date is voluntary and NCC 2022 Vol 2 is applicable.

4.7. Report Qualifications

- a) This Concept NCC Compliance Report has been based on architectural DA drawings. Further detail/clarification may be required to ascertain BCA compliance.
- b) Mechanical, electrical, hydraulic, fire and lift services, structural design, fire rating and protection etc are specialist disciplines and beyond scope of this report other than generally related provisions of BCA and subject to verification from the design team that the building has been designed and documented to comply with the BCA.
- c) Whilst every effort has been made to identify design non-compliance items this report cannot, by the nature of reviewing documentation, identify all such items. This report identifies applicable compliance that were observed during the assessment. It should be noted that non-compliance issues may arise upon further development of documentation and during the construction phase that have not been identified in this report due to their being insufficient detailing.
- d) Amendments to the design/building after this Concept NCC Compliance Report will require reassessment by ComplyWest Building Surveyors to verify consistency with the analysis and assumptions contained in this report.
- e) All relevant Architectural, Electrical, Hydraulic and Fire Services drawings and Performance Solutions are required to be submitted to the Department of Fire & Emergency Services (DFES) for comment NOT LESS THAN 15 DAYS prior to submission with the Permit Authority.
- f) A Certificate of Design Compliance by ComplyWest Building Surveyors for this project is subject to verification from the design team that the building has been designed and documented to comply with the BCA as outlined in the NCC Compliance Report.
- g) Building and Occupant characteristics set out in this report apply.
- h) Building services, equipment and strategies will be maintained to the compliance requirements and operational capacity to which they were designed and will correctly function and operate as required.
- i) The use of the facilities and fixtures are as intended and within the capacity and purpose for which they were designed.
- j) The purpose of this document is to provide BCA compliance advice for the project for the purpose of the design/construction team achieving compliance for certification by ComplyWest Building Surveyors. This document is not to be taken as design service or providing design solutions.
- k) Reference to the Building Code of Australia (BCA) shall be taken as a reference to Volume 1 of the the National Construction Code.
- l) NCC clauses and provisions referenced and quoted in this report are paraphrased and not complete or in full and readers must refer to the NCC for full wording and context. This report sets out applicable NCC requirements for the project where it can be reasonably foreseen from the information provided. It is the responsibility of the design consultant to verify design compliance with the National Construction Code, Building Code of Australia and applicable standards. The

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authors of this report take no responsibility for the accuracy or appropriateness of design or documentation by others.

4.8. Product Certification

ComplyWest Building Surveyors are not Certifiers of materials, products, manufacturer, assembly, design or construction and do not 'Certify' or provide 'Product Certification'.

Product test reports, compliance certificates, and design and construction compliance certificates are to be provided by the supplier/manufacture, designer, or contractor/builder demonstrating suitable documentary evidence of compliance with the applicable National Construction Code and Australian Standards to be accepted by ComplyWest Building Surveyors.

Upon receipt of suitable documentation demonstrating compliance in accordance with the above a Certificate of Design Compliance or Certificate of Construction Compliance can be issued.

4.9. Limitations

ComplyWest Building Surveyors (COMPLYWEST) advice is given in good faith based upon our technical expertise to interpret the provisions of the BCA. Compliance with this document does not discharge a user's legal obligations. The report should only be read and used subject to, and in conjunction with, the general disclaimer.

Preparation of alternative solutions and specialist design and certification (certificates of design compliance or installation commissioning reports) are taken on face value. ComplyWest Building Surveyors will not be responsible for the accuracy, appropriateness or third party review of documents relied upon for the purpose of determining compliance.

The extent of the NCC Audit and or certification excludes any reference to and/or consideration of compliance with the requirements of the Department of Consumer and Employment Protection (Worksafe Division) and Safety Codes of Practice for "Safe Design of Buildings and Structures".

The NCC is separate legislation created by Federal agreement and adopted by each State through the respective Building Acts and it should be noted that the Code of Practice extends beyond the design compliance requirements of the NCC to the extent that it covers design for occupational safety and health, continuing use and demolition.

Although this audit covers the BCA requirements, the design team will need to consider their obligations to the client with respect to the Code of Practice. Available at www.worksafe.wa.gov.au

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5.0 Building Code Requirements

5.1. General

This BCA Compliance Report outlines how the proposed Wave Rock Discovery Centre is to meet the performance requirements of the BCA by complying with the Deemed-to-Satisfy (DtS) based on an initial review of DA Architectural drawings subject to the compliance items set out in this report.

5.2. Principle Building Information

Project Description	Wave Rock Discovery Centre		
Relevant BCA	BCA Vol 1, 2022		
Classification(s)	Class 9b		
Rise in Storeys	Rise in Storeys of 1		
Effective Height	not applicable		
Floor Area/ Volume	Building	Approx. Area (m ²)	Approx. Volume (m ³)
	Building	975m ²	3,000m ³
Comment:- Building/Fire Compartments do not exceed maximum compartment size for Class 9b, Type C construction.			
Type of Construction	Type C		
Importance Level	Importance Level 2.		
Number of Persons Accommodate	Number of persons accommodated determined by: - the sum of the number of persons over the applicable floor area for:- 1 person per 10m² for Office, 1 person per 1m² for Café, 1 person per 1m² for Multipurpose, 1 person per 5m² for Exhibition, Gallery 1 person per 3m² for Retail based on the designed capacity ie seating, FF&E, design scope etc Comment:- Design Brief population requirements for building to be confirmed		
Fire Engineering	Nil		

5.3. Compliance Items/Notes

The following compliance items are highlighted and applicable to the Wave Rock Discovery Centre. Refer also to Building Code Requirements section in this report and attached drawing mark-ups.

Section A. General

BCA Classification, Type of Construction, Importance Level

Wave Rock Discovery Centre has a Class 9b classification, a Rise in Storeys of 1 and is required to be Type C construction and Importance Level 2.

Earthworks and works to and adjoining land and street

Extent of excavations (retaining walls for cut/ fill, impact on adjoining properties/buildings, disability access), easements and existing services, street verge conditions and services, location of existing buildings/structures and the like subject to Contour Feature Survey of site.

Section B1. Structure

The building to be designed, for during construction and for use, to resist the greater of the most critical action effect resulting from different combinations of actions as determined in accordance with B1D3 and the general design procedures contained in AS/NZS 1170.0 and as determined in accordance with B1D4 for Class 9b Type C construction and Importance Level 2.

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Section C. Fire Resistance, Compartmentation and Protection of Openings

Part C2. Fire Resistance and Stability

Building elements not required to have a Fire Resistance Level in accordance with Specification 5 - Fire-resisting construction

Fire Hazard Properties [C2D11]

Floor materials and floor covering, wall and ceiling linings and all other materials used in a building to be specified with minimum required fire hazard properties.

Test certificates, Compliance certificates and Manufacturers specifications and installation manuals of materials and building elements required to:-

- have fire hazard properties, to be provided demonstrating compliance with applicable requirements of the BCA.

Part C3. Compartmentation and Separation

General

Building not required to be fire compartmentised with total floor area not exceeding maximum fire compartment for Class 9b Type C construction.

Electrical systems

Electricity supply systems required to be provided which sustains emergency equipment operating in the emergency mode.

Switchboards which sustain electricity to emergency equipment to be constructed so that emergency equipment switchgear is separated from non-emergency equipment switchgear to minimise the spread of a fault from the non-emergency equipment switchgear.

Electricity meters, distribution boards, central telecommunications - Distribution boards or equipment, or electrical motors installed in a required exit (except for fire-isolated exits) or in any corridor, hallway, lobby or the like leading to a required exit to be enclosed by non-combustible construction or a fire-protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure.

Part C4. Protection of Openings

Openings in external walls not required to be protected.

Section D Access and Egress

Part D2 Egress

The number of exits, egress distances from any point within the building to an exit, distances between exits and discharge of exits is compliant with NCC DTS provisions.

Part D3 Construction of Exits

Doors serving as exits to swing in direction of egress.

Door latches to doors in the path of travel to an exit to operate such that it is readily openable without a key from side facing person seeking egress. Doors in a Class 9b building forming part of an exit or in a part of travel to an exit serving more than 100 persons to be readily openable without a key with a single pushing action such as a Panic Bar. Automatic and secured exit doors to be tested and certified including fail-safe device which automatically unlocks doors upon power failure.

Part D4 Access for People with a Disability

Parts of building to be accessible - Sanitary facilities, doorway clear opening widths, doorway circulation clearances, accessway widths and the like throughout the building are to be provided with

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dimensions and/or wheelchair circulation templates to demonstrated compliance with AS 1428.1.

Including:-

- Minimum passage widths, wheelchair circulation and doorway openings with clear opening widths including 850mm to doorways to accessible areas and 750mm to all other areas.
- Door thresholds to be flush or 35mm maximum with threshold ramp.
- Universally Accessible and Ambulant sanitary facilities and fixtures to be installed in accordance with AS 1428.1.
- Directional signage and Signage to Sanitary facilities (including colour and braille) for people with a disability to be installed in accordance with the BCA and AS 1428.1.

Section E. Fire Services and Equipment Requirements

Part E1. Fire Fighting Equipment

E1D2 Fire Hydrants

Fire Hydrant system to be in accordance with BCA, AS 2419.1 and DFES operation requirements (Guidelines) by Fire Services Engineer.

Comments:- Street Fire Hydrant flow and pressure test to be undertaken.

Fire hydrant coverage to be confirmed.

*Booster assembly and external hydrants not less than **10.0m from building** or suitably protected to be confirmed.*

E1D3 Fire Hose Reels

Fire Hose Reels to be in accordance with BCA, AS 2441.

Comments:- Fire Hydrant and Fire Hose Reel coverage plans to be provided.

E1D14 Portable Fire Extinguishers

Portable fire extinguishers - the appropriate type, number and location of portable fire extinguishers to be selected and installed in accordance with AS 2444.

E1D4 Sprinklers & E1D13 Occupancies of Excessive Hazard - not applicable

E1D15 Fire Control Centre Facility/Fire Control Room - not applicable

E1D17 Provision for special hazards (refer E1D4 & E1D13)

No Special Hazard has been identified which would likely result in special problems associated with occupant safety and/or fire fighting operations.

Part E2. Smoke Hazard Management

E2D3 – S2D20 Detection, Alarm System and Smoke Control Systems - not applicable

E2D21 Provision for special hazards (refer E1D4 & E1D13)

No Special Hazard has been identified which would likely result in special problems associated with occupant safety and/or fire fighting operations.

Part E3. Lift Installations - not applicable

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Part E4. Visibility in an emergency, exit signs and warning systems

Emergency Lighting, Exit Signage and Warning Systems

Emergency Lighting and exit signage to be provided to AS/NZS 2293.1.

Emergency warning and intercom system (EWIS) - not applicable

Section F. Health and Amenity Requirements

Part F1 Surface Water Management, Rising Damp and External Waterproofing

Stormwater

Stormwater drainage to comply with AS/NZS 3500.3.

External Damp and Waterproofing

Waterproofing membranes for external above ground to comply with AS 4654.1 and AS 4654.2.

Roof and wall covering, flashings, waterproofing membranes and sarking to comply with applicable Australian Standard.

Part F2 Wet areas and overflow protection

Waterproofing of wet areas to be water resistant or waterproof in accordance with the Specification 26 and comply with AS 3740.

Part F3 Roof and wall cladding

A roof must be covered with—

- metal sheet roofing complying with AS 1562.1; or
- an external waterproofing membrane complying with F1D5.

Or, if not listed above, be subject to a Performance Solution.

Glazed assemblies in an external wall to comply with AS 2047

External Wall cladding to comply with—

- Masonry, including masonry veneer, unreinforced and reinforced masonry: AS 3700.
- Metal wall cladding: AS 1562.1.
- Façade System design and compliance to be verified; viz material and assembly system compliance and/or Performance Solution.

Part F4 Sanitary and other Facilities

Sanitary facilities to be provided according to the number and activities of occupants in the building or part.

Population served by sanitary facilities:

Class 9b Public halls	Pans		Urinals		Washbasins	
	Provided	Serves	Provided	Serves	Provided	Serves
Male patrons	2	300	6	350	2	200
Female patrons	3	100	-	-	3	350

Note:- Accessible unisex facility counted as one female facility.

Sanitary compartments to be provided with a clear space between the closet pan and door of not less than 1.2m radial distance (from the door hinge). Alternatively, the door to a fully enclosed sanitary compartment must open outwards, slide or be readily removable from the outside or sufficient space is available above the partitioning.

Hydraulic

Hydraulic Services to be installed to AS/NZS 3500 Parts 1-4 National Plumbing and Drainage Standard.

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Part F5 Room Heights

Habitable rooms (excluding a kitchen) to be 2.4m. Kitchen, laundry, corridor, passageway or the like and bathrooms to be 2.1m. Stairways, landing or the like to be 2.0m.

Part F6 Light and Ventilation

Lighting to be provided in accordance with AS/NZS 1680.0, and
Ventilation to be provided in accordance with:-

- Natural ventilation to be provided through openings of area of 5% of the floor area of the habitable rooms, office, shop, factory, workroom, sanitary compartment, laundry or other room requiring ventilation, or by
- mechanical ventilation to:-
 - AS 1668.2 – 2012 The use of ventilation and air conditioning in buildings — Mechanical ventilation in buildings, and
 - AS/NZS 3666.1 - 2011 Air handling and water systems of buildings.

Part F7. Sound Transmission and Insulation - not applicable

Part F8. Condensation Management - not applicable

Section G. Ancillary Provisions - not applicable

Bush fire protection construction - not applicable

Building not in a Bush Fire Prone Area

Section I. Special Use Buildings - not applicable

Section J. Energy Efficiency

Envelope of Conditioned Spaces

Thermal insulation, glazing and services applicable to envelope of conditioned spaces to comply with Part J4 and Part J5 of Section J Energy Efficiency, BCA.

Building Services

Air-conditioning and ventilation system for the control of air-conditioning, space heating and ventilation equipment, the efficiency, sealing and insulation requirements for ductwork systems containing fans, and for the efficiency and insulation of pipework and pump systems to be in accordance with Part J6, BCA.

Artificial lighting and power to comply Part J7 of Section J Energy Efficiency, BCA.

Energy Monitoring

Facilities for energy monitoring (J9D3) required to building with a floor area of more than 500m² must have energy meters configured to record the time-of-use consumption of gas and electricity.

Administration

1. All relevant Architectural, Electrical, Hydraulic and Fire Services drawings and documents are required to be submitted to the Fire & Emergency Services Authority (DFES) for comment NOT LESS THAN 15 DAYS prior to submission with the Permit Authority.
2. Design consultants to confirm design approach to be as outlined in accordance with relevant parts of the NCC Compliance Report.

Building Code requirements
NCC Compliance Report

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3. Confirmation of completion and compliance with all planning approvals and conditions required prior to lodgement for Building Permit.

Construction Notes

1. All other statutory submissions, approvals and the like are the responsibility of contractor.
2. Construction of stairs, ramps, accessways (including doorways, thresholds, finished surfaces, abutments of different surfaces etc) and the like to be within permissible construction tolerances of AS 1428.4.1.
3. Testing and commissioning of services and systems to be in accordance with relevant Australian Standards. Compliance certificates to be provided stating element tested, commissioned and compliant with Australian Standard.
4. Certificates for the construction, installation and materials are to be provided certifying that the particular building element is tested, commissioned and compliant with the relevant provisions of the Building Code of Australia, Australian Standards and project documentation.
5. DFES inspection of fire services and subsequent testing and commissioning of fire pumps and hydrant system.
6. The builder, sub-contractors and suppliers are required to provide a Notice of Completion (BA7 form), installation compliance certificate and material product/test certificates respectively verifying works have been completed in accordance with applicable BCA provisions and relevant Australian Standards.

5.4. Documentation subject to Certificate of Design Compliance

1. Contour Feature Survey of site including any Property Easements, caveats and the like
2. Location of street Hydrant and receipt of current Flow and Pressure test.
3. Geotechnical and groundwater investigations & report.
4. Architectural, Hydraulic, Fire Services, Electrical, Mechanical Services and Structural drawings
5. Energy Efficiency Report
6. Building Specifications
7. Design certificates from services/structural consultants as setout below in Certificate of Design Compliance Requirements

5.5. Other Authorities and Legislative Requirements

The following authorities, persons or organisations that may require approval under any statute or law separate to the Building Permit Process are beyond the scope of this report (these are for information only and are not the responsibility of COMPLYWEST; acting as the certifier):

- Water Corporation
- Western Power
- Health (Public Buildings Regulations) - contact local authority
- Health (Food and Hygiene Regulations) - contact local authority
- Town Planning Considerations - Local approvals as well as regional
- Local Council Local Laws and by-laws.
- Council drainage requirements
- Council engineering and crossover requirements
- Council verge requirements

Building Code requirements
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5.6. Health, Liquor & Food Requirements

The proposed Wave Rock Discovery Centre is likely to be classified as a Public Building by the Department of Health/Local Government Health Officer and will therefore be subject to the following health, liquor and food statutory requirements:-

Health Act 1911 and Health (Public Building) Regulations 1992

Liquor Control Act 1988

Food Act 2008

Accordingly, a number of other legislative, and non-legislative, standards and documents could be applicable to the building design and operation. These requirements are beyond the provisions of the Building Code of Australia, and is not the subject of this Report. Due consideration, therefore, is required to ensure that other legislative requirements are adopted into the design.

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6.0 References

Australian Building Codes Board, National Construction Code (NCC) 2022, Building Code of Australia (BCA), Volume 1. Canberra: CanPrint Communications Pty Ltd.

Australian Building Codes Board, National Construction Code (NCC) 2022, Building Code of Australia (BCA), Volume 2. Canberra: CanPrint Communications Pty Ltd.

Australian Building Codes Board. Guide to the Building Code of Australia, Class 2 to Class 9 Buildings. Canberra: CanPrint Communications Pty Ltd

Australian Standard: AS1428.1-2009 Design for Access and mobility, Part 1: General requirements for access-New building work

References
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BUILDING SURVEYORS

7.0 Appendix – Drawing Mark-up



DA03 FLOOR PLAN DEVELOPMENT APPLICATION

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REV A

HYDEN PROGRESS ASSOCIATION | KATTER KICH DISCOVERY CENTRE

Appendix – Drawing Mark-up
NCC Compliance Report

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BUILDING SURVEYORS



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J1V3 PERFORMANCE SOLUTION REPORT

NCC 2022 SECTION J BUILDING FABRIC

KATTER KICH DISCOVERY CENTRE

4 MCPHERSON STREET, HYDEN WA 6359

PREPARED FOR
SITE ARCHITECTURE STUDIO

PREPARED BY
GLENN UNDERWOOD

PROJECT NO
133171

PUBLISHED DATE
16/07/2026



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DOCUMENT REVISION

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SOURCES OF INFORMATION

DRAWING SERIES	DRAWING TITLE	REV
22580 A1.00 – DA04	22580 Wave Rock Katter Kich DC – Issued to Energy	

DISCLAIMER

This report is provided for information and coordination purposes only. It may be relied upon to demonstrate NCC Section J compliance for approval or certification only where the referenced design documentation remains unchanged from the date of issue. Any subsequent design changes will require reassessment.

Insulation R-values and indicative thicknesses adopted in the assessment reflect readily achievable performance using commonly available insulation systems and modelling assumptions. These values are provided for coordination purposes only. Final insulation selection, detailing, and installation remain the responsibility of the design team and must achieve thermal performance equal to or greater than that modelled.

This report does not assess or confirm compliance of specific proprietary products, including fire performance or combustibility requirements, which fall outside the scope of NCC Section J and this assessment.

Insulation placement within building assemblies may influence condensation risk, particularly where foil-faced or vapour-resistant products are used. Condensation management, vapour control strategies, membrane selection, and ventilation provisions are not governed by NCC Section J Volume One and have not been assessed as part of this report.

CONFIDENTIALITY

The contents of the report are confidential. This report is for the purpose of design certification under the requirements of the National Construction Code of Australia.

All included information and documentation shall remain the property of EMERGEN (CADDs Group) therefore shall not be replicated in any form without written consent from EMERGEN.





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EXECUTIVE SUMMARY

This report presents a Performance-Based Assessment of the proposed Class 9b – Public with Café, Shop, and Offices building located at 4 Mcpherson Street, Hyden WA 6359, prepared on behalf of Site Architecture Studio. In accordance with Clause A2G2 of the National Construction Code (NCC) 2022, this assessment has been conducted to demonstrate compliance with Performance Requirement J1P1 – Energy use under Section J of NCC 2022 Volume One.

A Performance Solution has been developed for Part J4 – Building Fabric, using Verification Method J1V3 – Verification using a reference building. The proposed building was modelled using BetterBuilding simulation software and compared against a reference building designed in accordance with the Deemed-to-Satisfy (DtS) Provisions.

The simulation results confirm that the proposed building fabric meets the greenhouse gas emissions and thermal comfort acceptance criteria set out in the Performance-Based Design Brief (PBDB). Accordingly, the design is considered **compliant** with Part J4, provided that the building fabric specification outlined below is incorporated into the final construction documentation without alteration.

Table i: Opaque building fabric thermal performance requirements

OPAQUE ELEMENTS	GENERIC DESCRIPTION	THERMAL PERFORMANCE (M ² .K/W)
WALLS	Heavyweight wall (RE01): 400mm Rammed Earth Wall	RT = 0.98 (SA = 0.60)
	Lightweight wall (CLA02): Fiber-cement cladding, horizontal top hats, steel studs fitted with R2.50 insulation batts, internal lining.	RT = 1.76 (SA = 0.60)
FLOOR	Slab on ground: Concrete slab on ground. No insulation.	RT = 2.00
ROOF OR CEILING	Metal deck roof – with ceiling: Metal deck, R1.8 foil faced insulation blanket under roof, steel purlins, air cavity, suspended ceiling with R3.0 insulation batt, ceiling lining.	RT = 4.10 (SA = 0.45)
	Metal deck roof - no ceiling: Metal deck, R3.6 foil faced insulation blanket, steel purlins, air cavity.	RT = 4.25 (SA = 0.45)





Table ii: Transparent building fabric thermal performance requirements¹

TRANSPARENT ELEMENTS	LOCATION	THERMAL PERFORMANCE (W/M ² .K)
		PROPOSED DESIGN
EXTERNAL WINDOWS	All aspects	U _w = 6.00 SHGC _w = 0.60
SKYLIGHTS	All aspects	U _w = 3.50 SHGC _w = 0.35

¹Windows should come with a WERS (The Window Energy Rating Scheme) Certificate, which ensures the thermal performance data of the window system was calculated in accordance with AFRC protocols. If any films are being applied to improve the energy efficiency of the window, the film applicator should hold a WERS License.





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1 INTRODUCTION

The 2022 National Construction Code (NCC) specifies minimum Performance Requirements for the energy efficiency of buildings through the Building Code of Australia (BCA) Volume 1, Section J.

This report outlines the compliance approach and supporting evidence used to demonstrate compliance with Performance Requirement J1P1 – Energy Use for the proposed Class 9b – Public with Café, Shop, and Offices Class 9b – Public with Café, Shop, and Offices building at 4 Mcpherson Street, Hyden WA 6359. **Error! Reference source not found..**

The compliance approach was developed through a Performance-Based Design Brief (PBDB) and comprises a combination of a Performance Solution for the building fabric and an intent to apply the Deemed-to-Satisfy (DtS) Provisions for the remaining elements of Section J.

2 PERFORMANCE BASED DESIGN BRIEF

2.1 OVERVIEW

The stakeholder group comprised of the Architect (Site Architecture Studio) and Sustainability Consultant (EMERGEN) engaged in discussions to explore the possibility of achieving compliance with the applicable Performance Requirements, as per the performance-based design and approval process.

The applicable Performance Requirement for the proposed Class 9b – Public with Café, Shop, and Offices building was identified to be:

- J1P1 – Energy use

2.2 COMPLIANCE STRATEGY

To satisfy J1P1, a Performance Solution has been adopted for Part J4 – Building Fabric, with compliance to Parts J5 to J9 intended to be demonstrated via Deemed-to-Satisfy (DtS) Solutions, as summarised in the table below. This approach has been adopted to allow flexibility in the architectural design of the building fabric.

Accordingly, this report addresses the Performance Solution for Part J4 only. Compliance with J1P1 is contingent on separate verification that the requirements of Parts J5 to J9 are met under the DtS pathway. These elements are outside the scope of this report and have not been assessed.

Table 1: J1P1 compliance strategy

SECTION J PART	CLAUSES	COMPLIANCE PATHWAY	ASSESSMENT METHOD
J4 – Building Fabric	J4D2 to J4D7	Performance Solution	Verification Method J1V3 (Reference Building)
J5 – Building Sealing	J5D2 to J5D8	Deemed-to-Satisfy Solution	Comparison with DtS Provisions
J6 – HVAC & Ventilation	J6D2 to J6D13	Deemed-to-Satisfy Solution	Comparison with DtS Provisions
J7 – Lighting & Power	J7D2 to J7D9	Deemed-to-Satisfy Solution	Comparison with DtS Provisions
J8 – Heated Water & Pool Plant	J8D2 to J8D4	Deemed-to-Satisfy Solution	Comparison with DtS Provisions
J9 – Energy monitoring and on-site distributed energy resources	J9D3	Deemed-to-Satisfy Solution	Comparison with DtS Provisions





2.3 SUPPORTING DOCUMENTATION

The following supporting documentation must be provided to the building certifier to demonstrate compliance with J1P1:

- **Performance Solution:** a J1V3 Performance Solution Report (this report), which includes the building fabric and window thermal performance requirements.
- **DtS Solution:** a certification from a professional engineer or qualified person that the DtS Provisions have been satisfied.

2.4 ACCEPTANCE CRITERIA

The following acceptance criteria have been established in accordance with Verification Method J1V3, and are used to assess compliance with Performance Requirement J1P1 – Energy Use for Part J4 – Building Fabric:

- the Proposed Building, incorporating the proposed building fabric specification, must demonstrate annual greenhouse gas (GHG) emissions no greater than those of the Reference Building, which complies with all DtS requirements for Sections J4 – J8.
- in the Proposed Building, a thermal comfort level between a Predicted Mean Vote (PMV) of -1 to +1 must be achieved across not less than 95% of the floor area of all occupied zones for not less than 98% of the annual hours of operation.





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3 PERFORMANCE BASED ASSESSMENT

3.1 SCOPE OF WORKS

This assessment relates to the thermal performance requirements of Part J4 – Building Fabric, forming part of compliance with J1P1 – Energy Use. It does not assess services, systems, or provisions under Parts J5 to J9.

3.1.1 LIMITATIONS

- Full compliance with J1P1 requires that Parts J5 to J8 meet the relevant DtS Provisions, which are outside the scope of this assessment.
- Performance Requirement J1P4 (renewable energy and EV charging) is not addressed in this report. For full compliance with the NCC 2022 Section J this requirement must also be addressed. Applicability is assumed to be assessed separately by the building certifier.

3.2 METHODOLOGY

3.2.1 APPROACH

This assessment has been conducted using Verification Method J1V3 – Verification using a reference building, as an Alternative Solution for the building fabric.

A building-fabric-only J1V3 approach has been adopted, whereby the thermal performance of the building envelope is assessed independently of detailed HVAC system design. Heating and cooling energy outcomes and associated greenhouse gas emissions are used to compare the relative impact of building fabric performance between the Proposed and Reference Buildings, with building services assumed to be identical in both cases.

Accordingly, the Proposed Building has been modelled with the proposed building fabric and reference services and assessed against a Reference Building model that complies with all applicable Deemed-to-Satisfy requirements (refer to Figure 1).

3.2.2 ASSUMPTIONS

- Parts J3, J5, J6, J7, J8 and J9 are not part of this assessment.
- Specification 34 Modelling parameters for J1V3 S34C1 Scope, S34C2 Reference building and S34C3 Proposed building and reference building have been used to form the basis of the Method of Assessment.
- S34C4 Services Proposed and Reference Building is not part of this assessment as the minimum performance requirements of the services are not included.

3.2.3 SIMULATION METHODOLOGY

The simulation interface, **Error! Reference source not found.**, using EnergyPlus has been used for the modelling analysis, meeting the ANSI/ASHRAE Standard 140 requirements for a building's thermal envelope and fabric test.



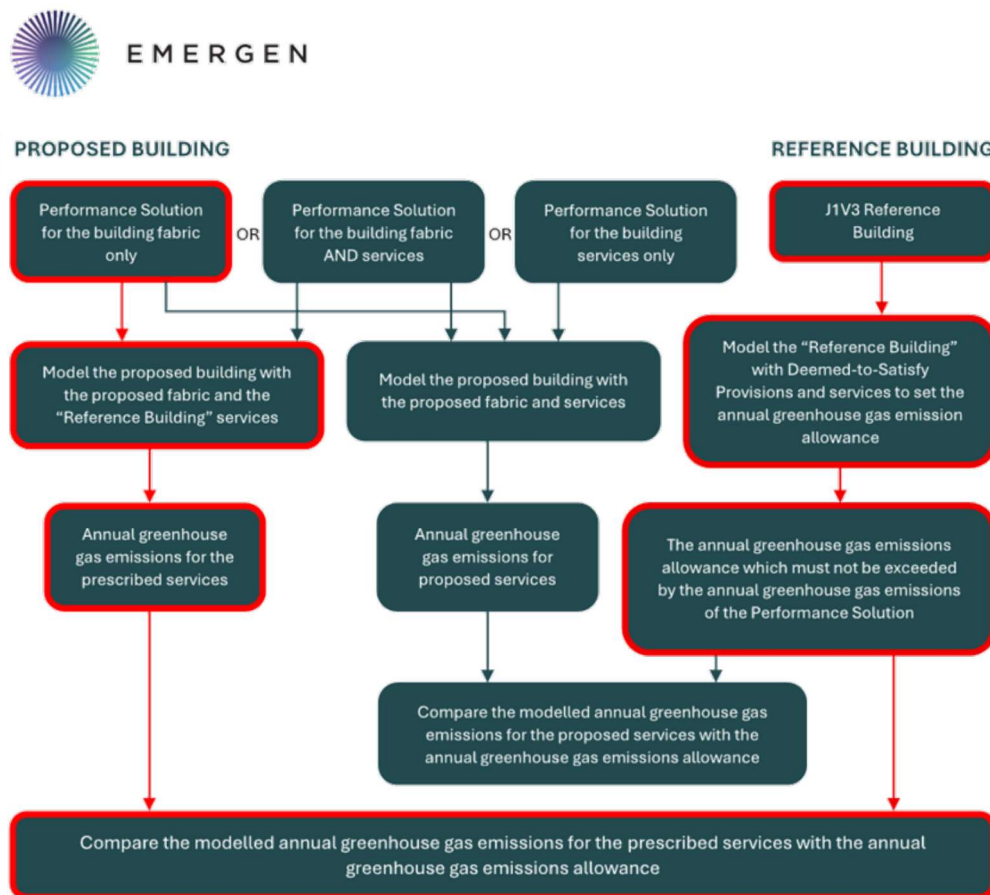


Figure 1: J1V3 modelling approach

3.3 LOCATION

The development is located in ABCB Climate Zone 4 – Hot dry summer, cool winter, as shown in the figure below.

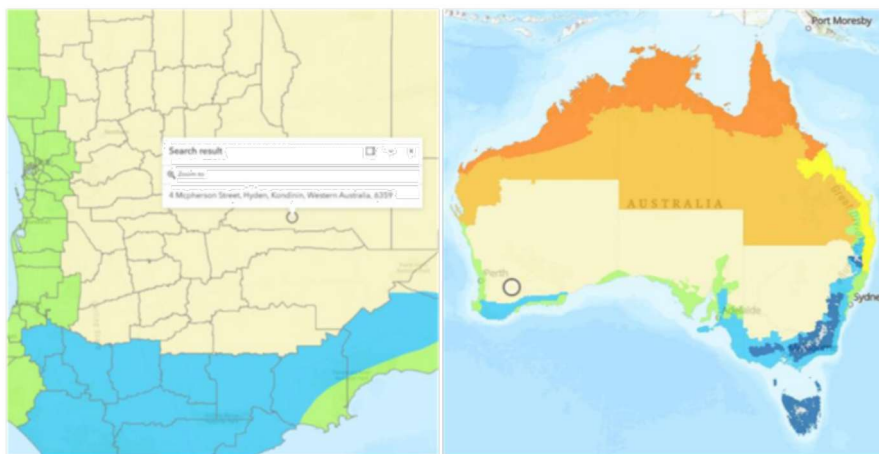


Figure 2: Site location climate zone classification.





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4 J1V3 ASSESSMENT

4.1 RESULTS

4.1.1 HEATING AND COOLING ENERGY USE

A comparison in heating and cooling energy demand between the Proposed Building and the Reference Building, has been shown in the table below, allowing for a quantifiable comparison of the building fabric performance.

Table 2: Estimated heating and cooling energy

MODEL	HEATING	COOLING	TOTAL
Proposed (kWh/m ²)	2.22	20.28	22.50
Reference (kWh/m ²)	2.02	24.11	26.13

4.1.2 BUILDING EMISSIONS

The Proposed Buildings energy emissions are less than the Reference Building, as shown in the table below, thereby meeting the acceptance criteria. The greenhouse gas emission factors are based on Table S34C3 as defined in Clause S34C3(2)(a).

Table 3: Building GHG emissions

BUILDING MODEL	GHG EMISSIONS	COMPLIANCE
Proposed (kgCO ₂ -e/m ²)	44.11	PASS
Reference (kgCO ₂ -e/m ²)	46.81	

4.1.3 THERMAL COMFORT (PMV)

The Proposed Buildings occupied zones are deemed comfortable for most occupants (within ±1 PMV) for at least 98% of the occupied hours, as shown in the table below, thereby meeting the acceptance criteria.

Table 4: Proposed Building PMV results

PMV	VALUE	COMPLIANCE
Total area (m ²)	703.21	PASS
Required compliant area (%)	95	
Compliant area (%)	100	





5 CONCLUSION

The proposed design is deemed capable of satisfying Performance Requirement J1P1 – Energy use, provided that:

- the building fabric and window thermal performance requirements outlined in Section 1A.1.3 are fully implemented, and
- the relevant Deemed-to-Satisfy (DtS) Provisions of Parts J5 to J9 are adopted and verified by the design team.

Compliance has been demonstrated through detailed energy modelling using BetterBuilding **Error!**

Reference source not found. simulation software, with the results confirming that the acceptance criteria established in the Performance-Based Design Brief (PBDB) have been met, as documented in Section 4.1 – Results.

To achieve full compliance with Section J of the NCC 2022, it is also necessary to address Performance Requirement J1P4 – Renewable energy and electric vehicle charging infrastructure. This component falls outside the scope of this report and must be verified separately. The relevant design consultants and contractors are responsible for providing appropriate documentation, such as professional certification to the building certifier as evidence of compliance.





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APPENDIX 1 – MODELLING ASSUMPTIONS

A.1 GEOMETRY AND ENVELOPE

A.1.1 GEOMETRY

The building can be seen visually represented in the modelling platform BetterBuilding **Error! Reference source not found.** in the figure below Figure 3. The key thermal envelope geometry characteristics have been noted in the table below.

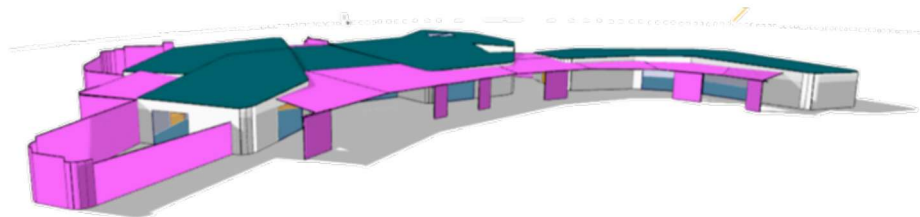


Figure 3: Modelled geometry

Table 5: Building geometry characteristics

CHARACTERISTIC	PARAMETER
Window-Wall Ratio (%)	17.6
Treated Floor Area (m ²)	811.03

A.1.2 SHADING

External shading to the Proposed Building has been included as per the architectural drawings listed in Sources of Information. External shading to the Reference Building has been included identical to the Proposed Building, expect where shading is used specifically for the use of solar control. The buildings shading can be seen in pink in Figure 3.

A.1.3 BUILDING FABRIC

The building fabric thermal performance requirements are summarised in Table 6 and Table 7, and are based on the architectural drawings listed in the Sources of Information section. The construction build-ups **have been confirmed** by the Architect as representative of the proposed design at the time of assessment.

- The indicative location of the thermal envelope elements is shown on the floors plans in Appendix 2.
- All insulation must be selected/installed in accordance with Part J4D3 Thermal construction – general. An excerpt of these requirements can be found in Appendix 3.
- Any changes to the build-up description of the building fabric elements post-report will require reassessment.
- R-values were calculated in accordance with AS/NZS 4859.2 for thermal bridging.
- The descriptions are not intended to represent the full construction build-up, nor specify specific products.
- Insulation thicknesses provided are indicative only, actual thickness will depend on product selection.
- Windows should come with a WERS (The Window Energy Rating Scheme) Certificate, which ensures the thermal performance data of the window system was calculated in accordance with





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AFRC protocols. If any films are being applied to improve the energy efficiency of the window, the film applicator should hold a WERS License.

Table 6: Opaque building fabric thermal performance requirements

OPAQUE ELEMENTS	GENERIC DESCRIPTION	THERMAL PERFORMANCE (M ² .K/W)		
		PROPOSED DESIGN		REFERENCE DESIGN
WALLS	Heavyweight wall (RE01): 400mm Rammed Earth Wall	RT = 0.98 (SA = 0.60)	≤	RT = 1.40 (SA = 0.60)
	Lightweight wall (CLA02): Fiber-cement cladding, horizontal top hats, steel studs fitted with R2.50 insulation batts, internal lining.	RT = 1.76 (SA = 0.60)	≥	RT = 1.40 (SA = 0.60)
FLOOR	Slab on ground: Concrete slab on ground. No insulation.	RT = 2.00	=	RT = 2.00
ROOF OR CEILING	Metal deck roof – with ceiling: Metal deck, R1.8 foil faced insulation blanket under roof, steel purlins, air cavity, suspended ceiling with R3.0 insulation batt, ceiling lining.	RT = 4.10 (SA = 0.45)	≥	RT = 3.70 (SA = 0.45)
	Metal deck roof - no ceiling: Metal deck, R3.6 foil faced insulation blanket, steel purlins, air cavity.	RT = 4.25 (SA = 0.45)	≥	RT = 3.70 (SA = 0.45)

Table 7: Transparent building fabric thermal performance requirements

TRANSPARENT ELEMENTS	LOCATION	THERMAL PERFORMANCE (W/M ² .K)		
		PROPOSED DESIGN		REFERENCE DESIGN
EXTERNAL WINDOWS	All aspects	U _w = 6.00 SHGC _w = 0.60	=	U _w = 4.08 SHGC _w = 0.25
SKYLIGHTS	All aspects	U _w = 3.50 SHGC _w = 0.35	=	U _w = 3.90 SHGC _w = 0.29

