PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2021/1196

Date: 17-Jun-2022

Queensland Government

AMENDED IN RED

By: Essen Joseph

Date: 17-Jun-2022

Queensland Government

ACOR CONSULTANTS

Site Based Stormwater Management Plan and Engineering Services Report

Rockpool Aged Care Development

Lot 102 (Stage 1C) Oxley Priority Development Area Oxley QLD

Prepared for: **McNab Developments (QLD) Pty Ltd**

Document no: **BR200791**

Issue no: **02**

Level 4
43 Peel Street
SOUTH BRISBANE QLD
4101

PO Box 3635
SOUTH BRISBANE QLD
4101

T 07 3844 5900
F 07 3844 7588

ENGINEERS

MANAGERS

INFRASTRUCTURE
PLANNERS

DEVELOPMENT
CONSULTANTS

Subject to Compliance Assessment
Stormwater discharge characteristics for north-eastern corner to be compatible with rock lined chute in drainage reserve to the north (by others). See conditions of approval.

Disclaimer

This Report has been prepared in accordance with the scope of services described in the agreement between ACOR Consultants (QLD) Pty Ltd and the Client. The Report relies upon data, surveys, measurements and results based on instructions from, and in consultation with, the Client. Except as otherwise stated, ACOR Consultants (QLD) Pty Ltd has not attempted to verify the accuracy or completeness of any information provided by the Client. If the information is subsequently determined to be false, inaccurate or incomplete then it is possible that changes may be required to the Report. Changes in circumstances or facts, the passage of time, manifestation of latent conditions or impacts of future events may also impact on the accuracy, completeness or currency of the information or material set out in this Report. This Report has been prepared solely for use by the Client, ACOR Consultants (QLD) Pty Ltd accepts no responsibility for its use by any third parties without the specific authorisation of ACOR Consultants (QLD) Pty Ltd]. ACOR Consultants (QLD) Pty Ltd reserves the right to alter, amend, discontinue, vary or otherwise change any information, material or service at any time without subsequent notification. All access to, or use of, the information or material is at the user's risk and ACOR Consultants (QLD) Pty Ltd accepts no responsibility for the results of any actions taken on the basis of information or material provided, nor for its accuracy, completeness or currency. For the reasons outlined above, however, no other warranty or guarantee, whether expressed or implied, is made as to the data, observations and findings expressed in this Report, to the extent permitted by law.

REVISIONS

Revision	Date	Purpose	Prepared By	Approved By
Draft	05/03/21	For Comments/Coordination	Niall Davidson	
01	24/06/21	For DA Approval	Niall Davidson	Roshan Khadka
02	7/03/22	EDQ RFI – Carpark Conveyance	Niall Davidson	Roshan Khadka RPEQ:15945 2022.03.07 15:28:52+10'00'

Review Panel		
Division/Office	**Revision**	**Name**
Civil / Brisbane, QLD	01, 02	Roshan Khadka RPEQ:15945 2022.03.07 15:29:46+10'00'

Table of Contents

Appendices

List of Figures

List of Tables

1 Introduction

1.1 Background

ACOR Consultants (QLD) Pty. Ltd. were engaged by McNab Developments (QLD) Pty Ltd (Client) to prepare a Site Based Stormwater Management Plan (SBSMP) and Engineering Services Report for the proposed Aged Care Development by Rockpool at the Oxley Priority Development Area (Site).

1.2 Scope

The following items will be addressed in this report;

- Lawful point of discharge for the development
- Proposed concept stormwater quantity management plan for the site.
- Proposed concept stormwater quality management plan for the site.
- Comments on flood assessment prepared by Design Flow
- Comments on services infrastructure near the Site.

1.3 Criteria

This report has been compiled based on:

- Existing design documentation for the Site prepared by KN Group Pty Ltd (Subdivision Civil Engineer)
- Proposed development plans for the Site prepared by GJG Architects Pty Ltd (Architect)
- Discussions with the Client and the consultant team
- Information obtained from Council's online mapping system

2 Site Characteristics

2.1 Location and Description

The proposed Rockpool Aged Care site is currently identified as Lot 102 of the Oxley Priority Development Area (Subdivision) located at 53 Seventeen Mile Rocks Road, Oxley QLD 4075 over the lot described as Lot 600 on SP236626.

Lot 102 of the subdivision work will be further referred to as the Site, which has a total area of approximately 1.6 hectares.

At the completion of the subdivision work by others, the Site will be fronted by a new road along the southern boundary, drainage reserve open space to the north and west, and a Public Recreation Park to the north and east.

Refer to **Appendix A** for the overall subdivision layout.

Figure 1 – Site Locality

Source: © Nearmap 2021

2.2 Watercourses and Topography

There is an existing watercourse that runs south to north, to the west of the Site.

The Site is provided with a grade of approximately 6% towards the northern boundary (drainage reserve) with levels ranging from approximately 21.0m AHD to approximately 13.5m AHD.

Refer to **Appendix B** for design of the Site as per the subdivision documentation.

2.3 Existing Land Use and Proposed Development

The Site area was previously a secondary college.

The surrounding area is currently being redeveloped as a residential/commercial subdivision.

The proposed development is an Aged Care Facility with communal and public facilities on the ground floor (e.g. café, theatre, function rooms etc.) and five floors above for residents.

Refer to **Appendix C** for the proposed development plans.

3 Services

3.1 Water Reticulation

A review of Urban Utilities' water reticulation infrastructure records and Brisbane City Council (BCC) ebimap2 in the immediate vicinity of the Site has been completed. The information indicates that there is a 300mm diameter main along Seventeen Mile Rocks Road and 150mm diameter mains along Seventeen Mile Rocks Road and Blackheath Road.

However, the Site is expected to be serviced by a new 150mm diameter main along its road frontage that is being constructed as part of the overall Subdivision (not yet documented in the mapping system).

Capacity of the new main and connection details will be confirmed by Urban Utilities at the time of detailed design for the Site.

Refer to **Appendix B** for the water main being designed and constructed as part of the overall subdivision .

3.2 Sewer Reticulation

A review of Urban Utilities' sewer reticulation infrastructure records and Brisbane City Council (BCC) ebimap2 undertaken in the immediate vicinity of the site has been completed. The information indicates there is existing reticulation infrastructure within the vicinity of the Site.

As part of the ongoing subdivisional work, a new reticulation sewer main is expected to be constructed near the eastern boundary of the Site along with a 150mm diameter property connection to service the development.

Final location of the sewer reticulation line and connection point is expected to be confirmed prior to commencement of detailed design.

Refer to **Appendix B** for the sewer main being designed and constructed as part of the overall subdivision.

Refer to **Appendix G** for a concept of the sewer arrangement being discussed.

3.3 Telecommunications & Electrical

The subdivisional work is also providing electrical and NBN infrastructure along the road frontage of the Site. It is expected that these infrastructures have been designed to allow for connection to the Site.

Refer to **Appendix B** for the telecommunication and electrical infrastructure being designed and constructed as part of the overall subdivision.

Capacity and details of the connection is expected to be confirmed with the relevant authority.

4 Stormwater Quantity Management

4.1 Stormwater Infrastructure being constructed

Stormwater infrastructure is being constructed within drainage reserve and public recreation park along northern and eastern boundaries. We have been advised that a 300mm dia connection will be provided for the Site

Refer to **Appendix B** for the stormwater infrastructure being designed and constructed as part of the overall subdivision.

Refer to **Appendix G** for a concept of the sewer arrangement being discussed.

4.2 Lawful Point of Discharge

The existing stormwater infrastructure within the drainage reserve and public recreation park along northern and eastern boundaries and the proposed new 300mm dia connection pipe to is considered as the lawful point of discharge for the development.

4.3 Proposed design

During detailed design, the Site will be graded to discharge to the lawful point of discharge. Refer to **Appendix D** for the preliminary civil layout sketch.

The overall subdivision is being developed as per a precinct wide Stormwater Management Plan prepared by Design Flow. Design Flow have also prepared a technical letter “Oxley PDA Retirement Living Precinct – Stormwater and Flooding Compliance”, (ref: projects/ 4277 dated 17 June 2021) summarising their allowances for the development site as part of the overall subdivision works.

The technical letter outlines the following allowances that has been made for the Site;

- Fraction impervious up to 80%
- Nominated low flow drainage diversion to a regional bio-retention basin
- Requirement for exclusion fencing along the north western boundary interfacing with detention external detention basin and water corridor.

Based on our review of the architectural plans, the proposed development layout has fraction impervious of 75% only. As this value is less than the value assumed by Design Flow, we consider that no on-site detention system will be required for the development.

Refer to **Appendix F** for the technical letter prepared by Design Flow.

Refer to **Appendix G** for a concept of the stormwater connection arrangement being discussed.

4.4 Overland Flow

Conveyance of stormwater to the lawful point of discharge from the carpark has been analysed to confirm that there is sufficient capacity in the minor and major systems being proposed for the Site.

Overland flow capacity has been checked at two critical locations; Section 1 and Section 2. Stormwater runoff at the end of the carparking bay (Section 1) will be controlled and conveyed to the lawful point of discharge by installing appropriate surface treatment on the batter. The final design will be confirmed during detailed design phase.

At section 2, a cut-out channel through the garden bed along the alignment of the kerb for a minimum width of 1.50m has been adopted

Refer to **Appendix D** for the Concept Civil Layout with location of sections.

The tables below summarise the calculations at both locations. The calculations have been undertaken with the following conservative assumptions:

- Although the current design crossfall grade of the carpark is 3%, calculations have been undertaken to allow this to increase up to 5%.
- Sensitivity capacity check for pipes being fully blocked scenario.
- Rainwater tank system assumed to be full with no retention capacity.

Table 1 – Overland Flow Capacity (Section 1)

ARI/AEP	Flow (m^3/s)	Flow Depth (m)	Velocity (m/s)	D*V (m^2/s)
Minor System (piped) Q10 / 10% AEP	0.172			
Major System Q100 / 1% AEP (Pits and pipes assumed to be fully blocked)	**0.300**	0.163	1.092	0.178
Major System less piped minor system (Q100 – Q10)	0.300 - 0.172 = 0.128	0.114	0.965	0.111
Total Section Capacity	**0.365**	0.177	1.081	0.191

Table 2 – Overland Flow Capacity (Section 2)

ARI/AEP	Flow (m^3/s)	Flow Depth (m)	Velocity (m/s)	D*V (m^2/s)
Minor System (piped) Q10 / 10% AEP	0.144			
Major System Q100 / 1% AEP (Pits and pipes assumed to be fully blocked)	**0.253**	0.168	1.207	0.203
Major System less piped minor system (Q100 – Q10)	0.253 – 0.144 = 0.109	0.105	1.055	0.111
Total Section Capacity	**0.273**	0.177	1.165	0.206

Results show that, even when the pipes are fully blocked, the Sections have capacity to covey major flows to the lawful point of discharge.

Refer to **Appendix E** for the calculations of the stormwater conveyance through the sections.

5 Stormwater Quality Management

5.1 Operational Phase

5.1.1 Water Quality Objectives

The proposed development is required to meet or exceed the stormwater management design objectives under the State Planning Policy (SPP) and Council's planning scheme and guidelines. The following minimum load reduction targets, in mean annual load from unmitigated development, are required to be achieved in the post-developed site's treatment:

- Total Suspended Solids (TSS) 80% reduction of average annual load
- Total Phosphorus (TP) 60% reduction of average annual load
- Total Nitrogen (TN) 45% reduction of average annual load
- Gross pollutants (greater than 5mm) 90% reduction of average annual load

5.1.2 7.2 Treatment Train

The technical stormwater letter "Oxley PDA Retirement Living Precinct – Stormwater and Flooding Compliance", prepared by Design Flow (ref: projects/ 4277 dated 17 June 2021), specifies the treatment train for the overall subdivision including fully developed scenario for the Site.

This treatment train does not include a separate treatment device for the Site. Therefore, we consider that no additional on-site treatment train is required for the Site.

Refer to **Appendix F** for the technical letter prepared by Design Flow.

The stormwater connection stub provided for the Site will convey post-development flows from the Site to the proposed bioretention basin being constructed (to the Northwest of the Site) as part of the overall subdivision works

Refer to **Appendix G** for a concept of the stormwater connection arrangement being discussed.

In addition to the above, the following permanent stormwater quality best management practices have been identified for the operational phase of the development to assist in the protection of water quality.

- Rubbish Bins provided on site;
- Street sweeping of pavement areas;
- Litter basket devices installed on all inlet pits within the carpark and service yard areas;
- Maintenance of all stormwater quality improvement devices.

5.2 Construction Phase

5.2.1 Water Quality Objectives

The following list summarises the required construction phase water quality objectives for the Site:

- Control measures to be put in place to protect downstream properties from nuisance flows.
- Maximum of 50mg/L of total suspended solids present in run-off discharged from the Site during the construction stage, and a pH between 6.5 and 8.5

5.2.2 Reference and Guidelines

Erosion and sediment control management for the development should be in accordance with the International Erosion Control Association (IECA) Best Management Practices (2008), the Institute of Engineers (QLD) 'Sediment and Erosion Control Guidelines' and Council requirements.

All erosion and sediment control devices used during and after construction is to be in line with current best management practices and all practical measures applicable to the site. Erosion and Sediment Control Measures should include, but not be limited to, details within the Erosion and Sediment Control Plan Drawings to be provided at detailed design stage.

As per the Environmental Protection Act (EPA) 1994 all personnel must comply with the general environmental controls under Sections 319 and 320, provided as follows:

- Section 319 of the EPA states that all persons involved in the project, from design to construction, are to act in accordance with the 'general environmental duty'. This requires all reasonable and practicable measures to be adopted to prevent or minimise environmental harm. Consequently, any erosion and sediment control devices proposed or implemented on site must represent current best management practices and all practical measures applicable to the site.
- In addition, Section 320 of the EPA, all personnel have a legally binding duty to notify their employer, their Local Regulatory Authority and the Environmental Protection Agency (QLD) should they become aware of a potential or actual incident of environmental harm. The principal contractor should therefore be aware of their responsibility to ensure all persons on site are aware of their environmental duties.

5.2.3 Responsibility

In addition to the above, it is the responsibility of the contractor to put in place all the erosion and sediment control measures on site until all disturbed areas are reinstated including maintenance of such measures.

The contractor is, at all times, responsible for the erosion and sediment control measures to ensure minimal environmental harm and compliance with Council's standards.

5.2.4 Proposed Erosion & Sediment Control Measures

During the construction phase of the development, an Erosion and Sediment Control Program will be implemented to minimise water quality impacts.

This Program will be developed by the Contractor that is engaged to design and construct plan and, will hence, not be available until closer to the start of construction.

Details of the required construction phase sediment and erosions control measures will be provided on the engineering drawings (detailed design phase) and shall be in accordance with the SPP 2017. However, the contractor shall be responsible for the preparation and implementation of an Erosion and Sediment Control Program and meeting the required minimum construction phase water quality objectives.

The information below is provided to identify possible controls and procedures, that could be adopted to mitigate erosion and sediment impacts, including who is responsible for them, and is recommended to be incorporated into the Erosion and Sediment Control Program.

5.2.4.1 Pre Construction

- Establish a single stabilised entry/exit point for each stage of construction. This point should also include a vehicle shakedown device to mitigate the transportation of dust and dirt.
- Sediment fences are to be placed along the low side of the site to slow flows, reduce scour and capture some sediment runoff.
- Sediment fences are to be constructed at the base of fill embankments.
- Divert up-slope water around the work site and appropriately stabilise any drainage channels.
- Areas for plant and construction material storage are to be designated along with associated diversion drains and spillage holding ponds.
- Diversion banks are to be created at the upstream boundary of construction activities to ensure upstream runoff is diverted around any areas to be exposed. Catch drains are to be created at the downstream boundary of construction activities.
- Construction of temporary sediment basins where required.
- Site personnel are to be educated to the sediment and erosion control measures implemented on site.

5.2.4.2 During Construction

- Progressive stabilization of filled areas and fill batters.
- Construction activities are to be confined to the necessary construction areas.
- The provision of a construction entry/exit to prevent the tracking of debris from tyres of vehicles onto public roads and to limit the movement of construction equipment.
- The topsoil stockpile location will be nominated to coincide with areas previously disturbed. A sediment fence is to be constructed around the bottom of the stockpile to trap sediment. A diversion drain is to be installed upstream of the stockpile if required.
- Roof downpipes should be installed as soon as practicable after the roof is constructed.
- Transport loads that are subject to loss through wind or spillage shall be covered or sealed to prevent entry of pollutants to the stormwater system.
- Regular inspection and maintenance of slit fences, sediment basins and other erosion control measures. Following rainfall events greater than 50mm inspection of erosion control measures and removal of collected material should be undertaken. Replacement of any damaged equipment should be performed immediately.

5.2.4.3 Post Construction

- The Contractor/ Developer will be responsible for the maintenance of erosion and sediment control devices from the possession of the site until stabilisation has occurred to the satisfaction of the superintendent and Principal.
- The Erosion and Sediment Control Management Plans should be provided to all people involved with the site, including sub-contractors, private certifiers, body corporates and regulators.

6 Flooding

The overall subdivision is being developed as per a precinct wide Stormwater Management Plan prepared by Design Flow. Design Flow have also prepared a technical letter "Oxley PDA Retirement Living Precinct – Stormwater and Flooding Compliance", (ref: projects/ 4277 dated 17 June 2021) summarising following flowing specific requirements and design thresholds for the Site.

- Exclusion fencing to north western site boundary interfacing with flood detention basin 1 and drainage corridor
- Local 100 year ARI (1% AEP) flood level adjacent to the north-western boundary varies from 12.36 mAHD to 14.09 mAHD.
- Brisbane River 0.2% AEP (1 in 500 AEP) flood level is 15.45 mAHD
- Refer to **Appendix F** for the technical letter prepared by Design Flow.

The following table summarises the relevant flood levels and the required minimum design levels for the Site as per Council's Flood Overlay Code and Design Flow's technical letter

Table 3 - Relevant flood levels (from Creek/Waterway) – Building Class 9C

Development Type & Category	Category	Critical Flood Source	Required Minimum Flood Planning Level (Criteria)	Required Minimum Flood Planning Level	Proposed Levels
Building floor level	Category A	Creek/ Waterway	1% AEP + 500mm	14.59m AHD (Ground Floor)	17.50m AHD (Ground Floor)
Building floor levels for habitable rooms	0.2% AEP	Creek/ Waterway	0.2% AEP	15.45m AHD (Ground Floor)	17.50m AHD (Ground Floor)
Unroofed car park	Category D	Creek/ Waterway	1% AEP	14.09m AHD	14.65m AHD
Vehicle Access and Manoeuvring Areas	Category D	Creek/ Waterway	1% AEP	14.09m AHD	14.65m AHD
Essential Electrical Services	Category A	Creek/ Waterway	1% AEP + 500mm	14.59m AHD	17.50m AHD

The proposed development levels are at or above the required minimum design levels.

Refer to **Appendix D** for the concept civil layout sketch with preliminary FFLs shown.

7 Conclusion and Recommendations

Services including water, sewer, stormwater, electrical and NBN, being installed as part of the overall subdivision work, are expected to service the proposed development.

A stormwater management plan has been prepared to manage stormwater quantity and quality for the proposed Aged Care development.

Stormwater infrastructure (to manage both quantity and quality) being designed and constructed as part of the overall subdivision has made allowance for fully developed flows from the Site. Therefore, no on-site detention or treatment train is proposed for the Site.

Parts of the site are affected by flooding. Relevant flood levels for the Site have been confirmed by Design Flow. Proposed levels for the development are at or above the relevant flood planning levels.

Appendix A – Subdivision Lot Layout Plan

AMENDED IN RED
By: Jennifer Davison
Date: 23 November 2020

Queensland Government

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL
Approval no: DEV2020/1099
Date: 9 December 2020

Queensland Government

Residential Allotment Mix	Stage 1
Courtyard 15 - 17.9m wide Allotments	16
Traditional 18.0m+ wide Allotments	23
TOTAL	39

	Stage 1A	Stage 1B	Stage 1C	Stage 1D
Total Stage Area	4.82	1.28	1.6	2.25
Drainage Reserve - Waterway Corridor	0	0	0	2.25
Public Recreation Park	0	1.28	0	0
Retirement Living	0	0	1.6	0
Child Care	0.23	0	0	0
Total Area of Road	1.41	0	0	0
Total Length of Road (16.0m)	385m	0	0	0
Total Length of Road (14.0m)	455m	0	0	0
Total Area of Residential Allotments	3.18	0	0	0
Average Lot Size	815sqm			

CLIVEDEN AVENUE

STAGE 1D
DRAINAGE RESERVE
(WATERWAY CORRIDOR)
2.25ha

STAGE 1B
PUBLIC RECREATION PARK PART 1
1.28ha

STAGE 1C
FUTURE RETIREMENT LIVING PRECINCT 102
(Subject to future Development Application)
1.6ha

STAGE 2

STAGE 1A

FUTURE CHILD CARE SITE
(Subject to future Development Application)
101
2320m²

Indicative detention basin

Indicative 4m wide path - Emergency Access

Indicative detention basin

Indicative pathway

Pathway alignment within Stage 1D subject to further design/approval via Stage 2 Development Application

Emt A SP236626

LOT 551 SP142916

VMA LINE & EXTENT OF WORKS - BNW

16.0m wide road (7.5m pavement)

14.0m wide road (7.5m pavement)

Temporary Turnaround

BLACKHEATH ROAD

SEVENTEEN MILE ROCKS ROAD

20 RP29775

8 RP133179

6 RP109846

3 RP68336

1 SP292671

2 SP292671

SP236626

RP 84652 · RP 47826 · RP 135388 · RP 65967 · RP 103844 · RP 171621 · RP 47825 · SL1211

place design group.

BRISBANE
131 Robertson Street
PO Box 419
FORTITUDE VALLEY, QLD, 4006
P: +61 7 3852 3922
F: +61 7 3852 4766

PROJECT

Oxley Priority Development Area

CLIENT

EDQ

KEY PLAN / NOTES

- SUBJECT SITE
- STAGING BOUNDARIES
- FUTURE RETIREMENT LIVING SITE
- FUTURE CHILD CARE SITE
- STORMWATER & ACCESS EASEMENT
- PUBLIC RECREATION PARK
- DRAINAGE RESERVE (WATERWAY CORRIDOR)
- INDICATIVE PATHWAY
- EXISTING VEGETATION TO BE RETAINED WITHIN ROAD RESERVE (SUBJECT TO ENGINEERING DESIGN)
- EXISTING VEGETATION TO BE RETAINED WITHIN OPEN SPACE

NOT FOR CONSTRUCTION

DRAWING TITLE

RECONFIGURATION OF A LOT
STAGE ONE

DESIGN	:	CK
DOCUMENT	:	JB
PROJECT	:	1018015
SCALE	:	1:1000@A1
DATE	:	22.09.2020

NORTH

SHEET NUMBER 1018015_34

REVISION Rev D

Appendix B – Subdivision Civil Design Documentation

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2020/1099

Date: 9 December 2020

Queensland Government

AMENDED IN RED

By: Jennifer Davison

Date: 3 November 2020

Queensland Government

Scope & Design Objectives

This landscape concept has been prepared for Economic Development Queensland (EDQ) to support their development of the Oxley Priority Development Area (PDA) located across two lots:

- Lot 600 on SP236626 (53 Seventeen Mile Rocks Rd, Oxley, 4075)
- Lot 551 on SP142916 (113 Cliveden Ave ,Oxley, 4075)

This landscape concept supports an urban design master plan (prepared separately by Place Design Group) which proposes the site's redevelopment as a boutique residential community set within a backdrop of natural bushland. It is understood the development's public areas would eventually be handed over as an asset by EDQ to Brisbane City Council (BCC) to maintain.

The landscape scope includes the local recreation park & stormwater management area, pocket park, drainage reserve (waterway corridor), conservation area, streetscape (public road dedication), and open space areas to the site entry, easements, hillside interfaces and fencing. Works will be split into two stages – *Refer Dwg. 06 for staging*. The retirement living facility, childcare centre and general allotment treatments are excluded from the landscape scope.

The landscape concept responds to criteria set out in EDQ's Oxley PDA Development Scheme, particularly relating to the design of welcoming and character-rich streets and shared recreation areas with safe and legible movement options for users. Other key design issues include environmental protection, hillside stability, flood resilience, bushfire risk mitigation and community safety.

Landscape Concept Plan

01 Entry landscape with feature planting and repurposed entry heritage elements.

02 Internal streets lined with trees in planting areas. 1.5m wide concrete paths to streets.

03 Local recreation park with turf kick about space, shared path and shade trees.

04 Hillside interface areas stabilised by revegetation with native grasses and trees.

05 80m road frontage to Drainage Reserve (Waterway Corridor) provides access to conservation area trail, strong public surveillance into area and road side parking for maintenance vehicles and public use. Turf area to trail entry with 1:4 fall away from road. 1.5m wide concrete path through turf narrows to deco recreational trail through revegetated areas of Reserve.

06 Stormwater management basins with 3m wide compacted gravel/cement or reinforced turf maintenance access between basins.

07 Drainage Reserve (Waterway Corridor)

08 Recreational trail (bush track/deco).

09 DDA compliant 4m wide shared concrete path / emergency and maintenance vehicle access.

10 1.5m wide path connecting to footpath on Blackheath Road

11 Conservation Area

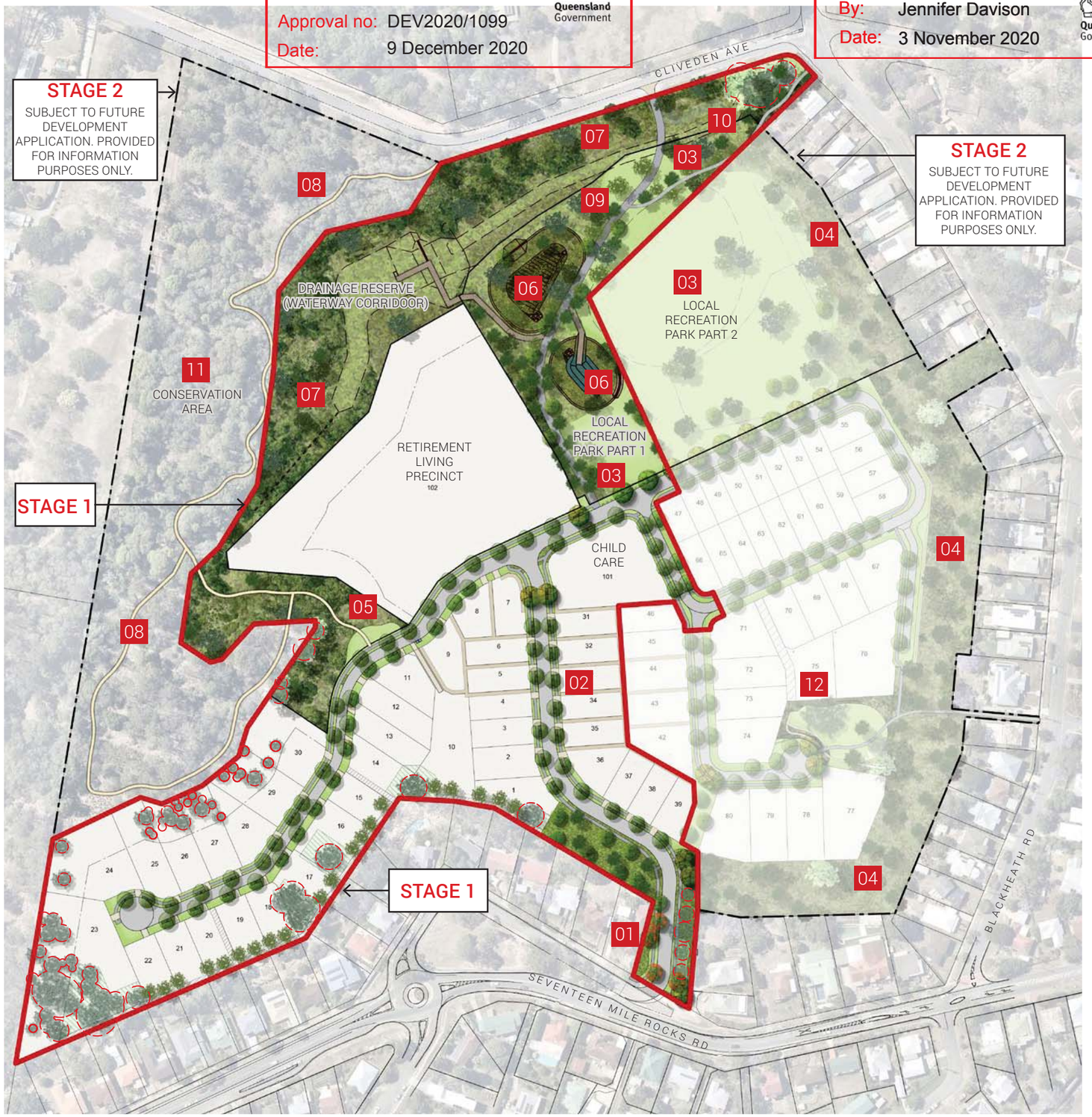
12 Pocket Park

Existing trees to be retained in Stage 1

Proposed new street trees

Proposed new trees to rear of lots 1, 10, 14-22 for soil stabilisation. A minimum of 20 trees will be planted. Maintenance by lot owners. Refer Section D / Dwg. 05.

Refer Dwg's 07-09 for landscape character descriptions and images for the different areas within the site.



place design group.

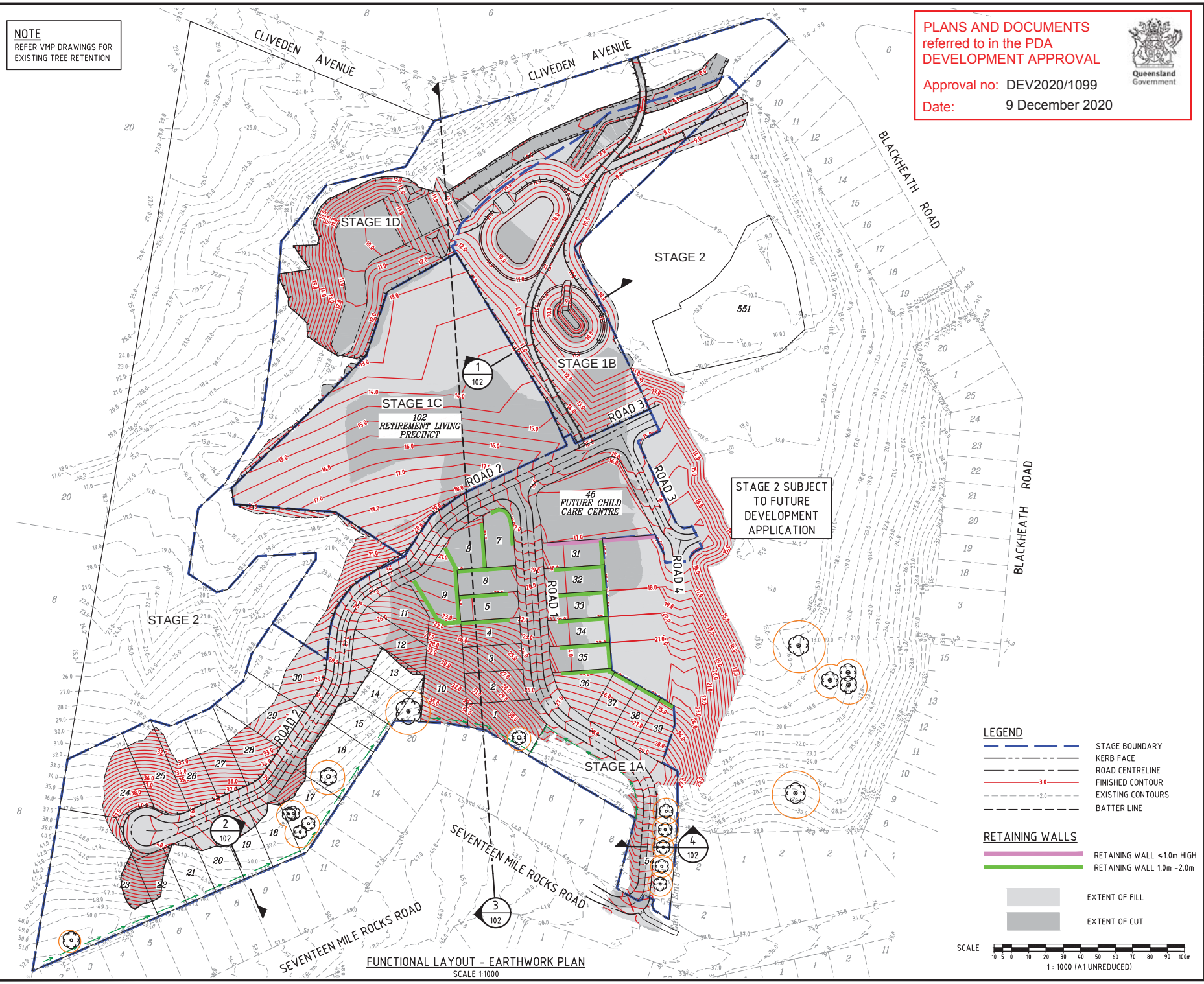
Economic Development Queensland – Oxley PDA

Landscape Master Plan – Stage 1

DATE	PROJECT NO.	REVISION	DWG NO.
21/08/2020	1018015C	E	**01**

N

0 50 100 150M/ 1:2500@A3



FUNCTIONAL LAYOUT - EARTHWORK PLAN
SCALE 1:1000

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV2020/1099

Date: 9 December 2020

Queensland Government

DO NOT SCALE THIS DRAWING IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN

REVISIONS

No	Description	Date	By
A	FOR APPROVAL	18/02/2020	DJS
B	REISSUE FOR APPROVAL	21/02/2020	DES
C	REISSUE FOR APPROVAL	04/06/2020	SLK
D	REISSUE FOR APPROVAL	19/08/2020	DES

Associated Consultants

Client
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

Project
OXLEY SECONDARY COLLEGE REDEVELOPMENT STAGE 1

KN GROUP PTY LTD CONSULTING ENGINEERS
LEVEL 1 - 62 ASTOR TCE
SPRING HILL, QLD 4000
PHONE 07 3017 1900
EMAIL kng@knpl.com.au
ABN 35 112 053 611

Approved

Drawing Title
FUNCTIONAL LAYOUT EARTHWORKS PLAN

Drawn	Designed	Checked	Date
RW	DJS	GBG	FEB 20

Scale	Sheet
AS SHOWN	1 of 11

Drawing No	Revision
19-173-101	D

A1

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2020/1099

Date: 9 December 2020

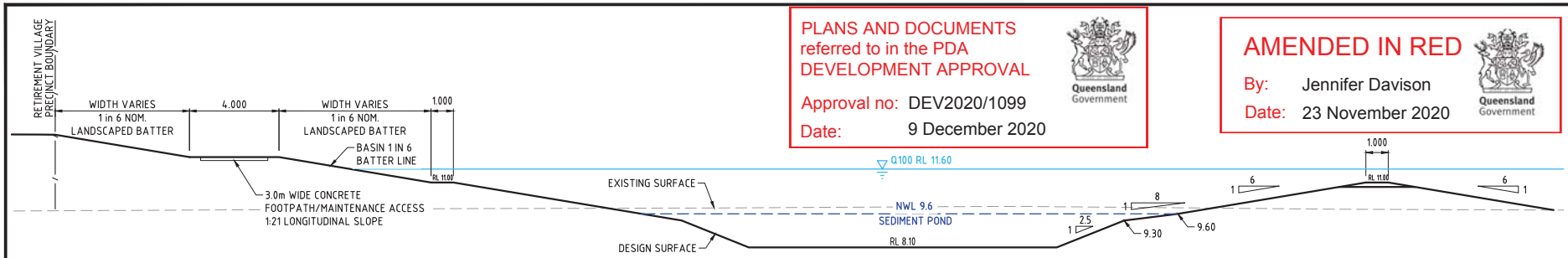
Queensland Government

AMENDED IN RED

By: Jennifer Davison

Date: 23 November 2020

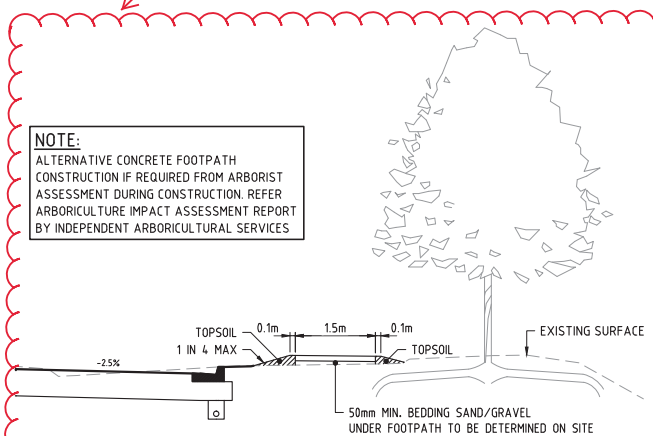
Queensland Government



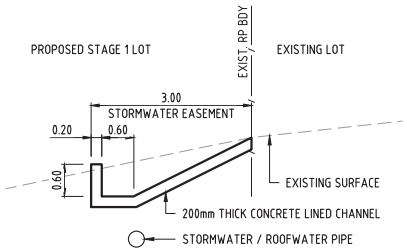
1/101 SECTION
SCALE 1:100

Amend in accordance with design endorsed by Compliance Assessment Condition 18

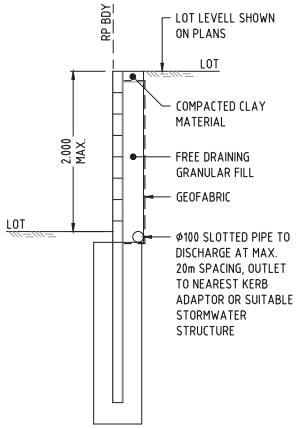
NOTE:
ALTERNATIVE CONCRETE FOOTPATH CONSTRUCTION IF REQUIRED FROM ARBORIST ASSESSMENT DURING CONSTRUCTION. REFER ARBORICULTURE IMPACT ASSESSMENT REPORT BY INDEPENDENT ARBORICULTURAL SERVICES



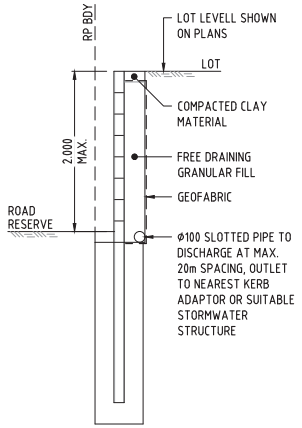
4/101 SECTION
SCALE - NTS



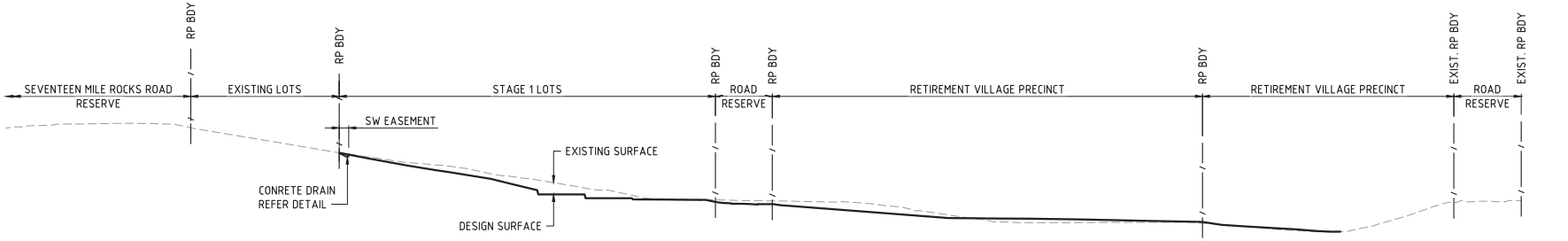
2/101 SECTION - TYPICAL
SCALE 1:50



TYPICAL CONCRETE SLEEPER WALL DETAIL
SCALE 1:25



TYPICAL CONCRETE SLEEPER WALL DETAIL - ADJACENT TO ROAD RESERVE
SCALE 1:25



3/101 SECTION
SCALE 1:50

SCALE 1.0 0.5 0 1.0 2.0 3.0 4.0 5.0m
1 : 50 (A1 UNREDUCED)

SCALE 1 0.5 0 1 2 3 4 5 6 7 8 9 10m
1 : 100 (A1 UNREDUCED)

DO NOT SCALE THIS DRAWING
IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN

REVISIONS

No	Description	Date	By
A	FOR APPROVAL	18/02/2020	DJS
B	REISSUE FOR APPROVAL	21/02/2020	DES
C	REISSUE FOR APPROVAL	19/08/2020	DES

Associated Consultants

Client
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

Project
OXLEY SECONDARY COLLEGE REDEVELOPMENT STAGE 1

KN GROUP PTY LTD CONSULTING ENGINEERS
LEVEL 1 - 62 ASTOR TCE
SPRING HILL, QLD 4000
PHONE 07 3017 1900
EMAIL kng@knpl.com.au
ABN 35 112 053 611

Approved

Drawing Title
FUNCTIONAL LAYOUT
EARTHWORKS PLAN
SECTIONS

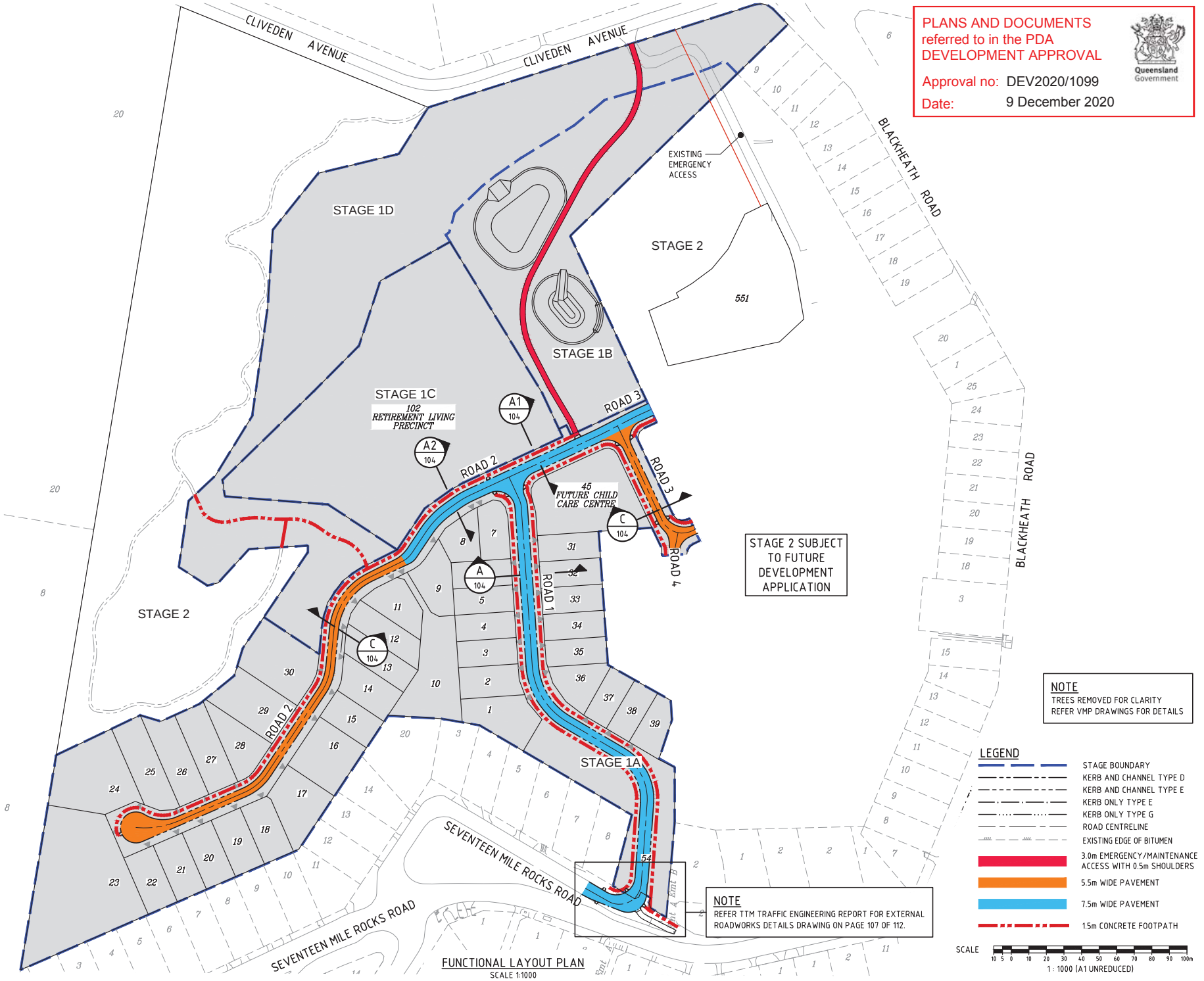
Drawn	Designed	Checked	Date
RW	DJS	GBG	FEB 20

Scale	Sheet
AS SHOWN	2 of 11

Drawing No	Revision
19-173-102	C

A1

C:\Users\ak\appdata\local\temp\AcPublish_2936\19-173-101-102-EW.dwg Plotted by: AK on 20/08/2020 5:02:44 PM



FUNCTIONAL LAYOUT PLAN
SCALE 1:1000

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV2020/1099

Date: 9 December 2020

Queensland Government

DO NOT SCALE THIS DRAWING
IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN

REVISIONS

No	Description	Date	By
A	FOR APPROVAL	18/02/2020	DJS
B	REISSUE FOR APPROVAL	21/02/2020	DES
C	REISSUE FOR APPROVAL	04/06/2020	SLK
D	REISSUE FOR APPROVAL	19/08/2020	DES

Associated Consultants

Client
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

Project
OXLEY SECONDARY COLLEGE REDEVELOPMENT STAGE 1

KN GROUP PTY LTD CONSULTING ENGINEERS
LEVEL 1 - 62 ASTOR TCE
SPRING HILL, QLD 4000
PHONE 07 3017 1900
EMAIL kng@knpl.com.au
ABN 35 112 053 611

Approved

Drawing Title
FUNCTIONAL LAYOUT ROAD WORKS

Drawn	Designed	Checked	Date
RW	DJS	GBG	FEB 20

Scale	Sheet
AS SHOWN	3 of 11

Drawing No	Revision
19-173-103	D

A1

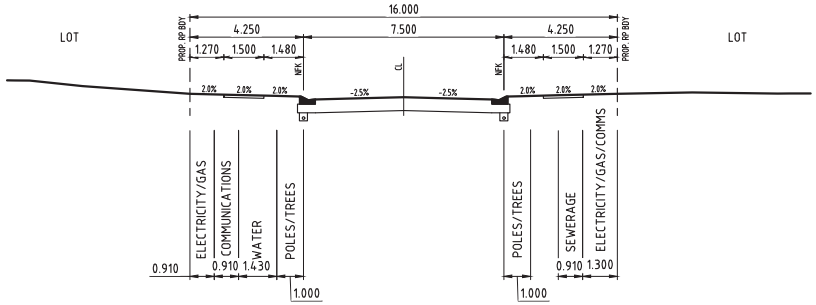
M:\2019\19173 Oxley Secondary College Redevelopment DA\Engineering\Acad\FUNCTIONAL\19-173-103-104-ROAD_LAYOUT.dwg Plotted by: AK on 20/08/2020 5:02:49 PM

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

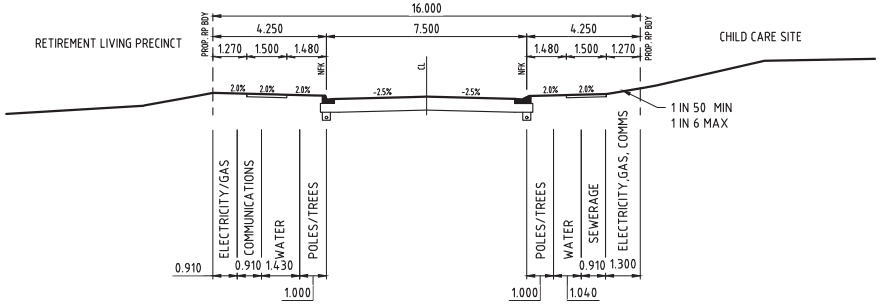
Approval no: DEV2020/1099

Date: 9 December 2020

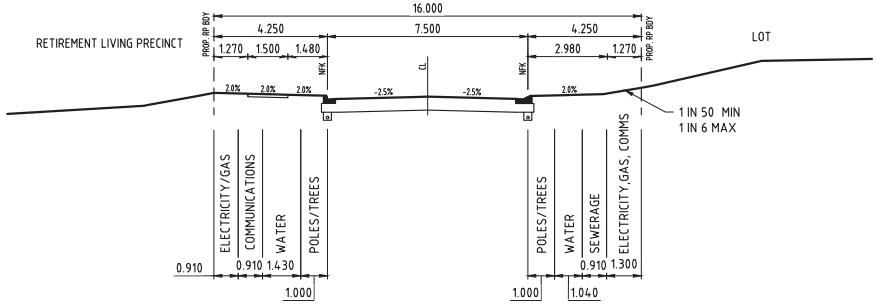
Queensland Government



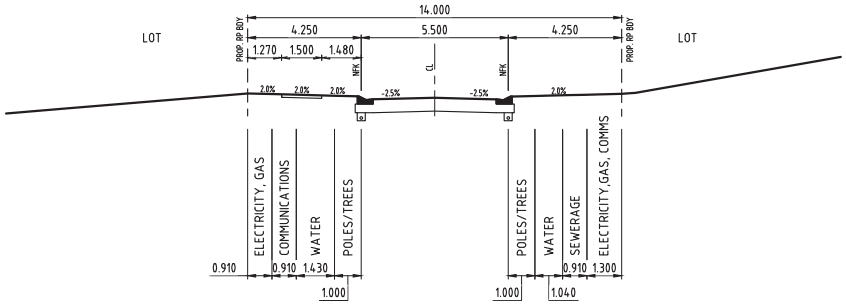
A 103 SECTION
SCALE 1:100



A1 103 SECTION
SCALE 1:100



A2 103 SECTION
SCALE 1:100



C 103 SECTION
SCALE 1:100

SCALE
1 0.5 0 1 2 3 4 5 6 7 8 9 10m
1 : 100 (A1 UNREDUCED)

DO NOT SCALE THIS DRAWING
IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN

REVISIONS

No	Description	Date	By
A	FOR APPROVAL	18/02/2020	DJS
B	REISSUE FOR APPROVAL	21/02/2020	DES
C	REISSUE FOR APPROVAL	19/08/2020	DES

Associated Consultants

Client
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

Project
OXLEY SECONDARY COLLEGE REDEVELOPMENT STAGE 1

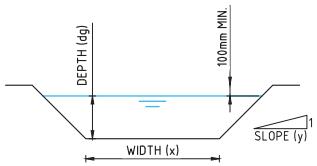
KN GROUP PTY LTD CONSULTING ENGINEERS
LEVEL 1 - 62 ASTOR TCE
SPRING HILL, QLD 4000
PHONE 07 3017 1900
EMAIL kng@knpl.com.au
ABN 35 112 053 611

Approved

Drawing Title
FUNCTIONAL LAYOUT
TYPICAL SECTIONS

Drawn	Designed	Checked	Date
RW	DJS	GBG	FEB 20

Scale: AS SHOWN
Sheet: 4 of 11
Drawing No: 19-173-104
Revision: C
A1



OVERLAND FLOW CHANNEL - TYPICAL SECTION

NTS

NB: FOR DESIGN, CONSTRUCTION AND SURFACE TREATMENT DETAILS REFER STORMWATER MANAGEMENT PLAN BY DESIGNFLOW

STORMWATER LAYOUT PLAN

SCALE 1:1000

LEGEND

- STAGE BOUNDARY
- KERB FACE
- PROPOSED STORMWATER
- EXISTING STORMWATER
- INDICATIVE DRIVEWAY LOCATION
- PROPOSED ROOFWATER
- OVERLAND FLOW CHANNEL
- DRAINAGE SWALE (REFER SECTION 2 ON KN DWG 19-173-102

NOTE

TREES REMOVED FOR CLARITY

REFER VMP DRAWINGS FOR DETAILS

AMENDED IN RED

By: Jennifer Davison

Date: 23 November 2020

Queensland Government

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV2020/1099

Date: 9 December 2020

Queensland Government

SCALE 1 : 500 (A1 UNREDUCED)

DO NOT SCALE THIS DRAWING IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN

REVISIONS

No	Description	Date	By
A	FOR APPROVAL	18/02/2020	DJS
B	REISSUE FOR APPROVAL	21/02/2020	DES
C	REISSUE FOR APPROVAL	04/06/2020	SLK
D	REISSUE FOR APPROVAL	19/08/2020	DES

Associated Consultants

Client

ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

Project

OXLEY SECONDARY COLLEGE REDEVELOPMENT STAGE 1

KN GROUP PTY LTD CONSULTING ENGINEERS

LEVEL 1 - 62 ASTOR TCE
SPRING HILL, QLD 4000
PHONE 07 3017 1900
EMAIL kng@knpl.com.au
ABN 35 112 053 611

Approved

Drawing Title

FUNCTIONAL LAYOUT STORMWATER

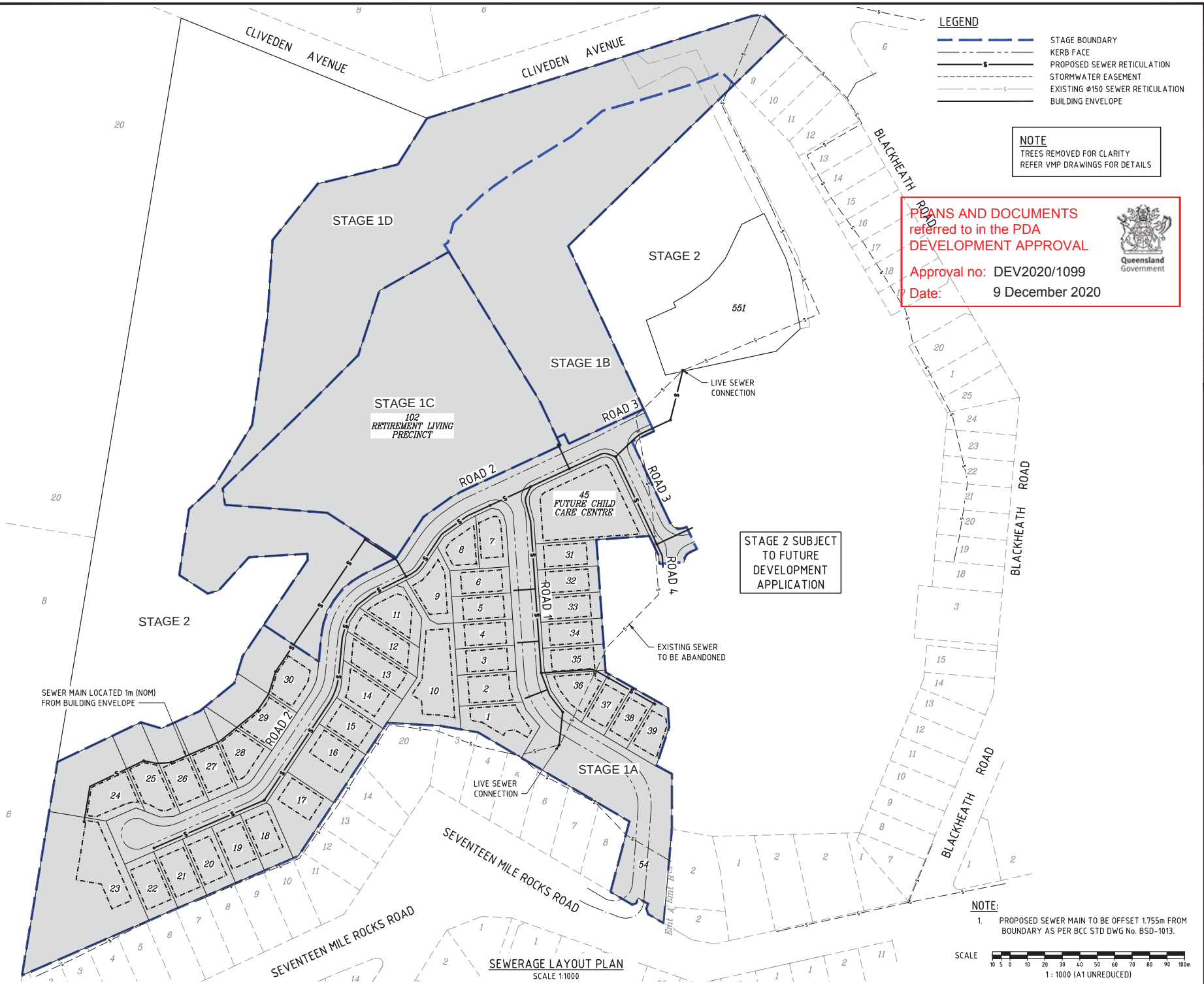
Drawn	Designed	Checked	Date
RW	DJS	GBG	FEB 20

Scale	Sheet
AS SHOWN	5 of 11

Drawing No	Revision
19-173-105	D

A1

M:\2019\19173 Oxley Secondary College Redevelopment DA\Engineering\Acad\FUNCTIONAL\19-173-105_SW.dwg Plotted by: AK on 20/08/2020 5:02:54 PM



SEWERAGE LAYOUT PLAN
SCALE 1:1000

DO NOT SCALE THIS DRAWING
IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN

REVISIONS

No	Description	Date	By
A	FOR APPROVAL	18/02/2020	DJS
B	REISSUE FOR APPROVAL	21/02/2020	DES
C	REISSUE FOR APPROVAL	04/06/2020	SLK
D	REISSUE FOR APPROVAL	19/08/2020	DES

Associated Consultants

Client
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

Project
OXLEY SECONDARY COLLEGE REDEVELOPMENT STAGE 1

KN GROUP PTY LTD CONSULTING ENGINEERS
LEVEL 1 - 62 ASTOR TCE
SPRING HILL, QLD 4000
PHONE 07 3017 1900
EMAIL kng@knpl.com.au
ABN 35 112 053 611

Approved

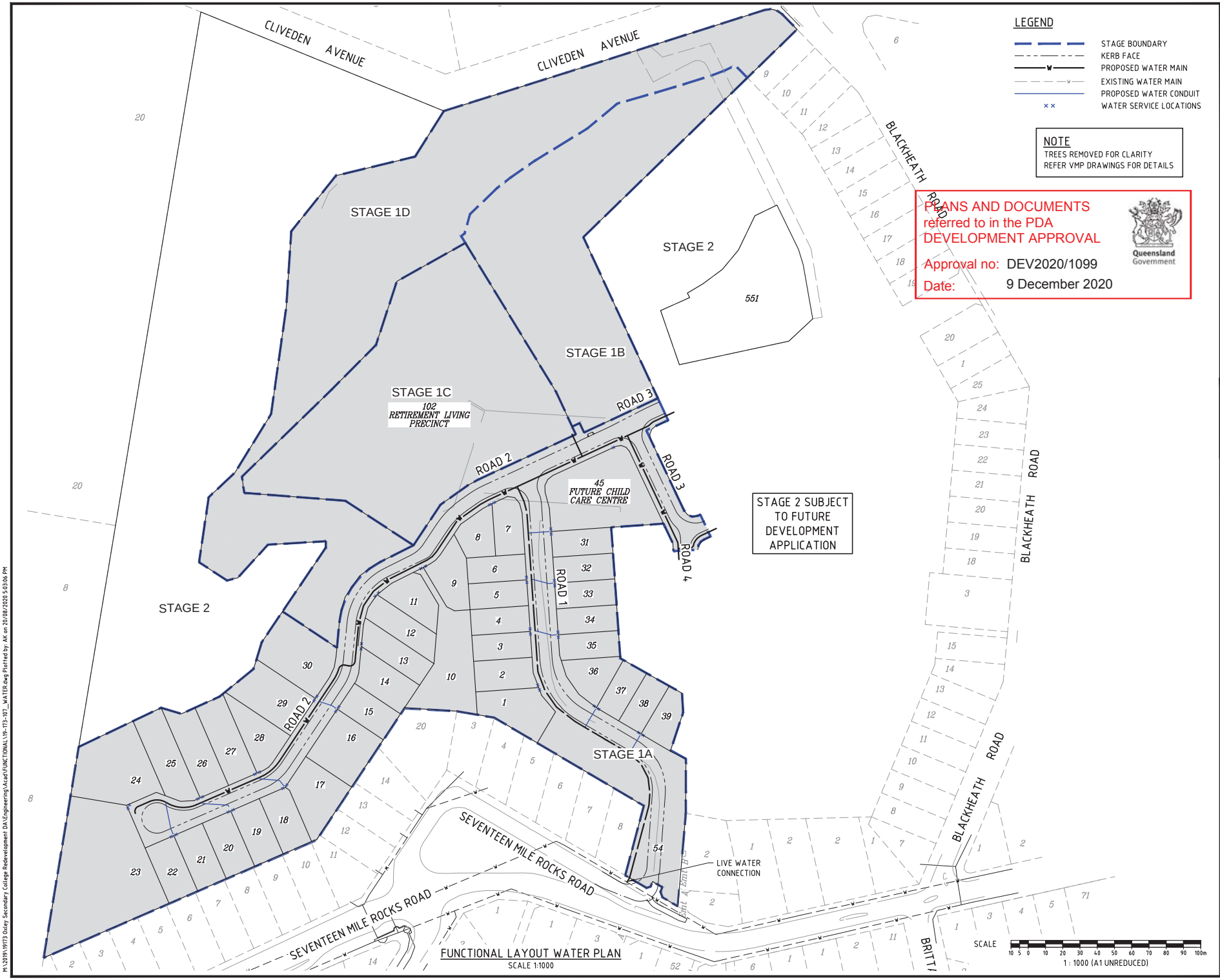
Drawing Title
FUNCTIONAL LAYOUT SEWER

Drawn	Designed	Checked	Date
RW	DJS	GBG	FEB 20

Scale	Sheet
AS SHOWN	6 of 11

Drawing No	Revision
A1	19-173-106	D

M:\2019\19173 Oxley Secondary College Redevelopment DA\Engineering\Acad\FUNCTIONAL\19-173-106_SEWER.dwg Plotted by: AK on 20/08/2020 5:03:00 PM



DO NOT SCALE THIS DRAWING
IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN

REVISIONS

No	Description	Date	By
A	FOR APPROVAL	18/02/2020	DJS
B	REISSUE FOR APPROVAL	21/02/2020	DES
C	REISSUE FOR APPROVAL	04/06/2020	SLK
D	REISSUE FOR APPROVAL	19/08/2020	DES

Associated Consultants

Client

ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

Project

OXLEY SECONDARY COLLEGE REDEVELOPMENT STAGE 1

KN GROUP PTY LTD CONSULTING ENGINEERS
LEVEL 1 - 62 ASTOR TCE
SPRING HILL, QLD 4000
PHONE 07 3017 1900
EMAIL kng@knpl.com.au
ABN 35 112 053 611

Approved

Drawing Title

FUNCTIONAL LAYOUT WATER RETICULATION

Drawn	Designed	Checked	Date
RW	DJS	GBG	FEB 20

Scale	Sheet
AS SHOWN	7 of 11

	Drawing No	Revision
A1	19-173-107	D

M:\2019\19173 Oxley Secondary College Redevelopment DA\Engineering\Acad\FUNCTIONAL\19-173-107_WATER.dwg Plotted by: AK on 20/08/2020 5:03:06 PM

FOR CONTINUATION REFER KNG DWG No 19-173-110

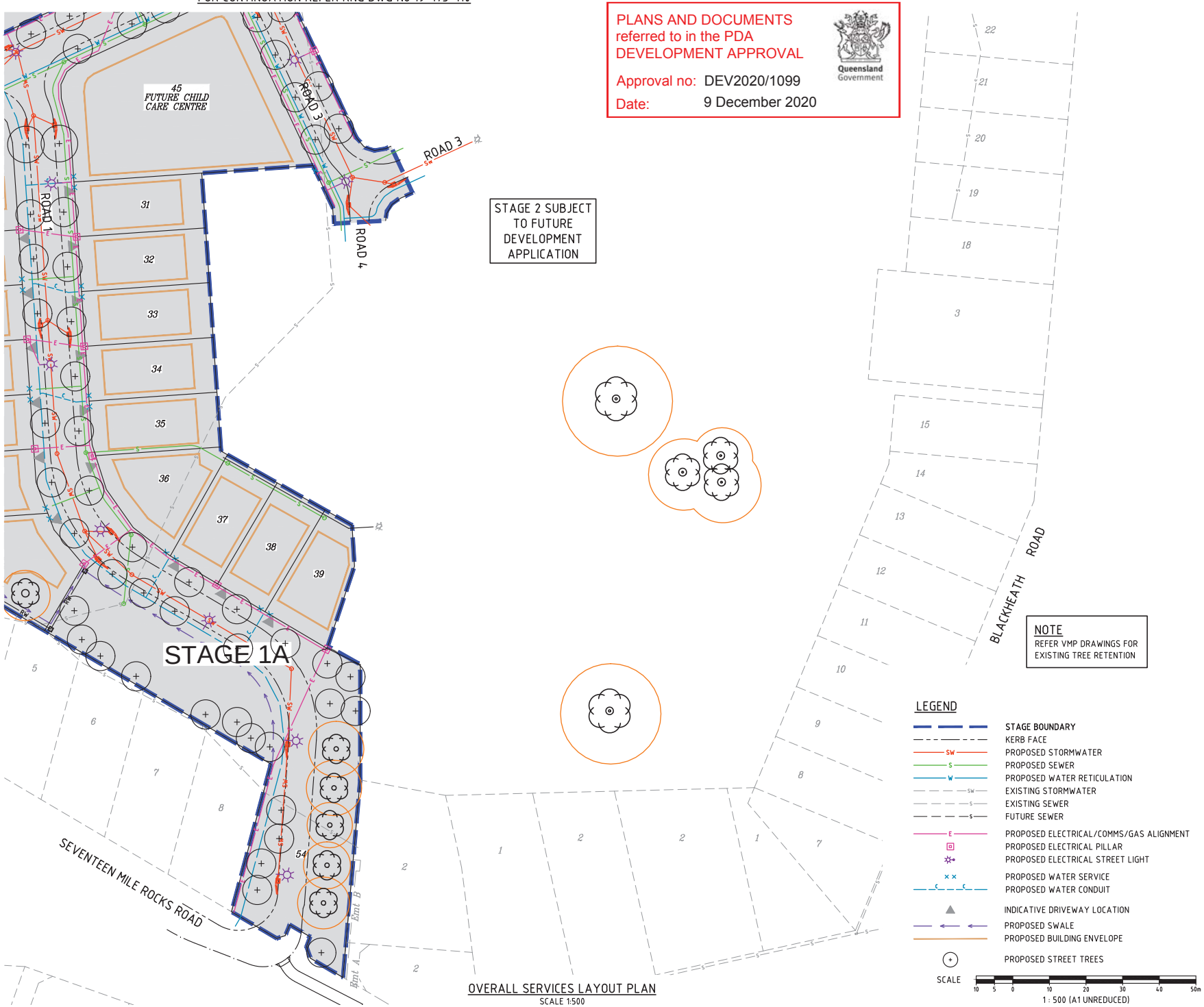
FOR CONTINUATION REFER KNG DWG No 19-173-109

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV2020/1099

Date: 9 December 2020

Queensland Government



OVERALL SERVICES LAYOUT PLAN

SCALE 1:500

LEGEND

- STAGE BOUNDARY
- KERB FACE
- PROPOSED STORMWATER
- PROPOSED SEWER
- PROPOSED WATER RETICULATION
- EXISTING STORMWATER
- EXISTING SEWER
- FUTURE SEWER
- PROPOSED ELECTRICAL/COMMS/GAS ALIGNMENT
- PROPOSED ELECTRICAL PILLAR
- PROPOSED ELECTRICAL STREET LIGHT
- PROPOSED WATER SERVICE
- PROPOSED WATER CONDUIT
- INDICATIVE DRIVEWAY LOCATION
- PROPOSED SWALE
- PROPOSED BUILDING ENVELOPE
- PROPOSED STREET TREES

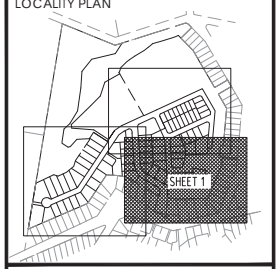
SCALE 10 5 0 10 20 30 40 50m

1 : 500 (A1 UNREDUCED)

DO NOT SCALE THIS DRAWING IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	FOR APPROVAL	18/02/2020	DJS
B	REISSUE FOR APPROVAL	21/02/2020	DES
C	REISSUE FOR APPROVAL	04/06/2020	SLK
D	REISSUE FOR APPROVAL	19/08/2020	DES

Associated Consultants

Client

ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

Project

OXLEY SECONDARY COLLEGE REDEVELOPMENT STAGE 1

KN GROUP PTY LTD CONSULTING ENGINEERS

LEVEL 1 - 62 ASTOR TCE
SPRING HILL, QLD 4000
PHONE 07 3017 1900
EMAIL kng@knpl.com.au
ABN 35 112 053 611

Approved

Drawing Title

FUNCTIONAL LAYOUT
OVERALL SERVICES
SHEET 1

Drawn	Designed	Checked	Date
RW	DJS	GBG	FEB 20

Scale	Sheet
AS SHOWN	8 of 11

Drawing No	Revision
19-173-108	D

A1

M:\2019\19173 Oxley Secondary College Redevelopment DA\Engineering\Acad\FUNCTIONAL\19-173-108_110-SERV-ALL.dwg Plotted by: AK on 20/08/2020 5:03:13 PM

NOTE
REFER VMP DRAWINGS FOR EXISTING TREE RETENTION

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2020/1099

Date: 9 December 2020

Queensland Government

FOR CONTINUATION REFER KNG DWG No 19-173-110

FOR CONTINUATION REFER KNG DWG No 19-173-108

FUTURE CHILD CARE CENTRE

STAGE 2

ROAD 1

ROAD 2

SEVENTEEN MILE ROCKS ROAD

OVERALL SERVICES LAYOUT PLAN
SCALE 1:500

LEGEND

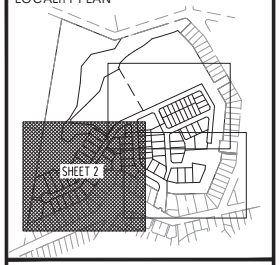
- STAGE BOUNDARY
- KERB FACE
- PROPOSED STORMWATER
- PROPOSED SEWER
- PROPOSED WATER RETICULATION
- EXISTING STORMWATER
- EXISTING SEWER
- FUTURE SEWER
- PROPOSED ELECTRICAL/COMMS/GAS ALIGNMENT
- PROPOSED ELECTRICAL PILLAR
- PROPOSED ELECTRICAL STREET LIGHT
- PROPOSED WATER SERVICE
- PROPOSED WATER CONDUIT
- INDICATIVE DRIVEWAY LOCATION
- PROPOSED SWALE
- PROPOSED BUILDING ENVELOPE
- PROPOSED STREET TREES

SCALE 10 5 0 10 20 30 40 50m
1 : 500 (A1 UNREDUCED)

DO NOT SCALE THIS DRAWING
IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	FOR APPROVAL	18/02/2020	DJS
B	REISSUE FOR APPROVAL	21/02/2020	DES
C	REISSUE FOR APPROVAL	04/06/2020	SLK
D	REISSUE FOR APPROVAL	19/08/2020	DES

Associated Consultants

Client
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

Project
OXLEY SECONDARY COLLEGE REDEVELOPMENT STAGE 1

KN GROUP PTY LTD CONSULTING ENGINEERS
LEVEL 1 - 62 ASTOR TCE
SPRING HILL, QLD 4000
PHONE 07 3017 1900
EMAIL kng@knpl.com.au
ABN 35 112 053 611

Approved

Drawing Title
FUNCTIONAL LAYOUT
OVERALL SERVICES
SHEET 2

Drawn	Designed	Checked	Date
RW	DJS	GBG	FEB 20

Scale	Sheet
AS SHOWN	9 of 11

Drawing No	Revision
19-173-109	D

A1

M:\2019\19173 Oxley Secondary College Redevelopment DA\Engineering\Acad\FUNCTIONAL\19-173-108_110-SERV-ALL.dwg Plotted by: AK on 20/08/2020 5:03:14 PM

NOTE
REFER VMP DRAWINGS FOR EXISTING TREE RETENTION

CLIVEDEN AVENUE

450 PIPE

STAGE 2

STAGE 1B

551

ROAD 2

ROAD 3

PROPOSED PAD MOUNT TRANSFORMER SITE

45 FUTURE CHILD CARE CENTRE

BLACKHEATH ROAD

STAGE 2 SUBJECT TO FUTURE DEVELOPMENT APPLICATION

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV2020/1099

Date: 9 December 2020

Queensland Government

FOR CONTINUATION REFER KNG DWG No 19-173-109

FOR CONTINUATION REFER KNG DWG No 19-173-108

OVERALL SERVICES LAYOUT PLAN
SCALE 1:500

LEGEND

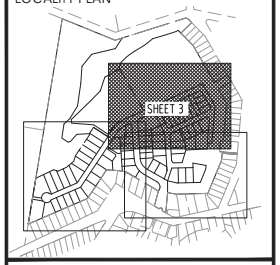
- STAGE BOUNDARY
- KERB FACE
- PROPOSED STORMWATER
- PROPOSED SEWER
- PROPOSED WATER RETICULATION
- EXISTING STORMWATER
- EXISTING SEWER
- FUTURE SEWER
- PROPOSED ELECTRICAL/COMMS/GAS ALIGNMENT
- PROPOSED ELECTRICAL PILLAR
- PROPOSED ELECTRICAL STREET LIGHT
- PROPOSED WATER SERVICE
- PROPOSED WATER CONDUIT
- INDICATIVE DRIVEWAY LOCATION
- PROPOSED SWALE
- PROPOSED BUILDING ENVELOPE
- PROPOSED STREET TREES

SCALE
10 5 0 10 20 30 40 50m
1 : 500 (A1 UNREDUCED)

DO NOT SCALE THIS DRAWING
IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	FOR APPROVAL	18/02/2020	DJS
B	REISSUE FOR APPROVAL	21/02/2020	DES
C	REISSUE FOR APPROVAL	04/06/2020	SLK
D	REISSUE FOR APPROVAL	19/08/2020	DES

Associated Consultants

Client
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

Project
OXLEY SECONDARY COLLEGE REDEVELOPMENT STAGE 1

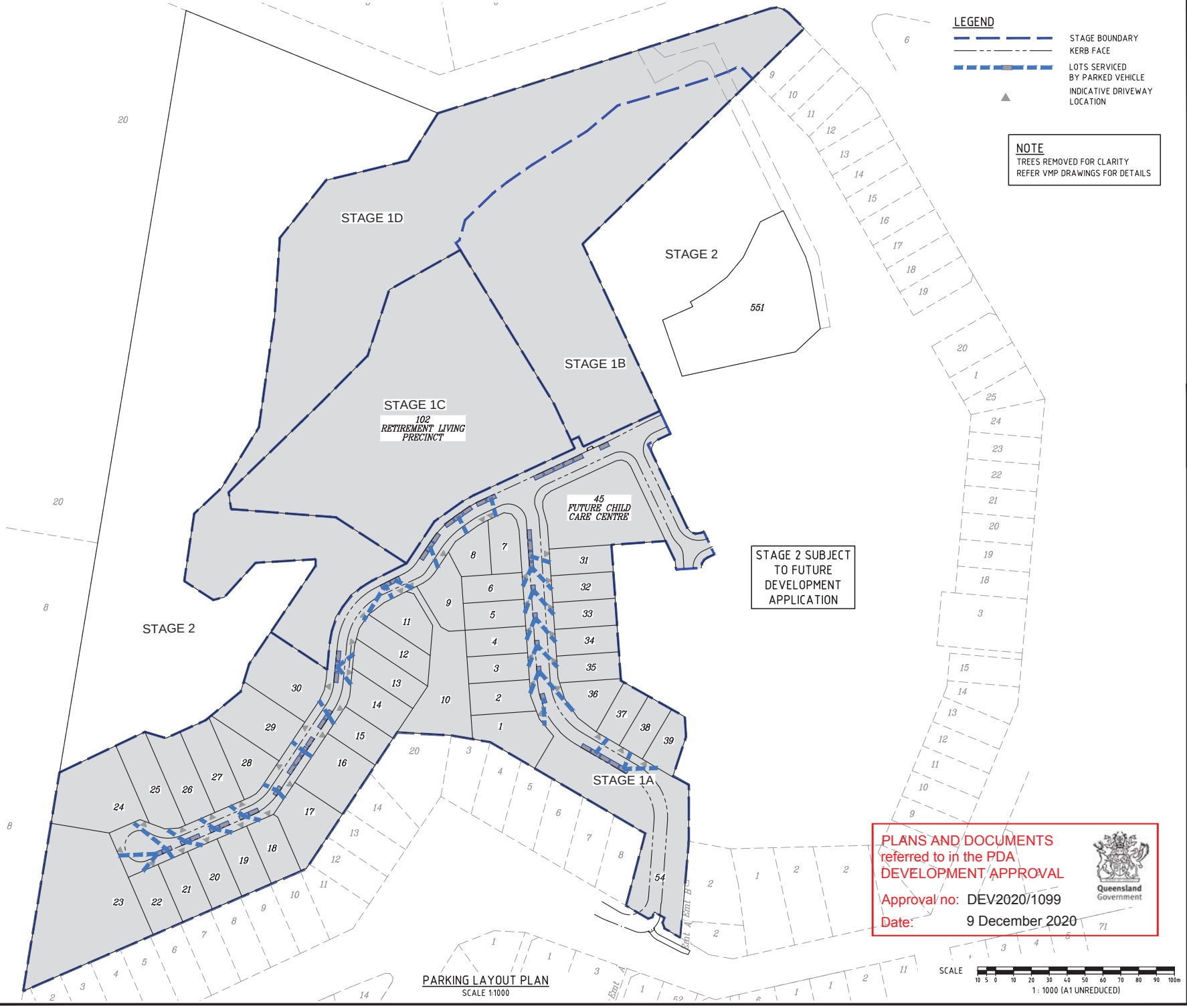
KN GROUP PTY LTD CONSULTING ENGINEERS
LEVEL 1 - 62 ASTOR TCE
SPRING HILL, QLD 4000
PHONE 07 3017 1900
EMAIL kng@knpl.com.au
ABN 35 112 053 611

Approved

Drawing Title
FUNCTIONAL LAYOUT
OVERALL SERVICES
SHEET 3

Drawn	Designed	Checked	Date
RW	DJS	GBG	FEB 20

Scale: AS SHOWN
Sheet: 10 of 11
Drawing No: 19-173-110
Revision: D
A1



PARKING LAYOUT PLAN
SCALE 1:1000

SCALE 10 5 0 10 20 30 40 50 60 70 80 90 100m
1 : 1000 (A1 UNREDUCED)

DO NOT SCALE THIS DRAWING
IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN

REVISIONS

No	Description	Date	By
A	FOR APPROVAL	18/02/2020	DJS
B	REISSUE FOR APPROVAL	21/02/2020	DES
C	REISSUE FOR APPROVAL	04/06/2020	SLK
D	REISSUE FOR APPROVAL	19/18/2020	DES

Associated Consultants

Client
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

Project
OXLEY SECONDARY COLLEGE REDEVELOPMENT STAGE 1

KN GROUP PTY LTD CONSULTING ENGINEERS
LEVEL 1 - 62 ASTOR TCE
SPRING HILL, QLD 4000
PHONE 07 3017 1900
EMAIL kng@knpl.com.au
ABN 35 112 053 611

Approved

Drawing Title
FUNCTIONAL LAYOUT PARKING

Drawn	Designed	Checked	Date
RW	DJS	GBG	FEB 20

Scale	Sheet
AS SHOWN	11 of 11

	Drawing No	Revision
A1	19-173-111	D

M:\2019\19173 Oxley Secondary College Redevelopment DA\Engineering\Acad\FUNCTIONAL\19-173-111_PARKING.dwg Plotted by: AK on 20/08/2020 5:03:21 PM

Appendix C – Proposed Development Plans

Rockpool Oxley

Aged Care Facility

GJG Architects

ABN 69 637 879 228

PO Box 1173
Elanora QLD 4221

Telephone (07) 5520 1134

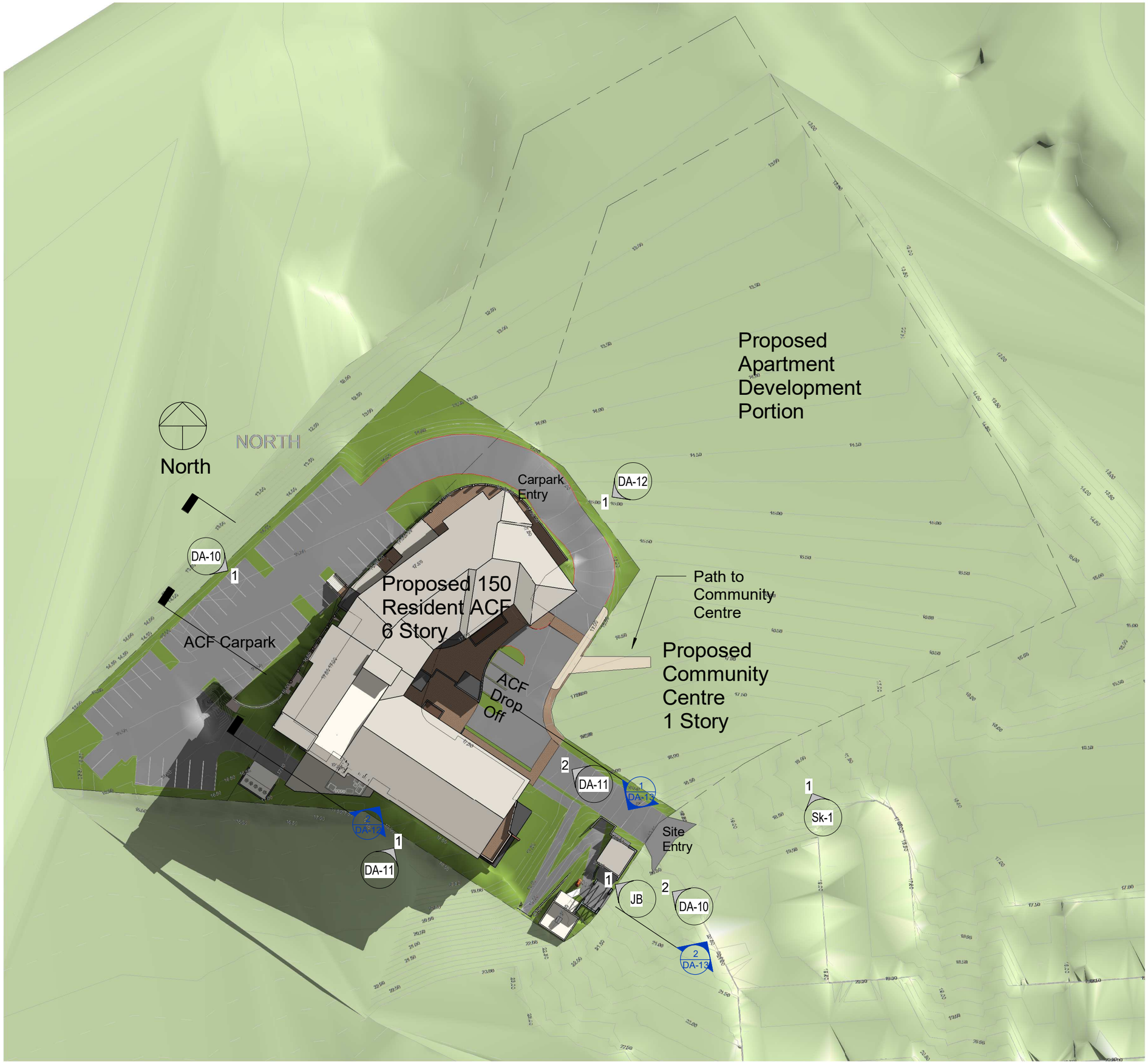
Member Australian Institute of Architects

Project
Oxley ACF

Client
Rockpool

Issue	Date	Amendment
5	14.10.21	EDQ RFI Response
4	10.09.21	RFI Response
3	17.06.21	DA Issue
2	9.04.21	Prelim 1
1	8.03.21	Revision 6

Drawing Title	Drawing Number
Cover Sheet Scale @ A3 original	20-09- DA-1



GJG Architects

ABN 69 637 879 228

PO Box 1173
Elanora QLD 4221

Telephone (07) 5520 1134

Member Australian Institute of Architects

Project
Oxley ACF

Client
Rockpool

Issue	Date	Amendment
7	14.10.21	EDQ RFI Response
6	20.09.21	Transformer Rotated
5	10.09.21	RFI Response
4	17.06.21	DA Issue
3	14.05.21	Path to Community Centre Added
2	9.04.21	Prelim 1

Drawing Title	Drawing Number
Site Plan Scale 1 : 700 @ A3 original	20-09- DA-2

Proposed Rockpool RACF Building

Approximately 8270 sqm GFA

6 Levels - 150 Residents

53 Car Parks - ACF

NORTH

Fire Setback line

Security Gate

Line of Fencing around ACF Facilities

COMMUNITY CENTRE R.L. 17.00

ACF R.L. 17.50 nom.

Terraced Pedestrian Entrance Path at grade flatter than 1in20.

Refer Civil Engineer for Crossover Details

Signage Wall

Ped. Portal Entry

Garden

Line of Fencing around ACF Site

Prop 5x210kg LPG Cylinders

2.1m High Rendered Concrete Block Fire/Vapour Barrier to 3 sides of Gas Bottle Enclosure

R.L.14 R.L.15 R.L.16 R.L.17 R.L.18 R.L.19 R.L.20 R.L.21 R.L.22

Wellness, Stair, Cons., WN Recept, Store, Dental, Male, Fem, ACFI, CM, Function, Theatre, DT, AWC, Corridor, Alfresco, Int/ Private Meeting, Hair Salon, Porte Cochere, Entry, Cafe Seating, Foyer, Lift, Recept., Cafe, BOH, Chute, FM, Admin, Off., Training, Comms, Corridor, Kitchen, Store, Lockers, Maint., Clnr, Laundry, AWC, M Staff, F Staff, Staff, Shr, Switch, Staging, Bins, Covered Loading, Loading, Stair, Terrace, Pedestrian Ramp, Circ., Boosters, Pump Room, Transformer, M Meters, DN

GJG Architects

ABN 69 637 879 228

PO Box 1173
Elanora QLD 4221

Telephone (07) 5520 1134

Member Australian Institute of Architects

Project
Oxley ACF

Client
Rockpool

Issue	Date	Amendment
7	21.10.21	Relocated Boosters
6	14.10.21	EDQ RFI Response
5	20.09.21	Transformer Rotated
4	10.09.21	RFI Response
3	17.06.21	DA Issue
2	9.04.21	Prelim 1

Drawing Title	Drawing Number
Ground Floor - Overall Scale 1 : 400 @ A3 original	20-09-DA-4

15 Resident Wing

T2 T2 T2 T2 T2 T2 T2 T2 T4

Stair

T2 T2 T1

St

Sit

T1 T1 T1 T1

Corridor

St

Pan

Bath

Wanderers Deck

Dining 42sqm

Lounge 36sqm

AWC

Lift Lift

Quiet

N/T

Servery

Foyer

Clnr

Pan

Comms

Sit

T1 T1

Dining 46sqm

AWC

Corridor

T1 T1 T1

Stair

St St St

Sit

Lounge 35sqm

T2 T2 T2 T4 T2 T2 T2 T2 T1 T1

Stair

2700

5282

2700

Fire Setback line

ACF BUILDING

NORTH

This Level SCU
1420 sqm GFA

15 Resident Wing

GJG Architects
ABN 69 637 879 228
PO Box 1173
Elanora QLD 4221
Telephone (07) 5520 1134
Member Australian Institute of Architects

Project
Oxley ACF

Client
Rockpool

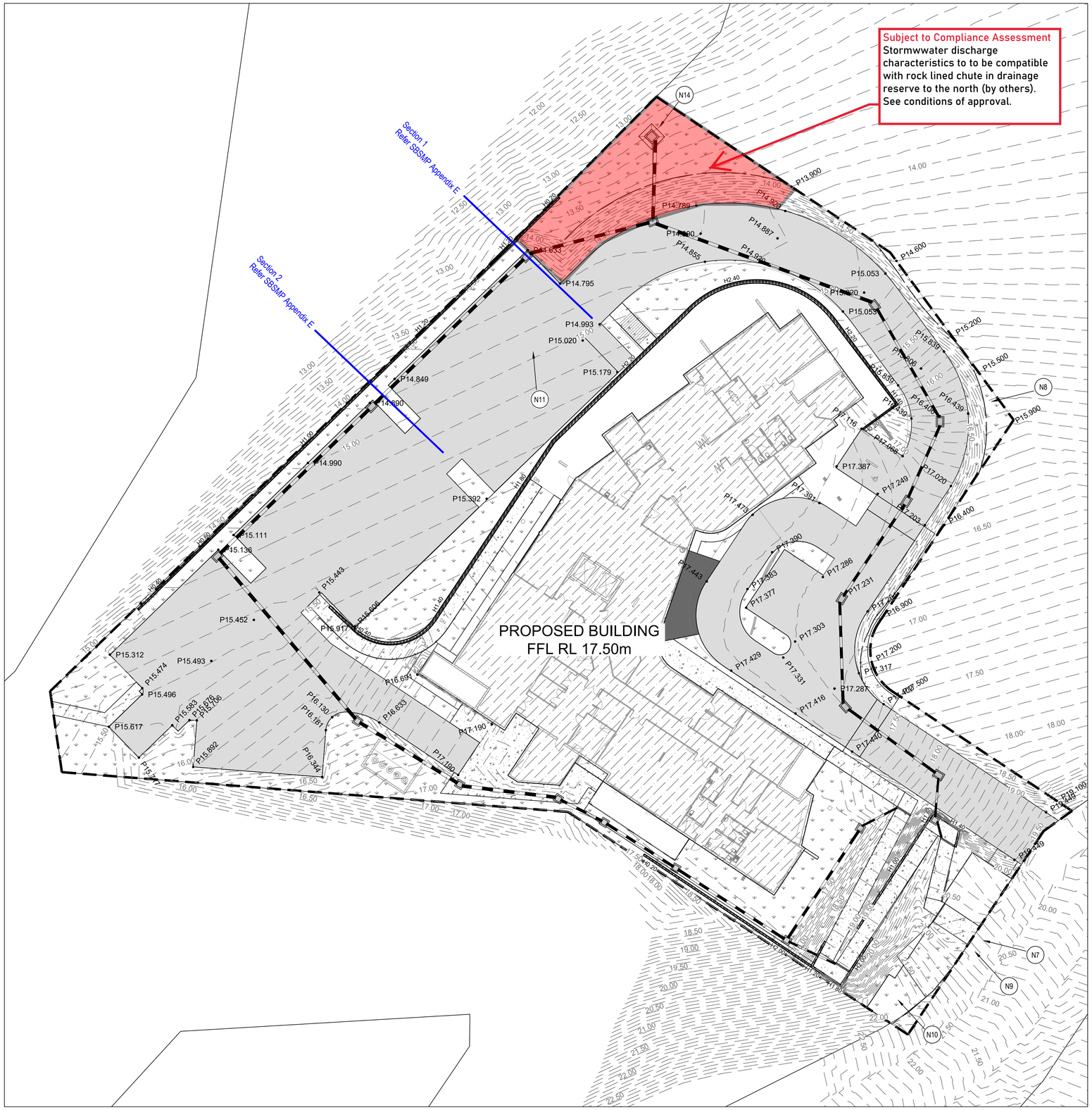
Issue	Date	Amendment
6	14.10.21	EDQ RFI Response
5	20.09.21	Transformer Rotated
4	10.09.21	RFI Response
3	17.06.21	DA Issue
2	9.04.21	Prelim 1
1	8.03.21	Revision 6

Drawing Title
Level 1

Scale 1 : 300 @ A3 original

Drawing Number
20-09-DA-6

Appendix D – Concept Civil Layout sketch



LEGEND

- PROPOSED CARPARK PAVEMENT
- PROPOSED CONCRETE FOOTPATH
- PROPOSED LANDSCAPING - REFER TO LANDSCAPE ARCHITECTS DRAWINGS FOR SURFACE TREATMENT
- PROPOSED SAW CUT
- P12.50 PROPOSED FINISHED SURFACE LEVEL
- EX12.50 EXISTING SURFACE LEVEL
- WS PROPOSED WHEELSTOP
- C PROPOSED LANDSCAPE CONDUIT
- 61.00 PROPOSED SURFACE CONTOUR (0.10m INTERVAL)
- RWB PROPOSED BLOCK RETAINING WALL - REFER STRUCTURAL DWGS
- TW12.50 PROPOSED TOP OF WALL LEVEL (SURFACE LEVEL)
- BW12.50 PROPOSED BOTTOM OF WALL LEVEL (SURFACE LEVEL)
- (N1) REFER NOTE 1 FOR DETAILS

EXISTING SERVICES LEGEND

- DEVELOPMENT BOUNDARY
- 61.00 EXISTING CONTOUR (0.25m INTERVAL)
- ExSW EXISTING STORMWATER
- ExS EXISTING SEWER
- ExW EXISTING WATER
- ExG EXISTING GAS
- ExE EXISTING ELECTRICAL - UNDERGROUND
- ExT EXISTING TELECOMMUNICATIONS
- EXISTING EARTHWORKS TOP OF BATTER
  EXISTING EARTHWORKS TOE OF BATTER
- // EXISTING FENCE
- X EXISTING SERVICE TO BE MADE REDUNDANT

NOTES

1. AREAS TO BE LANDSCAPED IN ACCORDANCE WITH THE LANDSCAPE ARCHITECTS PLANS.
2. GRADE LANDSCAPE AREA AT MAX 1V:3H (UNO).
3. GRADE LANDSCAPED AREAS TO DRAIN TO SURFACE INLET PITS.
4. GENERAL CARPARK AND INTERNAL LINEMARKING TO ARCHITECTS DETAILS.
5. REFER ELECTRICAL, HYDRAULIC & LANDSCAPE DRAWINGS FOR CONDUIT LOCATIONS. PIPEWORK TO BE INSTALLED PRIOR TO PAVEMENT CONSTRUCTION.
6. TRAFFIC MANAGEMENT PLAN TO BE SUBMITTED AND APPROVED BY THE SUPERINTENDENT, ACOR AND COUNCIL PRIOR TO COMMENCING WORK.
7. PROPOSED FOOTPATH TO MATCH NEATLY INTO EXISTING FOOTPATH
8. SUBJECT TO WATER AUTHORITY APPROVAL, PROVIDE Ø1200 MANHOLE AND DN250 PE CONNECTION STUB. FULL HEIGHT BENCHING REDUCING Ø225 SANITARY DRAINAGE TO Ø150 AUTHORITY CONNECTION. REFER HYDRAULIC DRAWINGS FOR INTERNAL SANITARY DRAINAGE. LOCATION OF CONNECTION AT BOUNDARY TO BE CONFIRMED FOLLOWING FURTHER INVESTIGATION WITH NEIGHBOURING PROPERTY.
9. SUBJECT TO WATER AUTHORITY APPROVAL, PROVIDE METERING ARRANGEMENT SUITABLE FOR Ø150mm FIRE SYSTEM AND Ø65mm DOMESTIC SYSTEM.
10. PROPOSED PAD MOUNTED TRANSFORMER (PMT). REFER ELECTRICAL ENGINEERS DRAWINGS FOR DETAILS.
11. UNDERGROUND ROOFWATER TANKS, REFER HYDRAUIC CONSULTANTS DRAWINGS FOR DETAILS BASE PREPARATION AS PER MANUFACTURERS SPECIFICATIONS.
12. STORMWATER STRUCTURES WITHIN ROADWAY TO BE 600x900 UNO
13. STORMWATER STRUCTURES WITHIN PEDESTRIAN/LANDSCAPED ARES TO BE 600x600 UNO
14. STORMWATER OUTLET STRUCTURE AND CONNECTION TO BE CONFIRMED. CONSTRUCTED BY EDQ AS PART OF SUBDIVISION WORKS

NOTE:
Design information shown as indicative only to support DA application. Proposed Concept design will need to be confirmed during full detailed design following DA approval.

NOTE:
1. ALL BATTERS TO BE 1 IN 4 U.N.O.
2. ALL BATTER STEEPTER THAN 1:4 TO BE STABILIZED AS PER GEOTECHNICAL ENGINEERS SPECIFICATIONS

0 2 4 6 8 10 12m
SCALE 1:250 @ A1

PRELIMINARY

North

This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by:

Issue	Description	Date	Drawn	Approved
P1	SCHEMATIC DESIGN	23/06/21	LM	ND
P2	AMENDED SBSMP	25/02/22	ND	ND

ENGINEER'S CERTIFICATION
This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by:

Client
ROCKPOOL RESIDENTIAL AGED CARE

Project Manager
mcnab
LEVEL 2, 10 BROWNING STREET
WEST END, QLD 4101
McNAB PROJECT NO. 17190
PHONE : (07) 3252 6945

Architect
GJG ARCHITECTS

PO BOX 1173
ELANORA, QLD 4221
PHONE : 07 5520 1134

Project
ROCKPOOL AGED CARE
OXLEY

53 SEVENTEEN MILE ROCKS ROAD
OXLEY, QLD 4075

ACOR CONSULTANTS
ACOR Consultants (QLD) Pty Ltd
Level 7, 22 Cordelia Street
South Brisbane QLD 4101
T +61 7 3844 5900
ENGINEERS | MANAGERS | INFRASTRUCTURE PLANNERS | DEVELOPMENT CONSULTANTS

Drawing Title
CONCEPT CIVIL SKETCH

Drawn	Date	Scale A1	Q.A. Check	Date
ND	JUN 2021	1:250	ND	23/06/21
Designed	Project No.	Dwg. No.		Rev.
ND	BR200791	SK1.00		P2

P:\BR200791\Rockpool Oxley Aged Care\Drawings\CAD\CIV\Drawings\200SK-C100.dwg
Feb 25, 2022 - 2:04pm

Appendix E – Carpark Drainage Sections

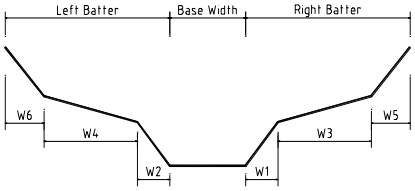
OPEN CHANNEL CALCULATIONS

Project: Rockpool Oxley

Channel Name: Section 1 **Location**

Comments: Full carpark catchment - Assuming rainwater tank full and surcharging all flows

Cross Section Data Input



Left Batter

	W6	W4	W2
Width (m)	1.300	0.110	0.040
Slope (1V in _)	50.000	100.000	0.267
Manning's n	0.030	0.015	0.015
	Landscape		Kerb

Base Width (m)

Manning's n	

Right Batter

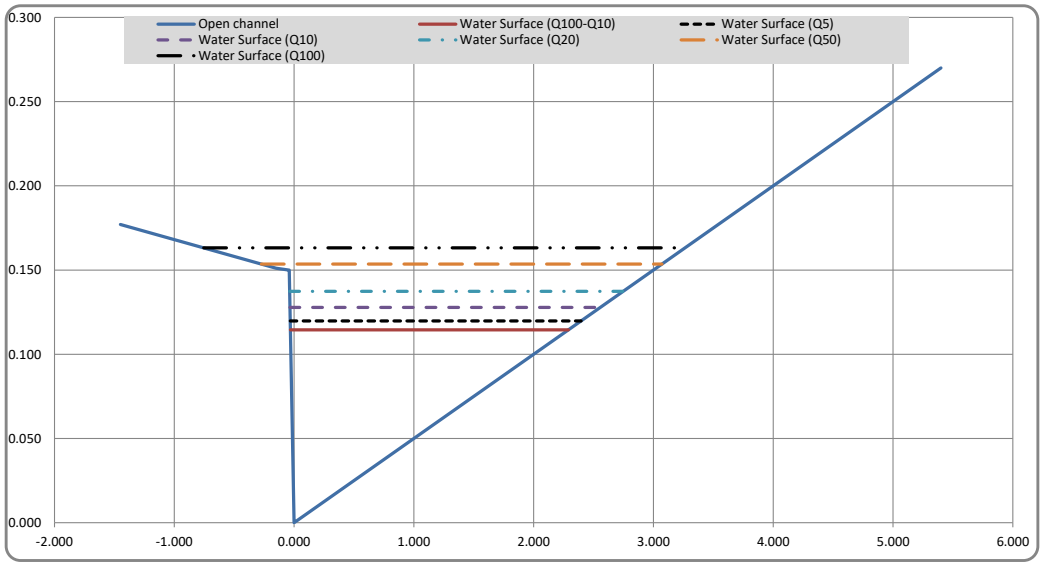
	W1	W3	W5	
Width	5.400			Width
Slope (1V in _)	20.000			Slope (1V in _)
Manning's n	0.015			Manning's n
	Carpark			

OVERLAND FLOW LESS PIPE FLOW OF

ARI (years)	Flow (m3/s)
Q100-Q10	0.128
5	0.145
10	0.172
20	0.209
50	0.269
100	0.300

Longitudinal Grade (%)	1.00
Allowable D*V (m2/s)	0.60

RESULTS



RESULTS

ARI (years)	Flow (m^3/s)	Flow Depth (m)	Flow Width (m)	Hydraulic Radius (m)	Velocity (m/s)	Calculated D*V (m^2/s)	Freeboard (m)	Calculated Effective Manning's n
Q100-Q10	0.128	0.114	2.320	0.055	0.965	0.111	0.063	0.015
5	0.145	0.120	2.428	0.058	0.995	0.119	0.057	0.015
10	0.172	0.128	2.591	0.062	1.039	0.133	0.049	0.015
20	0.209	0.137	2.784	0.066	1.090	0.150	0.040	0.015
50	0.269	0.154	3.344	0.069	1.123	0.172	0.024	0.015
100	0.300	0.163	4.018	0.066	1.092	0.178	0.014	0.015

CHANNEL CAPACITY

Total Flow Capacity	0.365
Total Top Width	4.992
Total Depth	0.1771
Hydraulic Radius	0.066
Velocity at Capacity	1.081
D*V (m2/s)	0.191
Effective Manning's n	0.015

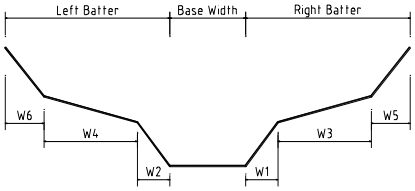
OPEN CHANNEL CALCULATIONS

Project: Rockpool Oxley

Channel Name: Section 2 **Location**

Comments: Lowest Landscape island in carpark - cut out channel along kerbline for major stormwater system

Cross Section Data Input



Left Batter

	W6	W4	W2
Width (m)	1.300	0.110	0.040
Slope (1V in _)	50.000	100.000	0.267
Manning's n	0.030	0.015	0.015
	Landscape		Kerb

Base Width (m)

Manning's n

Right Batter

W1	W3	W5	
1.500	0.040	0.110	Width
20.000	0.267	100.000	Slope (1V in _)
0.015	0.015	0.015	Manning's n
Channel		Kerb	

Grade matching Carpark

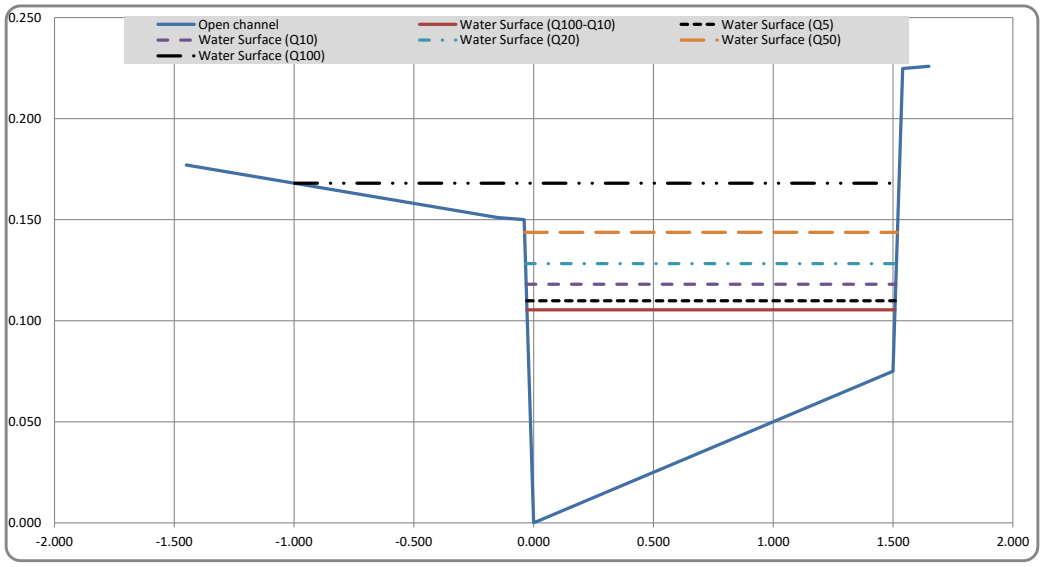
OVERLAND FLOW LESS PIPE FLOW OF

ARI (years)	Flow (m3/s)
Q100-Q10	0.109
5	0.121
10	0.144
20	0.174
50	0.225
100	0.253

Longitudinal Grade (%): 1.00

Allowable D*V (m2/s): 0.60

RESULTS



RESULTS

ARI (years)	Flow (m^3/s)	Flow Depth (m)	Flow Width (m)	Hydraulic Radius (m)	Velocity (m/s)	Calculated D*V (m^2/s)	Freeboard (m)	Calculated Effective Manning's n
Q100-Q10	0.109	0.105	1.536	0.063	1.055	0.111	0.072	0.015
5	0.121	0.110	1.539	0.067	1.098	0.121	0.067	0.015
10	0.144	0.118	1.543	0.074	1.172	0.138	0.059	0.015
20	0.174	0.128	1.548	0.082	1.259	0.162	0.049	0.015
50	0.225	0.144	1.557	0.095	1.383	0.199	0.033	0.015
100	0.253	0.168	2.522	0.077	1.207	0.203	0.009	0.015

CHANNEL CAPACITY

Total Flow Capacity	0.273
Total Top Width	2.977
Total Depth	0.1771
Hydraulic Radius	0.074
Velocity at Capacity	1.165
D*V (m2/s)	0.206
Effective Manning's n	0.015

Appendix F – Stormwater Technical Letter by Design Flow

Our Ref: projects/4277

DesignFlow

17 June 2021

Tim McMahon
McNab
PO Box 5054
West End QLD 4101

(via email)

Dear Tim

RE: Oxley PDA Retirement Living Precinct – Stormwater and Flooding Compliance

Please find below the key aspects of the *Oxley Priority Development Area Stormwater Management Plan – Version 3b* (DesignFlow, 2020) and subsequent *Oxley Priority Development Area Stormwater Management Design Report – Version 1* (DesignFlow, 2020) that are to be addressed as part of development of the Retirement Living Precinct.

The retirement living site falls within the regional stormwater quality and flood management strategy developed for the overall PDA site. Flood and stormwater quality management basins have been designed to receive discharge from the retirement site and area being constructed as part of Oxley PDA Stage 1. The following site specific requirements and design thresholds apply to the Retirement Living Precinct:

1. Site fraction impervious up to 80% has been allowed for.
2. Low flow drainage diversion (equivalent to 3 month ARI) from the retirement site to the Bioretention Basin B1 (east) with balance of site discharge (including overland flow) directed to Flood Basin 1 (north).
3. Exclusion fencing to north western site boundary interfacing with flood detention basin 1 and drainage corridor
4. Local 100 year ARI (1% AEP) flood level adjacent to the north-western boundary varies from 12.36 mAHD to 14.09 mAHD (refer to Figure 1 attached).
5. Brisbane River 0.2% AEP (1 in 500 AEP) flood level is 15.45 mAHD.

If you have any questions relating to the information provided above, please contact DesignFlow.

Yours Sincerely

Shaun Leinster
RPEQ 15637
DesignFlow

Attachments: Figure 1

Design Flow Consulting P/L
ATF Design Flow Unit Trust
ABN: 50 978 863 990

T/ 07 5528 1148
PO Box 1250 Southport BC,
Southport QLD 4215 Australia

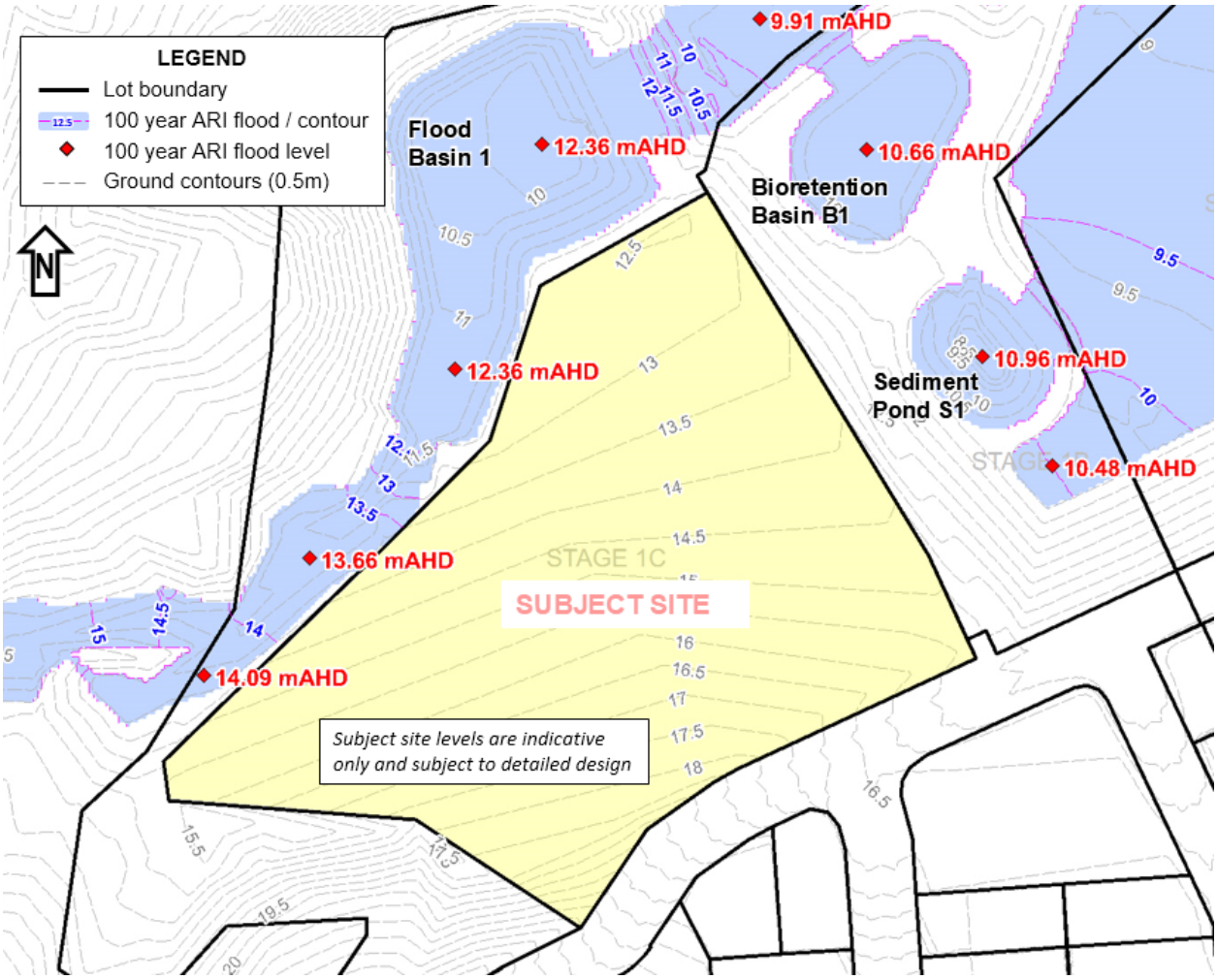


Figure 1: 100 year ARI flood levels

Appendix G – Site Servicing Arrangement under Discussion

Niall Davidson

From: Tim McMahon <Tim.McMahon@mcnab.net.au>
Sent: Monday, 24 May 2021 1:32 PM
To: Niall Davidson; Karl Paton
Cc: 20053 McNab - Rockpool Oxley; Thea Knezevic
Subject: Oxley - site servicing agreement

Niall

Confirming the site servicing arrangements for the Oxley site as follows, as taken from the Heads of Agreement.

EDQ are responsible for providing site servicing in accordance with.

Question – is 225mm stormwater suitable for full flows anticipated from the RAC site, or will detention be required (preferably not)?

Heads of Agreement

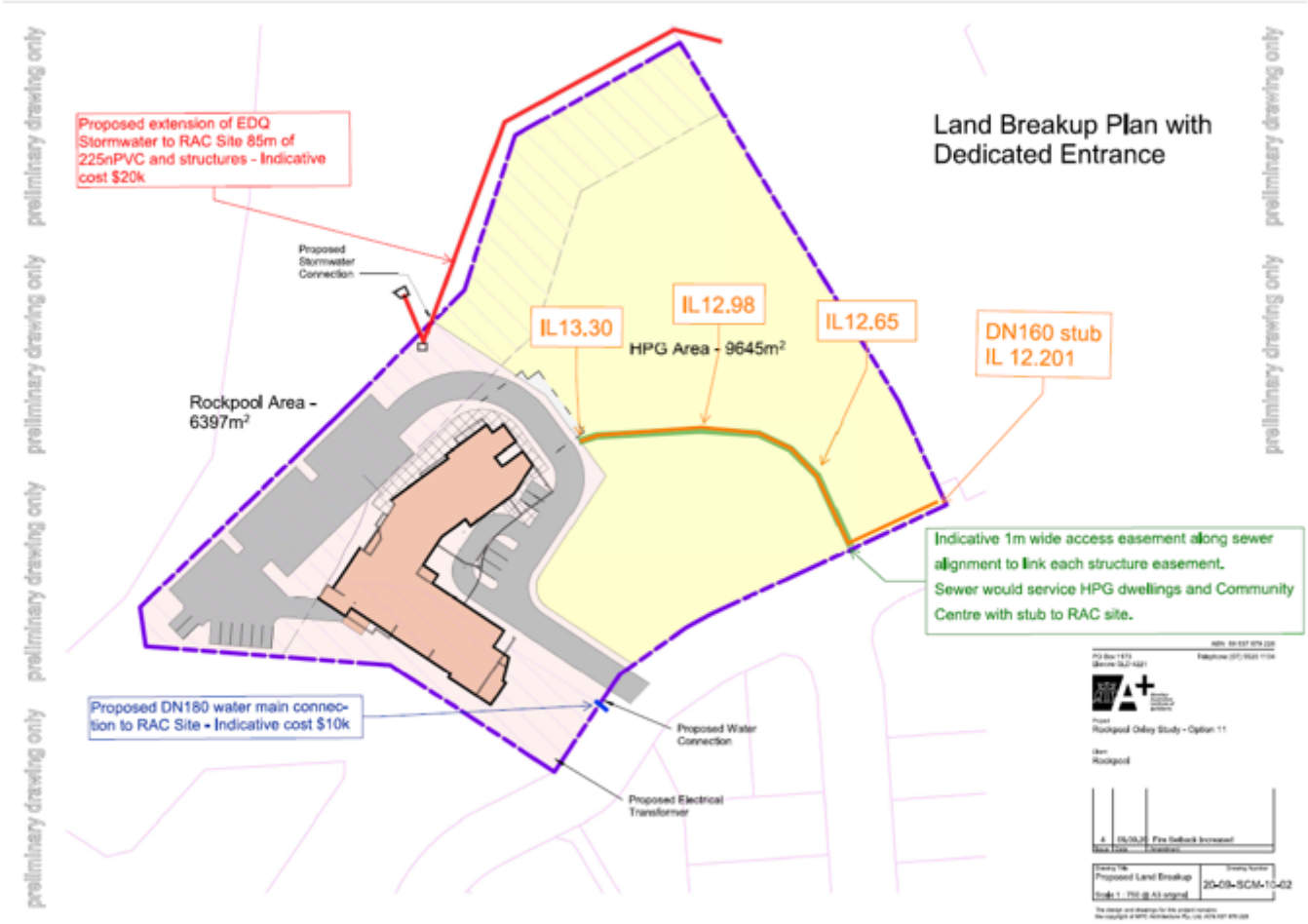


Image – Conceptual internal sewer, water connection and stormwater (to service the Aged Care lot) as part of EDQ OPW application and construction (on behalf of Rockpool) upon approval. MEDQ to be reimbursed fees and construction costs as per schedule 7 of the agreement.

Tim McMahon
Design Manager

07 3252 6997 | 0435 569 338
tim.mcmahon@mcnab.net.au

Level 2, 10 Browning Street, WEST END QLD 4101
PO Box 5054, WEST END QLD 4101