From: [redacted]
To: s 36 [redacted]
Subject: RE: Airport to Causeway - Latest design set
Date: Monday, 20 February 2023 5:01:00 PM

Thanks mate

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

Courage to make a difference through
TEAMWORK | INTEGRITY | RESPECT | EXCELLENCE

In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

From: s 36 [redacted]@pittsh.com.au>
Sent: Monday, 20 February 2023 12:51 PM
To: [redacted]@stategrowth.tas.gov.au>
Subject: RE: Airport to Causeway - Latest design set

Hi [redacted]

I have put a set of drawings in D23/42400. Its go the updated Pittwater Road and latest Taswater .

Regards

s 36 [redacted]
Principal Engineer
s 36 [redacted] | [redacted] | [redacted]
Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36 [redacted]
pittsh.com.au

From: [redacted]@stategrowth.tas.gov.au>
Sent: Thursday, 16 February 2023 10:24 AM
To: s36 [redacted]@pittsh.com.au>
Subject: Airport to Causeway - Latest design set

Hi [redacted]

Could you please flick through the latest design set for the Airport to Casueway SETS project, there have been a number of changes since the last set we sent through.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] s 36 [redacted]
www.stategrowth.tas.gov.au

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Document 31

From: [redacted]
To: s 36 [redacted]
Subject: RE: Watermain water and sewer design - Airport (Holyman Ave) Interchange to Midway Point Causeway (Western end) Tasman Hwy duplication - interaction with TasWater
Date: Monday, 6 February 2023 11:18:00 AM

Good outcome, thanks s 36 [redacted]

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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Please note I do not work Fridays.

From: s 36 [redacted] @pittsh.com.au>
Sent: Monday, 6 February 2023 11:17 AM
To: [redacted] @stategrowth.tas.gov.au>
Subject: Re: Watermain water and sewer design - Airport (Holyman Ave) Interchange to Midway Point Causeway (Western end) Tasman Hwy duplication - interaction with TasWater

Hi [redacted]
This is final design including Milford hydrant for approval from Taswater. We sent this in late last year and TW wanted a few minor amendments which are addressed in this submission
Regards
s 36 [redacted]

Sent from my iPhone

On 6 Feb 2023, at 11:13, [redacted] @stategrowth.tas.gov.au> wrote:

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi s 36 [redacted]

Any change for us?

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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From: [redacted]@stategrowth.tas.gov.au>
Sent: Monday, 6 February 2023 10:23 AM
To: [redacted]@stategrowth.tas.gov.au>; s 36 [redacted]@pittsh.com.au>
Cc: s 36 [redacted]@pittsh.com.au>
Subject: Watermain water and sewer design - Airport (Holyman Ave) Interchange to Midway Point Causeway (Western end) Tasman Hwy duplication - interaction with TasWater

Hello s 36 [redacted] – thanks for keeping the Dept. PMs in the loop

G'day [redacted] – please note Out of scope [redacted] attachment, this information is relevant to your "Airport to Causeway" project within the South East Traffic Solution (SETS) program. And you may already be aware it.

Regards
[redacted]

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted]
www.stategrowth.tas.gov.au

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Out of scope
[redacted]

Attachment 1

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1007	A	PROJECT LEGEND - DRG 3
1008	B	PROJECT LEGEND - DRG 4
1009	B	PROJECT LEGEND - DRG 5
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1014	A	ALIGNMENT AND SURVEY CONTROL - DRG 1
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No.	Amendment Description	Initials	Date
C	RE-ISSUED FOR APPROVAL	C.M.	20/01/2023
B	DETAILED DESIGN	D.C.	08/02/2022
A	DETAILED DESIGN	D.C.	17/03/2021

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SCALES
NTS

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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DESIGNED
REVIEWED RE-ISSUED FOR APPROVAL

Department of State Growth

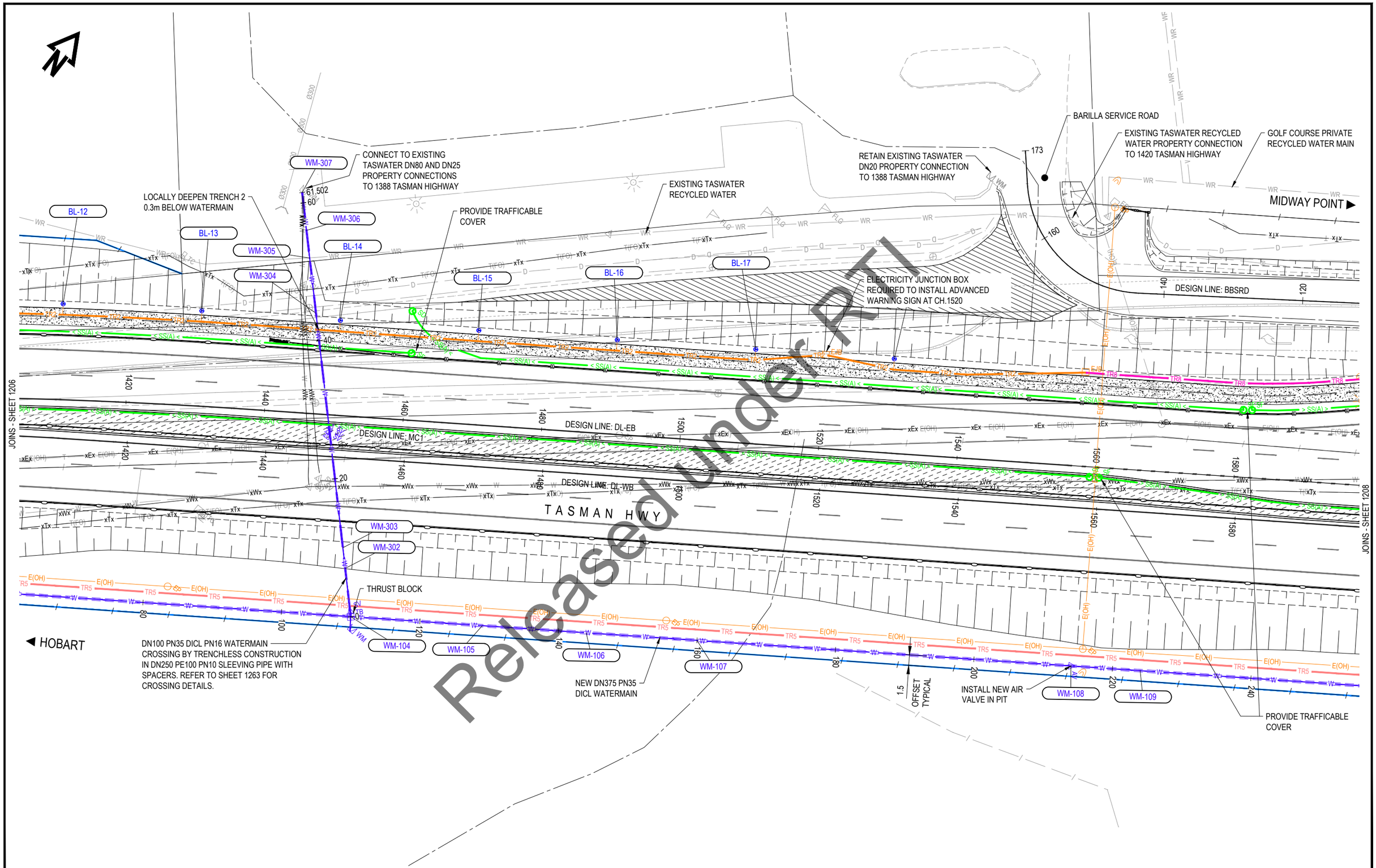
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS

TABLE OF CONTENTS

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C1001	20-Jan-23, 9:04 AM	1001

REGISTRATION NUMBER
A0113.028

REVISION C



No.	Amendment Description	Initials	Date
C	RE-ISSUED FOR APPROVAL	C.M.	20/01/2023
B	DETAILED DESIGN	D.C.	01/12/2021
A	DETAILED DESIGN	D.C.	17/03/2021

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SCALES
1:500m (A3)
5 0 5 10 15 20
SCALE IN METRES - 1:500

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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Tasmanian Government

DESIGNED s36

REVIEWED

Department of State Growth

TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS

DRAINAGE AND SERVICES - DRG 7

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C1207	20-Jan-23, 9:04 AM	1207

REGISTRATION NUMBER
A0113.028

REVISION C

INSTALL 100mm DIA PVC SN10 SMOOTH WALL OUTLET PIPE AS PART OF SUBSOIL DRAIN NETWORK

RELOCATE GOLF COURSE PRIVATE RECYCLED WATER PIPE FROM CH.1675 TO CH.1740 (DL-EB)

FOR TRAFFIC SIGNALING DETAILS REFER TO DRAWING 1041

LOCALLY DEEPEN TRENCH 2 0.3m BELOW CULVERT

GOLF COURSE PRIVATE RECYCLED WATER MAIN

GOLF COURSE SERVICE ROAD

ROCK PITCHING TO BE PROVIDED AS PER 3402-2/P19-3. DISPERSION APRON TO FULL CHANNEL WIDTH TO EXTEND ~1.6m FROM CULVERT.

MIDWAY POINT ▶

BARILLA SERVICE ROAD

DESIGN LINE: BBSRD

DESIGN LINE: GCSRD

DESIGN LINE: MCSR

DESIGN LINE: DL-EB

DESIGN LINE: MC1

DESIGN LINE: MC2

DESIGN LINE: DL-WB

DESIGN LINE: PWRD

DESIGN LINE: MCPR

SL01 SL02 SL03 SL04 SL51 SL52 SL05 SL06 SL07

HW-210/5 HW-210/2 HW-210/1 HW-210/3 HW-200/1

SEP-M1-200/2 SEP-M1-200/3 SEP-M1-210/2 SEP-M1-212/1

WM-110 WM-111 WM-112 WM-113 WM-114 WM-115 WM-116

ROW-01 ROW-02 ROW-03 ROW-04 ROW-05 ROW-06 ROW-07 ROW-08

DN100 DN300 DN375 DN450 DN225

TASMAN HWY

◀ HOBART

OFFSET TYPICAL 1.5

DN100 SCOUR TO DRAIN

INSTALL NEW SCOUR VALVE PIT

THRUST BLOCK

397.851 TP

405.287 TP

383.517 TP

NEW DN375 PN35 DICL WATERMAIN

EXTENT OF EXISTING WATERMAIN EASEMENT. REFER TO SHEET 1271 FOR SEPARATE SETOUT SCHEDULE.

RELOCATED PROPERTY CONNECTION AND DN25 LOW HAZARD WATER METER FOR MILFORD PROPERTY

INSET B
SCALE 1:500

ROCK PITCHING TO BE PROVIDED AS PER 3402-2/P19-3. DISPERSION APRON TO FULL CHANNEL WIDTH TO EXTEND ~1.5m FROM CULVERT.

APPROX. 6m WIDE RIGHT OF WAY. REFER TO SHEET 1271 FOR SEPARATE SETOUT SCHEDULE.

JOINS INSET A

JOINS - SHEET 1207

JOINS - SHEET 1209

SEVEN MILE BEACH ▶

PITTWATER RD

MILFORD ACCESS 02

TRENCH 3 CONTINUES TO EXISTING POLE No.114374/2

INSET A
SCALE: 1:500

No.	Amendment Description	Initials	Date
C	RE-ISSUED FOR APPROVAL	C.M.	20/01/2023
B	DETAILED DESIGN	D.C.	08/02/2022
A	DETAILED DESIGN	D.C.	17/03/2021
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5 0 5 10 15 20
SCALE IN METRES - 1:500

Co-ordinate System: MGA ZONE 55 Height Datum: A.H.D.

pitt&sherry

Tasmanian Government

DESIGNED s36

REVIEWED s36

Department of State Growth

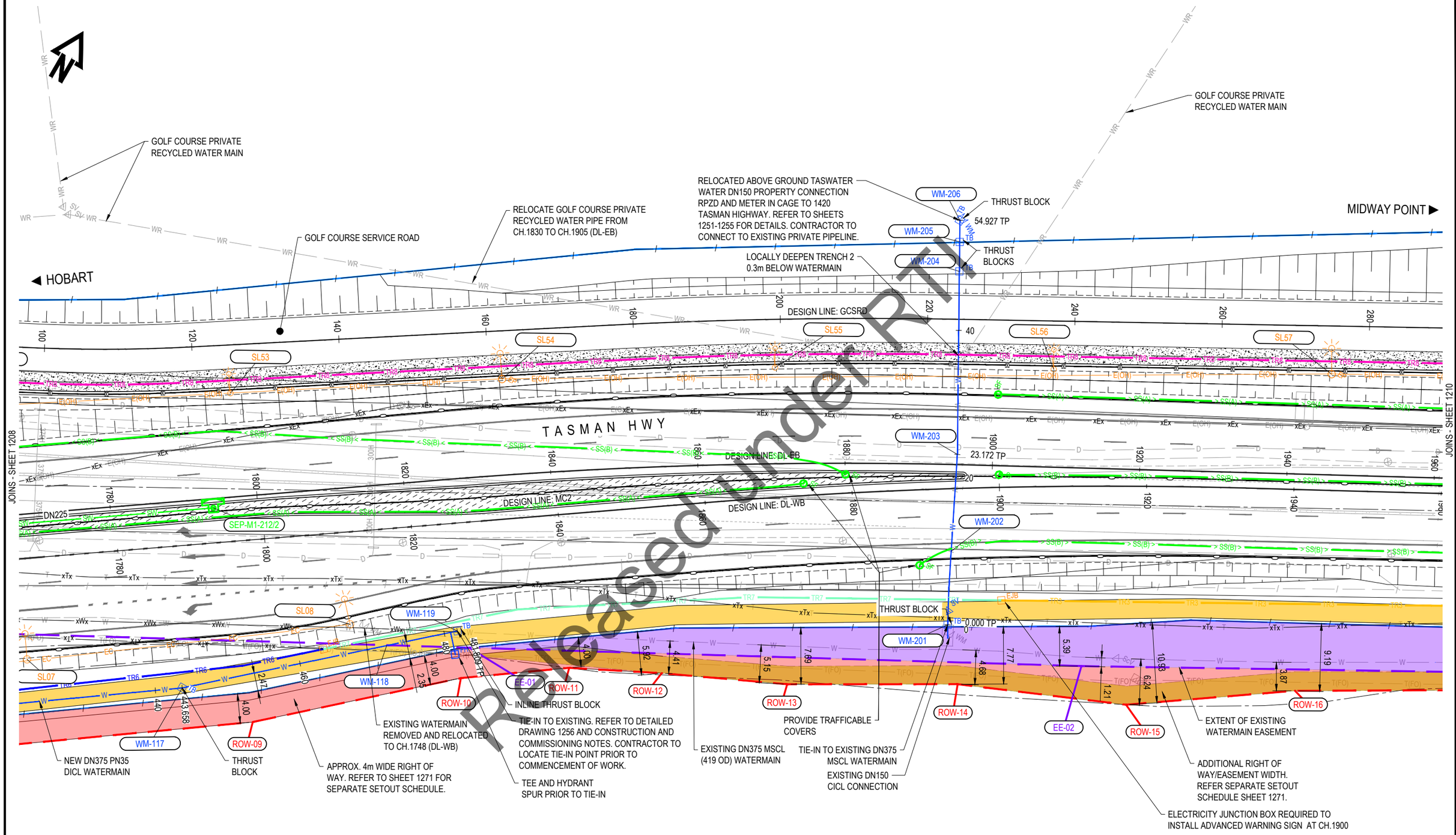
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS

DRAINAGE AND SERVICES - DRG 8

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C1208	20-Jan-23, 9:04 AM	1208

REGISTRATION NUMBER

REVISION C



No.	Amendment Description	Initials	Date
D	RE-ISSUED FOR APPROVAL	C.M.	20/01/2023
C	WATER HYDRANT ADDED	C.M.	06/10/2022
B	DETAILED DESIGN	D.C.	08/02/2021
A	DETAILED DESIGN	D.C.	17/03/2021

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SCALES
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SCALE IN METRES - 1:500

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

pitt&sherry

Tasmanian Government

DESIGNED
REVIEWED

Department of State Growth

TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS

DRAINAGE AND SERVICES - DRG 9

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C1209	20-Jan-23, 9:04 AM	1209

REGISTRATION NUMBER
A0113.028

REVISION D

GENERAL NOTES

1. THE LOCATION OF UNDERGROUND SERVICES ARE BASED ON SURVEY DRAWING 301593 D03 R1 AIRPORT TO CAUSEWAY 1 DATED 09/12/2019 BY VERIS SURVEYORS. THE EXACT POSITION OF EACH SERVICE PRESENT SHOULD BE ESTABLISHED ON SITE WITH THE RESPECTIVE SERVICE OWNERS PRIOR TO COMMENCING CONSTRUCTION.
2. FOR GROUND ENGINEERING DETAILS REFER HB19197 TEST PIT LOGS AND LAB TEST RESULTS.
3. ALL SETOUT DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE (U.N.O.) DETAIL SHEETS ARE IN MILLIMETRES (MM).
4. SITE SETOUT IS BASED ON THE SURVEY UNDERTAKEN BY VERIS SURVEYORS
5. ANY DISCREPANCIES WITHIN PROJECT DOCUMENTATION SHALL BE REPORTED TO THE SUPERINTENDENT FOR RESOLUTION.

CIVIL WORKS

1. THE CONTRACTOR SHALL PREPARE AND PROVIDE A SEDIMENT AND EROSION CONTROL PLAN FOR THE WORKS. NO WORK SHALL BE COMMENCED UNTIL THIS PLAN HAS BEEN APPROVED BY THE SUPERINTENDENT.
2. NO MACHINERY IS TO BE PLACED ON OR HAVE ACCESS TO ANY AREA OUTSIDE THE LIMIT OF WORKS UNLESS APPROVED BY THE SUPERINTENDENT.
3. THE LIMIT OF WORKS LINE SHALL BE TEMPORARILY FENCED WITH BUNTING BEFORE ANY WORKS COMMENCE.
4. ALL WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH THE FOLLOWING DEPARTMENT OF STATE GROWTH SPECIFICATIONS:
   R21 - CLEARING AND GRUBBING, R22 - EARTHWORKS, R23 - SUBGRADE ZONE, R31 - OPEN DRAINS AND CHANNELS, R36 - KERB AND GUTTER, R40 - PAVEMENT BASE AND SUBBASE, R40.1 NOMINATION OF MATERIALS FORM, EXPLANATORY NOTES, R43 - PAVEMENT AND SHOULDER MAINTENANCE, R51 - SPRAYED BITUMINOUS SURFACING, R55 - ASPHALT PLACEMENT, R64 - PAVEMENT MARKING, R80 - MISCELLANEOUS CONCRETE SLABS.
5. NO CLEARING OF VEGETATION OR REMOVAL OF TOPSOIL IS PERMITTED IN ANY AREA NOT DIRECTLY RELATED TO THE CONSTRUCTION WORKS OR AS NOTED ON THE DRAWINGS OTHER THAN REMOVAL OF TREES IDENTIFIED AS IN A HAZARDOUS CONDITION.
6. ALL STRIPPED TOPSOIL IS TO BE STORED IN AN APPROVED MANNER FOR REHABILITATION WORKS AND VEGETATION RESEEDING.
7. SURFACE REINSTATEMENT AND EROSION CONTROL.
   ALL DISTURBED AND BARE GROUND INCLUDING ALL CUT AND FILL SURFACES SHALL BE REHABILITATED AS FOLLOWS:
   REPLACE TOPSOIL WITH THAT RESERVED WHEN THE SITE WAS STRIPPED (50 THICK). RE-SEED ALL DISTURBED GROUND USING SEED MIX APPROVED BY THE SUPERINTENDENT.
8. 14/7mm TWO COAT SEAL TO BE IN ACCORDANCE WITH DEPARTMENT OF STATE GROWTH STANDARD SPECIFICATION R51 - BITUMINOUS SURFACING.
9. SUBGRADE CBR FOR ROAD PAVEMENTS AND FOOTPATHS TO BE A MINIMUM OF 5%
10. ALL PAVEMENT MARKING TO BE STANDARD PAINT IN ACCORDANCE WITH DEPARTMENT OF STATE GROWTH SPECIFICATION R64 - PAVEMENT MARKING.
11. TRAFFIC MANAGEMENT PLAN INDICATING HOW SAFE USE OF TASMAN HIGHWAY AND PITTWATER ROAD WILL BE MAINTAINED DURING CONSTRUCTION SHALL BE SUBMITTED PRIOR TO COMMENCEMENT OF WORK.
12. CONCRETE FOOTPATH TO BE CONSTRUCTED IN ACCORDANCE WITH LGAT STANDARD DRAWINGS TSD-R11-V1.
13. CONCRETE KERBS TO BE CONSTRUCTED IN ACCORDANCE WITH LGAT STANDARD DRAWINGS TSD-R14-V1.

SAFETY IN DESIGN (SiD)

SD1. SiD GENERALLY
THIS STRUCTURE HAS BEEN DESIGNED TO ELIMINATE HAZARDS TO HEALTH AND SAFETY WHEREVER POSSIBLE. WHERE THIS HAS NOT BEEN POSSIBLE, THE RISK TO HEALTH AND SAFETY OF PERSONS HAS BEEN MINIMISED TO BE REASONABLY PRACTICABLE FOR THE 100 YEAR DESIGN LIFE OF THE STRUCTURE.

SD2. WORK HEALTH AND SAFETY:
THE CONTRACTOR SHALL ENSURE THAT THE CONSTRUCTION OF THIS PROJECT IS CARRIED OUT UNDER A WORK HEALTH AND SAFETY CO-ORDINATION PLAN AND COMPLIANT WITH ANY 'SAFETY IN THE WORKPLACE LEGISLATION' APPLICABLE IN THE STATE IN WHICH THE WORK IS CARRIED OUT.

SD3. IDENTIFY HAZARDS:
THE CONTRACTOR SHALL MAKE EVERY EFFORT TO ENSURE THAT ALL PERSONS WHO ENTER THE CONSTRUCTION SITE ARE MADE AWARE ABOUT THE RISK OF HAZARDS AND POTENTIAL HAZARDS WHICH MAY OCCUR ON THE SITE. ANY SUCH HAZARD SHALL BE ISOLATED AND CLEARLY IDENTIFIED. THE CORRECT LEVEL OF TRAINING SHALL BE MANDATORY BEFORE ANY PERSON ENTERS THE CONSTRUCTION AREA. ALL PERSONS SHALL WEAR THE APPROPRIATE SAFETY PROTECTION APPAREL SPECIFIED BY THE CONTRACTOR BEFORE ENTERING THE SITE. A QUALIFIED GUIDE SHALL ACCOMPANY ALL NEW CONSTRUCTION WORKERS DURING THEIR INITIATION AND ALL SITE VISITORS WHILE ON THE SITE.

GENERAL NOTES - SERVICES

1. ALL PRIVATE PLUMBING WORKS SHALL GENERALLY BE IN ACCORDANCE WITH THE AS3500, THE TASMANIAN PLUMBING CODE, THE PLUMBING CODE OF AUSTRALIA AND THE IPWEA MUNICIPAL STANDARD SPECIFICATION AND DRAWINGS AS APPLICABLE.
2. UNLESS NOTED OTHERWISE THE CONTRACTOR IS REQUIRED TO OBTAIN ALL NECESSARY PERMITS FOR THE WORKS INCLUDING ANY WORKS IN THE ROAD RESERVATION AND ON ADJACENT PRIVATE PROPERTIES.
3. THE CONTRACTOR SHALL CONFIRM THE PRESENCE AND LOCATION OF ALL EXISTING SERVICES ON THE SITE AND WITHIN THE AREA OF WORKS AND CLEARLY IDENTIFY ALL DANGEROUS SERVICES UNDERGROUND AND OVERHEAD.
4. ALL DRAINS AND SERVICES TIE IN LEVELS AND LOCATIONS ARE TO BE CONFIRMED BEFORE COMMENCEMENT OF CONSTRUCTION WORKS.
5. UNLESS NOTED OTHERWISE ALL SERVICE CONNECTIONS TO COUNCIL OR WATER AUTHORITY SERVICE SHALL BE UNDERTAKEN BY THE COUNCIL OR WATER AUTHORITY AT THE CONTRACTOR'S COST.
6. ALL REDUNDANT SERVICE LINES SHALL BE CUT, GROUTED AND CAPPED AT TIE-IN LOCATIONS UNO.
7. REDUNDANT SERVICE TRENCHES SHALL BE BACKFILLED WHERE NOTED, WITH FULLY COMPACTED MATERIAL APPROPRIATE FOR THE AREA OF THE DEVELOPMENT SITE.
8. ALL UNDERGROUND WATER AND SEWER WORKS MUST BE TESTED AND INSPECTED BY TASWATER PRIOR TO BACKFILL.
9. ALL MATERIALS SHALL COMPLY WITH
   OPVC-O PIPE: AS 4441
   DICL AND DIEL PIPE: AS 2280
   CICL AND CIEL PIPE AND FITTINGS: AS 2544
   MSCL AND MSEL PIPE: AS 1479.
   PIPE MATERIALS: AS4130
   PIPE FITTINGS: AS 4129
   GATE VALVES: AS 2638
10. LOCATIONS AND LEVELS OF THE EXISTING PIPES ARE APPROXIMATE ONLY. THE CONTRACTOR IS TO LOCATE AND CONFIRM ALL SETOUT DIMENSIONS PRIOR TO FABRICATION.
11. BACKFILL AND REINSTATEMENT OF PIPE TRENCHES TO BE IN ACCORDANCE WITH WSAA SPS-1601 AND TASWATER REQUIREMENTS.
12. ON THE DRAWINGS, PIPE TYPES AND MATERIALS ARE SPECIFIED AS FOLLOWS
    PE100 DENOTES POLYETHYLENE PIPE WITH A MINIMUM REQUIRED STRENGTH OF 10 MPA AT 20°C IN ACCORDANCE WITH AS 4130 AND FITTINGS IN ACCORDANCE WITH AS 4129

SURVEY NOTES

THE SIZE AND ORIENTATION OF ALL SURVEY FEATURES LIKE PIT COVERS AND MANHOLES ARE SHOWN SYMBOLIC ONLY BASED ON SURVEY DATA PROVIDED. THE CONTRACTOR SHALL ENSURE MINIMUM CLEARANCE BETWEEN NEW WATER MAIN AND OTHER UTILITIES/STRUCTURES ARE ACHIEVED ON SITE.

SAFETY IN DESIGN (SiD)

SD4. TEMPORARY SUPPORT REQUIRED:
SOIL AND ROCK EXCAVATION
CONCRETE FORMWORK TO FACILITATE CONCRETE PLACEMENT
STATIC OR OPERATING PLANT AND EQUIPMENT
STORED MATERIALS

SD5. SPECIALIST CONTRACTOR:
SOME ACTIVITIES REQUIRED TO BE CARRIED OUT DURING THE CONSTRUCTION ARE NOT CONSIDERED TO BE NORMAL BUILDING PRACTICE. THEREFORE ENGAGEMENT OF A SPECIALIST CONTRACTOR, IS EXPECTED TO BE NECESSARY FOR THE FOLLOWING ACTIVITIES, BUT NOT LIMITED TO:

LIFTING AND PLACEMENT OF HEAVY ELEMENTS
USE OF HEAVY EQUIPMENT
DEMOLITION WORKS
DRILLING
ANCHOR INSTALLATION
WORK OVERHEAD ELECTRICAL EQUIPMENT.
EXCAVATION NEAR: - PRESSURISED WATER MAINS

WATER SERVICES NOTES:

WATER SUPPLY

1. WORKS IN GENERAL TO BE CARRIED OUT IN ACCORDANCE WITH: - WSA 03-2011-3.1, MRWA VERSION 2.0 - TASWATER'S SUPPLEMENT TO WSAA WATER SUPPLY CODE - PIPE SUPPLIER'S INSTALLATION MANUAL AND SPECIFICATIONS
2. PN DENOTES THE NOMINAL PRESSURE RATING OF THE WATER SERVICE. ALL PIPES AND ASSOCIATED FITTINGS SHALL BE PN25 UNLESS NOTED OTHERWISE
3. DN DENOTES THE NOMINAL DIAMETER FOR THE WATER SERVICE OR FITTING. FOR POLYETHYLENE PIPES, THIS REFERS TO THE OUTSIDE DIAMETER OF THE PIPE. FOR ALL OTHER PIPES IT REFERS TO THE NOMINAL BORE OF THE PIPE.
4. ON THE DRAWINGS, PIPE JOINTS ARE SPECIFIED AS FOLLOWS
   FL DENOTES FLANGED JOINTS IN ACCORDANCE WITH AS 4087 WITH PN TO MATCH PIPE MATERIAL. REFER MRWA-W-306B
   CF DENOTES COMPRESSION FITTING FOR ALL METRIC POLYETHYLENE PIPE MANUFACTURED TO AS4130
   SP-SOC DENOTES SPIGOT SOCKET JOINTS USING RUBBER RINGS
   SSJ DENOTES SPHERICAL SLIP JOINTS WITH 6 MM FILLET WELDS IN ACCORDANCE WITH MRWA-W-400
   WC DENOTES PLAIN END WELDED COLLAR JOINT IN ACCORDANCE WITH MRWA-W-400
   BWJ DENOTES BUTT WELDED JOINT FOR POLYETHYLENE PIPES
   EFC DENOTES ELECTRO FUSION COUPLING FOR POLYETHYLENE PIPES
5. AIR RELEASE VALVES: ARE TO BE IN ACCORDANCE WITH AS 4956 AND INSTALLED IN ACCORDANCE WITH THE DRAWINGS.
6. TB DENOTES THRUST BLOCK IN ACCORDANCE WITH THE DRAWINGS
7. UNLESS NOTED OTHERWISE, ALL THRUST BLOCKS SHALL BE SUITABLE FOR 1500 kPa PRESSURE AND SOIL SAFE BEARING CAPACITY OF 100 KPA, AND CONSTRUCTED IN ACCORDANCE WITH DRGS TW-W-300 AND MRWA -W-205A. TIMBER BLOCKS ARE NON PREFERRED.
8. FOR CHANGES IN HORIZONTAL AND VERTICAL ALIGNMENT GREATER THAN 1 DEGREE FOR SPIGOT SOCKET JOINTS PROVIDE BENDS OR DISTRIBUTE THE CHANGE IN ALIGNMENT OVER SEVERAL PIPE LENGTHS. REFER DRGS MRWA-W-103 AND MRWA-W-212
9. THE CONTRACTOR SHALL PROVIDE TRENCH STOPS FOR PIPES LAID AT GRADES BETWEEN 5% AND 20% AS PER THE REQUIREMENTS OF DRGS MRWA-W-208 AND MRWA-W-209..
10. THE CONTRACTOR SHALL PROVIDE CONCRETE BULKHEADS FOR PIPES LAID AT GRADES GREATER THAN 20% AS PER THE REQUIREMENTS OF DRGS MRWA-W-208 AND MRWA-W-209
11. WHERE MINIMUM COVER CANNOT BE ACHIEVED SUCH AS CROSSINGS OF EXISTING ASSETS SEEK DIRECTION FROM TASWATER.
12. ALL MATERIALS ARE TO COMPLY WITH CITY WEST WATER APPROVED PRODUCTS PUBLICATION.
13. DETECTOR TAPE / DETECTOR WIRE IS TO BE INSTALLED OVER ALL NON-METALIC WATER MAINS.
14. MARKER POSTS TO BE INSTALLED IN ACCORDANCE WITH TASWATER STANDARDS REFER TW-W-311 AND TW-W-312.
15. TEST PROCEDURE
    TO BE TESTED AS PER;
    'WATER SUPPLY CODE OF AUSTRALIA - WSA 03-2011-3.1 MRWA EDITION 2.0 PART 2 - CONSTRUCTION' CLAUSE 19.4
    TEST PRESSURE 1500 kPa (AT LOWEST POINT)
    TO BE CONDUCTED WITH TASWATER REPRESENTATIVE PRESENT
16. FOLLOWING A SATISFACTORY HYDROSTATIC PRESSURE TEST ALL WATER MAINS TO BE DISINFECTED PRIOR TO COMMISSIONING IN ACCORDANCE WITH MRWA WATER QUALITY COMPLIANCE SPECIFICATION No. 04-02-2.1. NOTE TASWATER DOES NOT NECESSARILY REQUIRE MAINS TO BE SWABBED HOWEVER THIS MAY BE REQUIRED TO MEET THE WATER QUALITY TESTING.

INSTALLATION AND COMMISSIONING NOTES:

1. THE GENERAL SCOPE IS TO PERFORM WORKS FOR EACH STAGE AS FOLLOWS - REFER NOTES AND REFERENCED STANDARDS FOR FURTHER DETAIL:
   a. FAMILIARISATION OF WORKS AREA AND REQUIREMENTS AS PER PLANS, LONGITUDINAL SECTIONS, DETAILS AND NOTES
   b. CONFIRM SERVICE LEVELS AT CROSSING LOCATIONS, AS NOTED ON DRAWINGS
   c. INSTALL NEW WATER MAIN, AS PER DRAWINGS, BETWEEN THE POINTS AS PER NOMINATED TIE-IN DETAILS (LIMIT OF WORK PRIOR TO TIE-IN), INCLUDING NEW VALVES, FITTINGS AND THRUST RESTRAINTS, AND BLANK ENDS
   d. WAIT FOR THRUST BLOCK CONCRETE TO CURE
   e. FILL PIPE USING HYDRANTS AND PRESSURE TEST (REFER WATER SUPPLY NOTE 15)
   f. UNDERTAKE DISINFECTION AND DISPOSE OF WATER AS DIRECTED BY SUPERINTENDENT (REFER WATER SUPPLY NOTE 16)
   g. UNDERTAKE TIE-IN WORKS AS PER TIE-IN DETAILS DURING SHUTDOWN PERIOD, INCLUDING RECONNECTING ALL PROPERTY CONNECTIONS AND SUB-MAINS WITHIN THE STAGE
   h. GROUT FILL REDUNDANT WATER MAIN SECTION(S) AT TIE-IN LOCATIONS, AND CAP (REFER GENERAL SERVICES NOTE 6 AND 7).

No.	Amendment Description	Initials	Date
A	RE-ISSUED FOR APPROVAL	C.M.	20/01/2023

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SCALES
N.T.S.

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Tasmanian Government

DESIGNED s36
REVIEWED s36

Department of State Growth
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS
GENERAL NOTES

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C1250	20-Jan-23, 9:04 AM	1250

REGISTRATION NUMBER
A0113.028

REVISION A

GENERAL

G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION, STRUCTURAL, CIVIL AND RELEVANT ENGINEERING SERVICES, DOCUMENTS AND WITH OTHER SUCH WRITTEN INSTRUCTIONS AS MAY BE ISSUED.

G2. ALL DIMENSIONS SHOWN SHALL BE VERIFIED ON SITE. ENGINEER'S DRAWINGS MUST NOT BE SCALED.

G3. DURING CONSTRUCTION THE RESPONSIBLE CONTRACTOR SHALL MAINTAIN THE STRUCTURE IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED.

G4. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE WSAA STANDARD SPECIFICATION WATER SUPPLY CODE OF AUSTRALIA WSA 03-2011-3.1 MRWA EDITION V2.0 AND TASWATER'S SUPPLEMENT.

G5. UNLESS OTHERWISE NOTED ALL DIMENSIONAL UNITS ARE MILLIMETRES EXCEPT REDUCED LEVELS AND DISTANCES (CHAINAGES) WHICH ARE METRES.

G6. ALL COORDINATES ARE IN METRES UNO.

G7. UNO DENOTES UNLESS NOTED OTHERWISE.

G8. ALL DIMENSIONS WHICH TIE INTO OR OTHERWISE RELATE TO EXISTING STRUCTURES SHALL BE VERIFIED ON SITE PRIOR TO THE START OF CONSTRUCTION BY THE CONTRACTOR.

G9 SITE SET-OUT IS NOT BASED ON ANY DETAILED SURVEY.

G10. ANY DISCREPANCIES WITHIN PROJECT DOCUMENTATION SHALL BE REFERRED TO THE SUPERINTENDENT FOR RESOLUTION.

FOUNDATION

F1. FOOTINGS HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF '100kPa' AT FOUNDING LEVELS UNO .THE CONTRACTOR SHALL OBTAIN THE ENGINEER'S APPROVAL OF THE FOUNDATION MATERIAL BEFORE PLACING CONCRETE.

F2. AFTER EXCAVATION ENSURE THAT ALL LOOSE GRAVEL, SOIL OR DEBRIS IS REMOVED BEFORE PLACING CONCRETE.

F3. IN ALL EXCAVATIONS FOR FOOTINGS > 400 WIDE PLACE BLINDING CONCRETE IN A SEPARATE POUR, MINIMUM 65 THICK.

EXCAVATION AND BACKFILL

E1. ALL EXCAVATION SHALL BE CARRIED OUT IN SUCH A MANNER AS TO PRESERVE UNDISTURBED CONDITIONS AT THE UNDERSIDE OF FOOTINGS.

E2. ALL FOOTINGS SHALL BE CONSTRUCTED ON UNDISTURBED OR COMPACTED FILL FOUNDATION MATERIAL WITH A SAFE BEARING CAPACITY AS SHOWN IN FOUNDATIONS NOTE 'F1' AND TO THE APPROVAL OF THE ENGINEER.

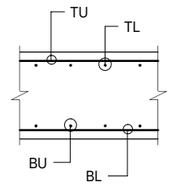
E3. IF FOOTING EXCAVATIONS ARE LOWER THAN THOSE SHOWN ON DESIGN DRAWINGS. THE OVER EXCAVATION SHALL BE BACKFILLED WITH COMPACTED FOUNDATION MATERIAL AS PER NOTE 'E3' ABOVE.

E4. FINISHED EARTHWORK SLOPES SHALL NOT BE STEEPER THAT 2 HORIZONTAL AND 1 VERTICAL U.N.O.

E5. APPROVED BACKFILL MATERIAL SHALL BE PLACED UNIFORMLY AROUND ALL FOOTING SIDES IN 200 MAXIMUM LOOSE LAYERS AND COMPACTED IN ACCORDANCE WITH SPECIFICATION.

CONCRETE REINFORCEMENT ABBREVIATIONS

CP	CENTRALLY PLACED
EW	EACH WAY
EF	EACH FACE
NF	NEAR FACE
FF	FAR FACE
LV	LENGTH VARIES
B	BOTTOM REINFORCEMENT
BL	BOTTOM REINFORCEMENT LOWER LEVEL
BU	BOTTOM REINFORCEMENT UPPER LEVEL
T	TOP REINFORCEMENT
TL	TOP REINFORCEMENT LOWER LEVEL
TU	TOP REINFORCEMENT UPPER LEVEL



REINFORCEMENT LAYERING

CONCRETE AND OTHER ABBREVIATIONS

CJ	CONTROL JOINT
DJ	DOWELLED JOINT
SJ	SAWCUT JOINT
TOC	TOP OF CONCRETE
FCR	FINE CRUSHED ROCK
SOP	SET OUT POINT

150 SLAB THICKNESS (=150mm)
OTHER ABBREVIATIONS COMPLY WITH AS1100

CONCRETE

C1. ALL WORKMANSHIP AND MATERIAL SHALL BE IN ACCORDANCE WITH THE SPECIFICATION AND AS3600. USE GENERAL PURPOSE CEMENT AND NORMAL WEIGHT AGGREGATES UNO. DO NOT USE ADDITIVES WITHOUT APPROVAL.

C2. CONCRETE QUALITY SHALL BE AS FOLLOWS (U.N.O):

ITEM	CHARACTERISTIC CONCRETE STRENGTH f'c (MPa)
GENERAL	32
PAD AND STRIP FOOTINGS	N/A
PRECAST CONCRETE	N/A
FOOTING - PIER	N/A
PEDESTALS	N/A
BLINDING	N/A

C3. UNLESS SPECIFIED UNABBREVIATED TO AS4671 ALL REINFORCEMENT ON THIS PROJECT IS DESIGNATED AS FOLLOWS:

SYMBOL	DESCRIPTION	TYPE
SL	MESH - SQUARE GRID	D500L TO AS4671
RL	MESH - RECTANGULAR GRID	D500L TO AS4671
TM	TRENCH MESH	D500L TO AS4671
R	PLAIN BARS	R250N TO AS4671
S	DEFORMED BARS	D250N TO AS4671
N	DEFORMED BARS	D500N TO AS4671

DESIGNATION EXAMPLE

SL82	REINFORCING MESH	D500L 8 DIA. RIBBED BARS AT 200 CRS
4-L12TM	TRENCH MESH	D500L 4 No 12 DIA. RIBBED BARS. (300 WIDE)
4-R10-300	PLAIN BARSR	250N 4 No 10 DIA. BARS AT 300 CRS
4-S12-300	DEFORMED BARS	D250N 4 No 12 DIA. BARS AT 300 CRS
4-N16-200 T	DEFORMED BARS	D500N 4 No 16 DIA. BARS AT 200 CRS TOP

NOTE: NUMBER OR SPACING SPECIFIED - GENERALLY NOT BOTH

C4. CLEAR COVER TO REINFORCEMENT (INCLUDING FITMENTS) SHALL BE AS FOLLOWS UNO.

CAST AGAINST BUILDING OR FORMWORK	:	50
CAST AGAINST GROUND PROTECTED BY WATERPROOF MEMBRANE	:	50
CAST AGAINST GROUND NOT PROTECTED BY WATERPROOF MEMBRANE	:	50
CAST AGAINST BLINDING CONCRETE	:	50
TOP COVER	:	50

C5. SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF ANY APPLIED FINISHES.

C6. BEAM DEPTHS ARE NOTED FIRST AND INCLUDE THE THICKNESS OF THE SLAB IF ANY.

C7. CONSTRUCTION JOINTS WHERE NOT SHOWN ON THE DRAWINGS SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER, JOINTS TO BE SEALED WITH 'NITROSEAL 280' OR EQUIVALENT.

C8. FORMS SHALL BE CHAMFERED FOR RE-ENTRANT ANGLES AND FILLETED FOR CORNERS. WHERE THESE WILL BE EXPOSED TO VIEW IN THE COMPLETED PROJECT THE FACE OF THE BEVEL IN EACH CASE SHALL BE 25 WIDE UNO.

C9. NO HOLES, CHASES OR EMBEDMENTS OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

C10. NO ALLOWANCE HAS BEEN MADE FOR STACKED MATERIALS ON THE CONCRETE STRUCTURE UNO.

C11. CONCRETE FLOOR FINISH SHALL BE MONOLITHIC, STEEL TROWEL FINISH INTERNAL AND BROOM FINISH EXTERNAL UNO.

C12. NO REINFORCEMENT SPLICES SHALL BE MADE IN POSITIONS OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

C13. MINIMUM LAP FOR FABRICS SHALL BE TWO TRANSVERSE WIRES PLUS 25. MINIMUM LAP LENGTHS FOR DEFORMED BARS SHALL BE IN ACCORDANCE WITH AS3600 UNO.

C14. WELDING OF REINFORCEMENT IS NOT PERMITTED UNLESS SHOWN ON THE DRAWINGS OR APPROVED BY THE ENGINEER.

C15. TOP AND BOTTOM REINFORCEMENT IN SLABS SHALL BE SUPPORTED ON APPROVED PLASTIC TIPPED CHAIRS, IN BOTH DIRECTIONS AT MAXIMUM CENTRES OF ;
600 FOR 10 DIA. BARS,
900 FOR 12 AND 16 DIA. BARS,
1200 FOR 20 DIA. BARS
750 CENTRES FOR MESH.

C16. ALL FORMWORK AND PROPS UNDER SUSPENDED CONCRETE WORK SHALL BE REMOVED BEFORE ANY BRICKWORK OR BLOCKWORK IS BUILT ABOVE.

CONCRETE (CONTINUED)

C17. THE MINIMUM CLEAR SPACING BETWEEN CONDUITS, CABLES, PIPES AND BARS SHALL BE AS REQUIRED BY AS3600 BUT NOT LESS THAN THREE DIAMETERS HORIZONTALLY FOR HORIZONTAL CONDUITS ETC. IN SLABS WALLS AND FOOTINGS AND NOT LESS THAN ONE DIAMETER FOR ALL OTHER CONDUITS ETC.

C18. BARS SHALL BE LAPPED AS FOLLOWS UNLESS NOTED OTHERWISE:

MINIMUM LAP LENGTHS				
BAR	<300 CONCRETE DEPTH (UNDER LAP)		>300 CONCRETE DEPTH (UNDER LAP)	
N12	385	350	500	450
N16	600	525	775	700
N20	850	750	1100	975
N24	1100	1000	1450	1285
N28	-	-	-	-
CONCRETE	N32	N40	N32	N40

✳ THE CONCRETE DEPTH IS MEASURED BELOW THE BAR LAP
✳ THE NOTED LAP LENGTHS RELATE TO GRADE 32/40 CONCRETE AT Cd = 40mm. CONSULT THE ENGINEER FOR BAR LAPS IN OTHER CONCRETE GRADES.

C19. THE LAP LENGTH OF BUNDLED BARS SHALL BE INCREASED FROM THE VALUES SHOWN IN THE TABLE AS FOLLOW:
3 BAR BUNDLE - 20%
4 BAR BUNDLE - 33%.

C20. INDIVIDUAL BARS WITHIN A BUNDLE SHALL BE TERMINATED AT DIFFERENT POINTS STAGGERED BY AT LEAST 40 TIMES THE DIAMETER OF THE LARGER BAR.

C21. LAPS IN REINFORCEMENT SHALL BE STAGGERED SO THAT NO MORE THAN 50% OF BARS ARE LAPPED IN ANY ONE CROSS SECTION AND THAT NO TWO ADJACENT BARS ARE LAPPED AT THE SAME LOCATION.

C22. WHERE STAGGERED BAR SPLICES ARE NOT POSSIBLE, THE MINIMUM LAP LENGTH SHALL NOT BE LESS THAN 1.3 TIMES THE THE STANDARD LAP LENGTH OR AS SHOWN ON THE DRAWINGS, WHICHEVER IS GREATER.

No.	Amendment Description	Initials	Date
B	RE-ISSUED FOR APPROVAL	BWH	20/01/2023
A	FOR APPROVAL	BWH	04/07/2022

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REVIEWED .-.....

Department of State Growth
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS

RPZD GENERAL NOTES SHEET 1 OF 2

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-S1251	20/01/2023 8:40:01 AM	1251

REGISTRATION NUMBER
A0113.028

REVISION B

STRUCTURAL STEELWORK

S1. ALL STEEL, STEELWORK, CONNECTIONS AND CORROSION PROTECTION OF STEELWORK SHALL BE IN ACCORDANCE WITH THE NOTES, SPECIFICATION AND AS4100.

S2. ALL STEELWORK SHALL BE GRADE 250 EXCEPT USE GRADE 450 FOR COLD FORMED LIGHT GRADE SECTIONS, GRADE 350 FOR HOLLOW SECTIONS, AND GRADE 300 FOR HOT ROLLED SECTIONS, UNO.

S3. BOLT TYPES SHALL BE AS FOLLOWS:

4.6/S	HEXAGON HEAD BOLTS TO AS1111.1, SNUG TIGHTENED
8.8/S	HIGH STRENGTH STRUCTURAL BOLTS, WITH BOLT, NUTS AND HARDENED WASHERS TO AS4100, SNUG TIGHTENED
8.8/TB	HIGH STRENGTH STRUCTURAL BOLTS AS ABOVE, FULLY TENSIONED TO AS4100 IN A BEARING TYPE JOINT
8.8/TF	HIGH STRENGTH STRUCTURAL BOLTS AS ABOVE, FULLY TENSIONED TO AS4100 IN A FRICTION TYPE JOINT AND WITH FAYING SURFACES LEFT UNCOATED, UNO.

BOLTS SHALL BE 4.6/S UNLESS NOTED OTHERWISE.

DESIGNATION EXAMPLE 6 M20 8.8/S.

S4. ALL CONNECTIONS SHALL BE SHOP DETAILED IN ACCORDANCE WITH THE SPECIFIED CONNECTION TYPES ON EACH OF THE STEELWORK FRAMING DRAWINGS. THE CONNECTIONS SHALL BE IN ACCORDANCE WITH THE STANDARD CONNECTION DETAIL DRAWINGS UNLESS NOTED OTHERWISE ON THE FRAMING DRAWINGS.

S5. ALL DETAILS, GAUGE LINE ETC, WHERE NOT SPECIFICALLY SHOWN ARE TO BE IN ACCORDANCE WITH ASI DESIGN CAPACITY TABLES FOR STRUCTURAL STEEL AND ASI STANDARDISED STRUCTURAL CONNECTIONS.

S6. THE MINIMUM CONNECTION REQUIREMENTS SHALL BE AS FOLLOWS:
PURLINS AND GIRTS - 2 PBM12 OR 2 M16 4.6/S BOLTS WITH A 8 PLATE CLEAT UNO
SECTIONS < 210 DEEP - 2 M16 8.8/S BOLTS WITH A 8 PLATE CLEAT UNO
SECTIONS > 220 DEEP - 2 M20 8.8/S BOLTS WITH A 10 PLATE CLEAT, UNO.

S7. BOLT HOLES IN STEEL TO STEEL, AND STEEL TO CONCRETE CONNECTIONS SHALL BE BOLT DIAMETER PLUS 2mm AND BOLT DIAMETER PLUS 6mm FOR BASE PLATES UNO.

S8. ALL HOLDING DOWN BOLTS SHALL BE EITHER COMMERCIAL BOLTS OR BE MADE FROM MILD STEEL BARS WITH A MINIMUM 'fsy = 250 MPa' UNO.

S9. E41XX ELECTRODES SHALL BE USED FOR ALL WELDS ON GRADE 250 STEELWORK. E48XX ELECTRODES SHALL BE USED FOR ALL WELDS ON ≥ GRADE 300 STEELWORK. LOW HYDROGEN ELECTRODES ARE RECOMMENDED.

S10. WELDS SHALL BE 6 CFW (UNO) CATEGORY SP (AS DEFINED IN AS1554.1) REFER TO THE DRAWINGS FOR WELD CATEGORY GP LOCATIONS.

S11. HOT DIP GALVANISE STEELWORK AS NOTED ON THE DRAWINGS.

S12. HOT DIP GALVANISED STEEL SHALL BE SUITABLY PREPARED FOR GALVANISING. THE PREPARATION SHALL INCLUDE GRIT BLASTING TO CLASS 2.5, AS1627.4.

S13. ALL FULLY SEALED HOLLOW OR BOX SECTIONS CONTAINING TOTALLY ENCLOSED AREAS MUST BE VENTED NEAR EACH END WHEN THE MEMBER IS TO BE GALVANISED. THE MINIMUM DIAMETER OF THE VENT HOLE IS TO BE 25% OF THE INTERNAL DIAMETER OR DIAGONAL DIMENSION FOR SECTIONS UP TO 150. FOR LARGER MEMBERS VENTING DETAILS SHALL BE PROVIDED BY THE GALVANISER FOR THE APPROVAL OF THE ENGINEER PRIOR TO GALVANISING.

S14. PRIOR TO BOLTING PLATES AGAINST OR SITE WELDING PLATES TO EXISTING STEELWORK, ALL CONTACT AREAS SHALL HAVE CORROSION AND EXISTING LOOSE PAINT ETC REMOVED TO EXPOSE CLEAN BASE METAL. THIS SHALL BE ACHIEVED WITH A PROCESS TO MATCH THE NEW STEELWORK IF THIS IS PRACTICABLY FEASIBLE.

S15. ALL BOLTS SHALL BE HOT DIP GALVANISED U.N.O.

S16. AFTER TIGHTENING, EXPOSED FACES OF NUTS, BOLTS AND WASHERS SHALL BE PREPARED AND COATED AS SPECIFIED OR AS FOR ADJACENT WORK.

STRUCTURAL STEELWORK (CONTINUED)

S20. THE CONTRACTOR SHALL PREPARE AND SUBMIT 3 COPIES OF ALL WORKSHOP DRAWINGS TO THE ENGINEER FOR APPROVAL. FABRICATION SHALL NOT COMMENCE UNTIL APPROVAL HAS BEEN OBTAINED.

S21. REFER TO THE SPECIFICATION FOR PREPARATION, PRIMING AND FINISH COATS ON EXTERNAL STEELWORK. IF NO SPECIFICATION IS AVAILABLE ALLOW TO PREPARE THE STEELWORK BY CLEANING WITH POWER TOOLS TO AS1627.2 AND PROTECT WITH ONE COAT OF ZINC PHOSPHATE PRIMER (MIN 50 MICRONS DFT), UNO.

STEELWORK ABBREVIATIONS

ALL DRAWING ABBREVIATIONS CONFORM TO AS1101 UNO.

ADDITIONAL ABBREVIATIONS ARE:

BS	BOTH SIDES
CFW	CONTINUOUS FILLET WELD
CONTS	CONTINUOUS
MS	MILD STEEL
PL	PLATE
FSBW	FULL STRENGTH BUTT WELD (CATEGORY SP)
TOS	TOP OF STEEL
TOP	TOP OF PLATE
TOG	TOP OF GRATE

SITE SAFETY

SS1. ALL WORK SITES CAN BE POTENTIALLY HAZARDOUS TO PEOPLE, PROPERTY AND EQUIPMENT. ALL PEOPLE WHO ARE AUTHORISED TO BE ON A WORK SITE MUST CAREFULLY CONSIDER, DOCUMENT AND ADOPT SUITABLE SAFE WORK PROCEDURES FOR ALL REQUIRED ACTIVITIES.

SS2. CURRENT LEGISLATION:
CURRENT LEGISLATION REQUIRES THAT ALL PERSONS ARE TO CONSIDER THEIR ACTIONS OR INACTION ON THE HEALTH AND SAFETY OF OTHERS AND THEMSELVES.

SS3. THE CONTRACTOR SHALL ABIDE WITH AND IS BOUND BY THE CURRENT SAFE WORK AUSTRALIA ACT, REGULATIONS AND CODES OF PRACTICE ISSUED BY STATE GOVERNMENTS AND / OR THEIR AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION, DOCUMENTATION AND MAINTENANCE OF WORK SAFETY PROCEDURES AND OTHER RELEVANT DOCUMENTATION. THE CONTRACTOR SHALL ENSURE THAT ALL SUB CONTRACTORS AND OTHER AUTHORISED PEOPLE COMPLY WITH THE ABOVE.

SS4. THE CONTRACTOR SHALL BE ALERT AND PROACTIVE TO IDENTIFY HAZARDS AND MANAGE THE ASSOCIATED RISKS TO ELIMINATE THEM OR MINIMISE THEM TO AN AGREED RISK LEVEL.

SS5. THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER IF THERE IS ANY PERCEIVED RISK RELATING TO THE DESIGN OR CONSTRUCTION OF THE DESIGN. THE CONTRACTOR SHALL ENGAGE SUITABLY QUALIFIED ENGINEERS TO CERTIFY ALL TEMPORARY STRUCTURAL WORKS.

SS6. THE CONTRACTOR SHALL ENGAGE WITH THE SUBCONTRACTOR AND OTHER AUTHORISED PEOPLE WHO USE THE SITE TO IDENTIFY THEIR RISKY WORK PROCEDURES AND OTHER ACTIVITIES.

SS7. SUBCONTRACTORS AND OTHER AUTHORISED PEOPLE SHALL PROVIDE DOCUMENTATION ABOUT THEIR RISK ASSESSMENTS AND RISK MINIMISATION.

SS8. PUBLIC SAFETY:
A LIVE SITE THAT HAS WORK UNDERWAY OR IS UNATTENDED HAS A STRONG ATTRACTION TO THE PUBLIC IN GENERAL. THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO PREVENT UNAUTHORISED PEOPLE ENTERING THE SITE. EXCAVATIONS, STRUCTURES AND ACCESS EQUIPMENT SHALL BE LEFT IN A SECURE MANNER AS IS REASONABLY PRACTICABLE TO PREVENT ANY UNAUTHORISED PEOPLE FROM ENTERING, CLIMBING OR FALLING. THE SITE SHALL HAVE CLEAR WARNING SIGNS IN APPROPRIATE LOCATIONS, E.G. - "DANGER KEEP OUT" AND BE SECURELY BARRICADED AND WHEN UNATTENDED LEFT IN A LOCKED CONDITION AS IS REASONABLY PRACTICABLE.

SS9. SPECIFIC ATTENTION SHALL BE PAID TO RISKY ACTIVITIES INCLUDING BUT NOT LIMITED TO:
SITE ESTABLISHMENT
DEMOLITION, RECYCLING AND REMOVAL
TEMPORARY WORKS
EXCAVATION AND TRENCHING - UNSTABLE GROUND
WELDING - EYE PROTECTION
CONSTRUCTION PROCESSES
TRIPS AND FALLS (GENERAL]
UNSTABLE TEMPORARY FOOTINGS
WORKING AT HEIGHT.

SAFETY IN DESIGN (SiD)

SD1. SiD GENERALLY
THIS STRUCTURE HAS BEEN DESIGNED TO ELIMINATE HAZARDS TO HEALTH AND SAFETY WHEREVER POSSIBLE. WHERE THIS HAS NOT BEEN POSSIBLE, THE RISK TO HEALTH AND SAFETY OF PERSONS HAS BEEN MINIMISED TO BE REASONABLY PRACTICABLE FOR THE 50 YEAR DESIGN LIFE OF THE STAGE STRUCTURE.

SD2. WORK HEALTH AND SAFETY:
THE CONTRACTOR SHALL ENSURE THAT THE CONSTRUCTION OF THIS PROJECT IS CARRIED OUT UNDER A WORK HEALTH AND SAFETY CO-ORDINATION PLAN AND COMPLIANT WITH ANY 'SAFETY IN THE WORKPLACE LEGISLATION' APPLICABLE IN THE STATE IN WHICH THE WORK IS CARRIED OUT.

SD3. IDENTIFY HAZARDS:
THE CONTRACTOR SHALL MAKE EVERY EFFORT TO ENSURE THAT ALL PERSONS WHO ENTER THE CONSTRUCTION SITE ARE MADE AWARE ABOUT THE RISK OF HAZARDS AND POTENTIAL HAZARDS WHICH MAY OCCUR ON THE SITE. ANY SUCH HAZARD SHALL BE ISOLATED AND CLEARLY IDENTIFIED. THE CORRECT LEVEL OF TRAINING SHALL BE MANDATORY BEFORE ANY PERSON ENTERS THE CONSTRUCTION AREA. ALL PERSONS SHALL WEAR THE APPROPRIATE SAFETY PROTECTION APPAREL SPECIFIED BY THE CONTRACTOR BEFORE ENTERING THE SITE. A QUALIFIED GUIDE SHALL ACCOMPANY ALL NEW CONSTRUCTION WORKERS DURING THEIR INITIATION AND ALL SITE VISITORS WHILE ON THE SITE.

SD4. STABILITY OF THE STRUCTURE:
TEMPORARY MEASURES ARE REQUIRED DURING CONSTRUCTION AND DEMOLITION TO ENSURE THE STABILITY OF THE STRUCTURE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND THE CONTRACTOR'S ERECTION DESIGN ENGINEER TO TAKE ALL MEASURES NECESSARY TO MAINTAIN STRUCTURAL INTEGRITY DURING ALL PHASES OF DECONSTRUCTION AND CONSTRUCTION. TEMPORARY SUPPORT IS EXPECTED TO BE NECESSARY.

SD5. TEMPORARY SUPPORT REQUIRED:
SOIL AND ROCK EXCAVATION
CONCRETE FORMWORK TO FACILITATE CONCRETE PLACEMENT
STRUCTURAL STEEL FRAMING
TIMBER FRAMING
STATIC OR OPERATING PLANT AND EQUIPMENT
STORED MATERIALS
STABILITY OF THE EXISTING STRUCTURE.

SD6. SPECIALIST CONTRACTOR:
SOME ACTIVITIES REQUIRED TO BE CARRIED OUT DURING THE CONSTRUCTION

ARE NOT CONSIDERED TO BE NORMAL BUILDING PRACTICE. THEREFORE ENGAGEMENT OF A SPECIALIST CONTRACTOR, IS EXPECTED TO BE NECESSARY FOR THE FOLLOWING ACTIVITIES, BUT NOT LIMITED TO

LIFTING AND PLACEMENT OF HEAVY ELEMENTS
USE OF HAZARDOUS MATERIALS
USE OF HEAVY EQUIPMENT
DEMOLITION WORKS
MOVING MASS CONCRETE BLOCKS
ACCESS USING WORK PLATFORMS, STEPS, FALL ARREST SYSTEMS AND LADDERS
DRILLING
ANCHOR INSTALLATION
WORK NEAR LIVE EQUIPMENT, INCLUDING ELECTRICAL EQUIPMENT.

No.	Amendment Description	Initials	Date
B	RE-ISSUED FOR APPROVAL	BWH	20/01/2023
A	FOR APPROVAL	BWH	04/07/2022

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Co-ordinate System: MGA ZONE 55 | Height Datum: AHD

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Department of State Growth

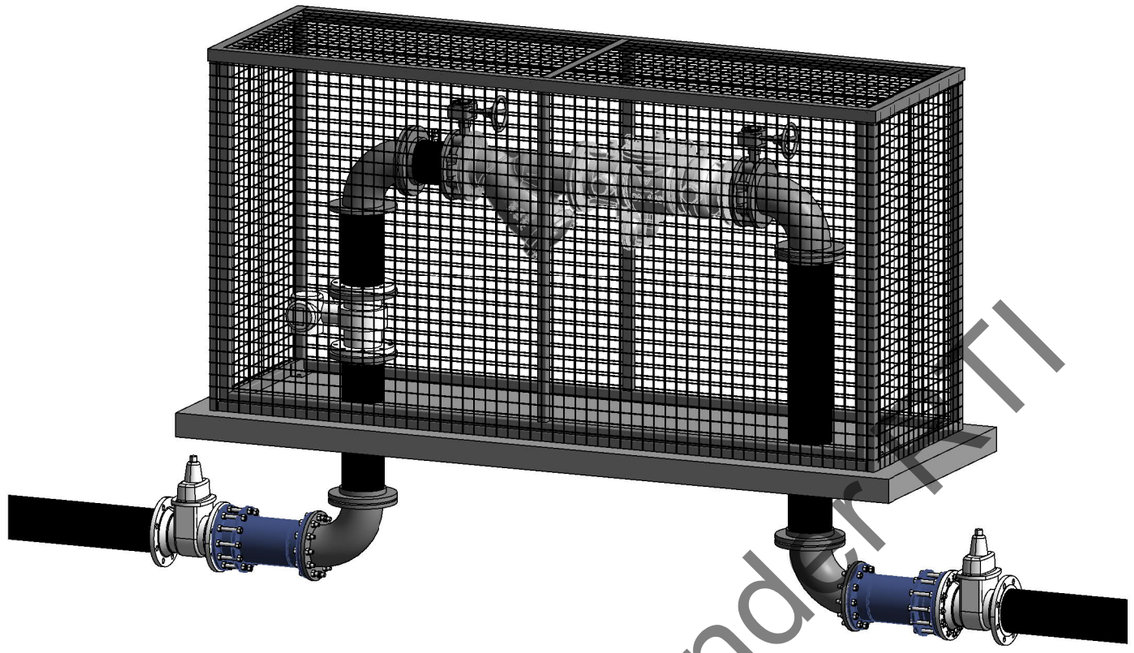
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS

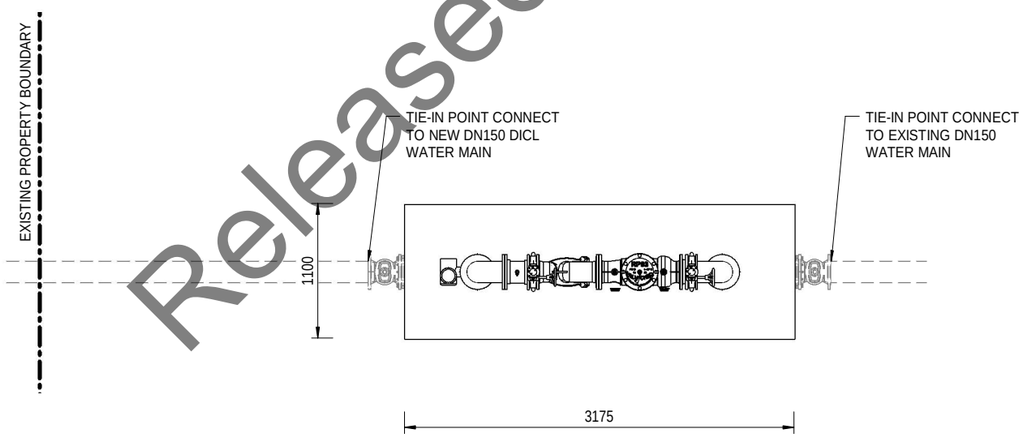
RPZD GENERAL NOTES SHEET 2 OF 2

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-S1252	20/01/2023 8:40:02 AM	1252

REGISTRATION NUMBER
A0113.028

REVISION B





SITE PLAN
SCALE: 1 : 50

No.	Amendment Description	Initials	Date
B	RE-ISSUED FOR APPROVAL	BWH	20/01/2023
A	FOR APPROVAL	BWH	04/07/2022

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SCALES
1 : 50

Co-ordinate System: MGA ZONE 55 | Height Datum: AHD

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DESIGNED .-.....

REVIEWED .-.....

Department of State Growth

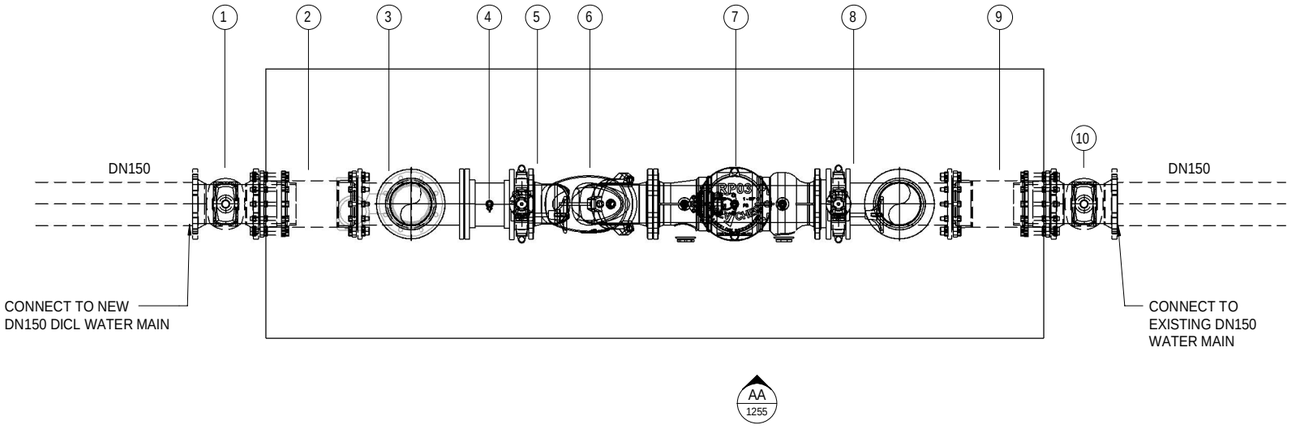
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS

GOLF COURSE RPZD DETAIL - LOCALITY AND SITE PLAN

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-S1253	20/01/2023 8:39:57 AM	1253

REGISTRATION NUMBER
A0113.028

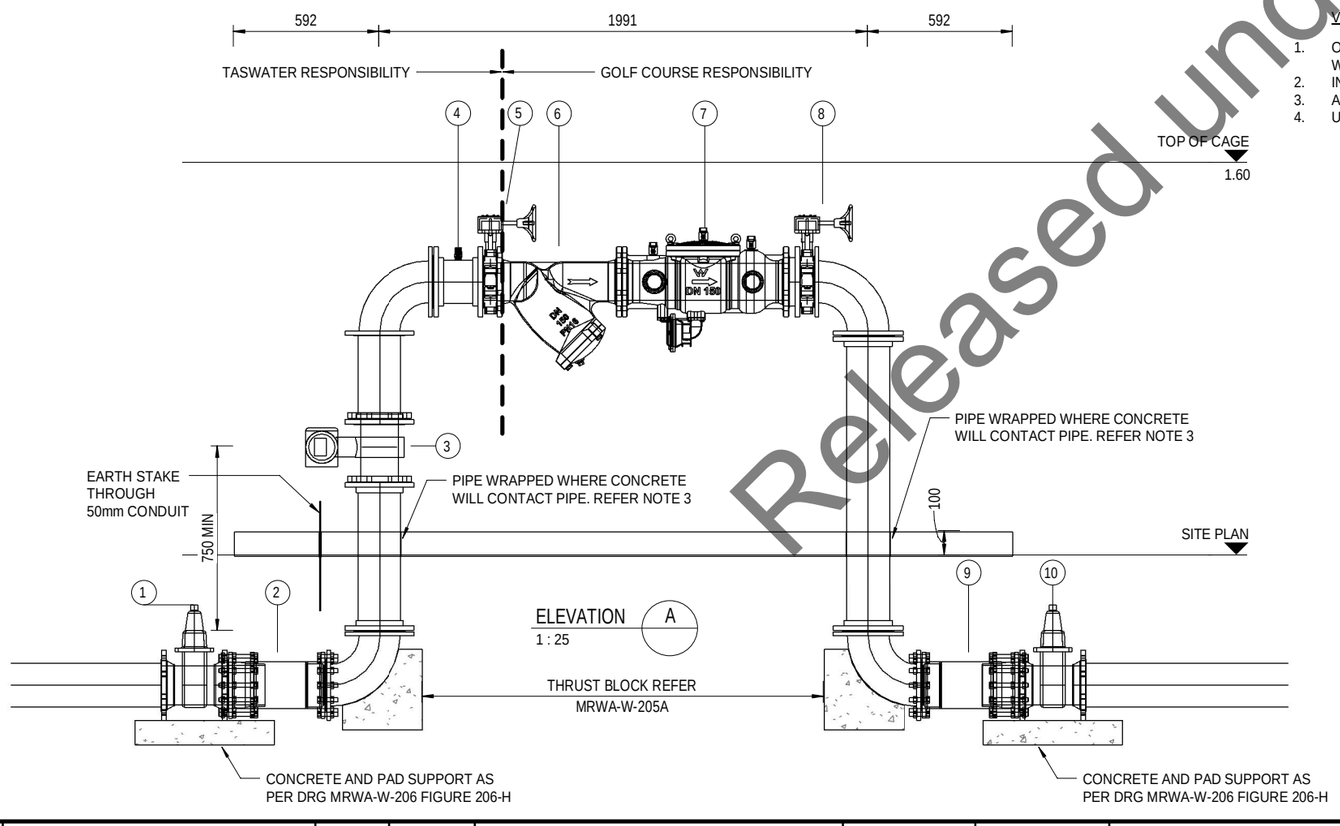
REVISION B



AA
1255

DN150 CICL PROPERTY SERVICE CONNECTION - PLAN

SCALE: 1 : 25



Pipe Accessory Schedule

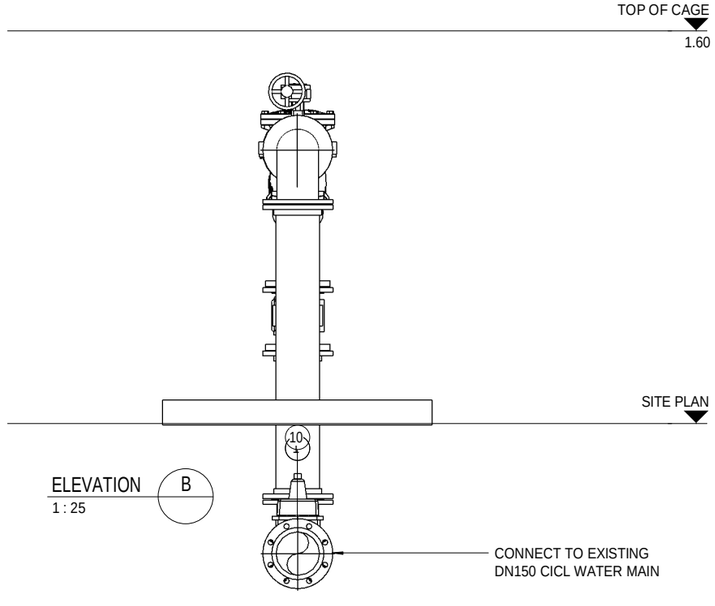
MARK	DESCRIPTION	COMMENTS
1	MAIN ISOLATOR	SUPPLIED BY TASWATER
2	DN150 GIBAULT JOINT	SUPPLIED BY TASWATER
3	DN150 EUROMAG MUT 2200 EL FLOW METER	SUPPLIED BY TASWATER
4	DN150x200 HYDRANT RISER WITH 25mm TAPPING FOR PRESSURE TESTING, 20mm VALVE AND PLUG	SUPPLIED BY TASWATER
5	DN150 LUG TYPE BUTTERFLY VALVE WITH WORK=M GEAR ACTUATOR	1 x SUPPLIED BY TASWATER
6	DN150 STRAINER	OWNED, OPERATED AND MAINTAINED BY PROPERTY OWNER
7	HIGH HAZZARD DN150 VALVCHEQ RPZD RP03 COMPLETE ASSEMBLY	OWNED, OPERATED AND MAINTAINED BY PROPERTY OWNER
8	DN150 LUG TYPE BUTTERFLY VALVE WITH WORK=M GEAR ACTUATOR	1 x SUPPLIED BY TASWATER
9	DN150 GIBAULT JOINT	SUPPLIED BY TASWATER
10	MAIN ISOLATOR	SUPPLIED BY TASWATER

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS NOTED OTHERWISE.
2. A 3mm CLEARANCE HAS BEEN ADDED WHERE A GASKET IS REQUIRED.
3. ALL METALIC PIPEWORK TO BE 'DENSO' WRAPPED, OR EQUIVALENT WHERE IT COMES IN CONTACT WITH CONCRETE - TO PROTECT IT FROM CORROSION.
4. WHERE A VENTED BACK FLOW PREVENTION DEVICE IS REQUIRED SUCH AS A REDUCED PRESSURE ZONE DEVICE (RPZD) IT SHALL:
   - COMPLY WITH AS3500 AND AS2845, IT SHALL:
   - HAVE FREE VENTILATION TO THE ATMOSPHERE FOR THE RELIEF VALVE AT ALL TIMES.
   - NOT BE IN AN AREA THAT MAY BE SUBJECT TO PONDING.
   - HAVE THE RELIEF DRAIN OUTLET NOT LESS THAN 300mm ABOVE THE SURROUNDING SURFACE.
5. INSTALL THE METER ASSEMBLY IN CAGE IN ACCORDANCE WITH TWS-W-003.
6. THE PROPERTY OWNER IS REPONSIBLE FOR THE ONGOING MAINTENANCE OF SECURITY CAGE.
7. INSTALL AND LOCATE THE METER ASSEMBLY SO THAT THE METER CAN BE EASILY READ.
8. THE MAGFLOW METER REQUIRES A STRAIGHT LENGTH OF PIPE MEASURED FROM THE CENTRE OF THE METER:
   - TO AN UPSTREAM LENGTH OF 5 TIMES THE NOMINAL DIAMETER; AND
   - TO A DOWNSTREAM LENGTH OF 3 TIMES THE NOMINAL DIAMETER TO MINIMISE TURBULANCE.
9. EARTH THE METER AS PER MANUFACTURER'S SPECIFICATIONS.
10. LOCATE THE METER IN AN UPRIGHT POSITION TO ENSURE MNIMUM TURBULANCE NEAR THE METER.
11. INSTALL MAIN ISOLATOR IN GROUND TO ENSURE MINIMUM TURBULANCE NEAR THE METER.
12. CONCRETE SLAB TO HAVE 50mm CONDUIT FOR CORRECT INSTALLATION OF EARTH STAKE.

VALVE & EQUIPMENT SCHEDULE

1. ONLY USE PRODUCTS WITH WATERMARK CERTIFICATION AND APPROVED FOR USE BY TASWATER AND LISTED WITHIN CITY WEST WATER'S APPROVED PRODUCTS CATALOGUE.
2. INSTALLATION MUST COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. ALL VALVES MUST BE RESILIENT SEATED, CLOCKWISE CLOSING TO AS1628 WITH 316 STAINLESS STEEL BOLTS AND WASHERS.
4. UNLESS APPROVED OTHERWISE THE WATER METER/S, TAILS AND METER BOXES ARE TO BE SUPPLIED BY TASWATER.



No.	Amendment Description	Initials	Date
B	RE-ISSUED FOR APPROVAL	BWH	20/01/2023
A	FOR APPROVAL	BWH	04/07/2022

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SCALES
AS SHOWN
250 0 250 500 750 1000
SCALE IN mm - 1:25

Co-ordinate System: MGA ZONE 55 | Height Datum: AHD

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Department of State Growth

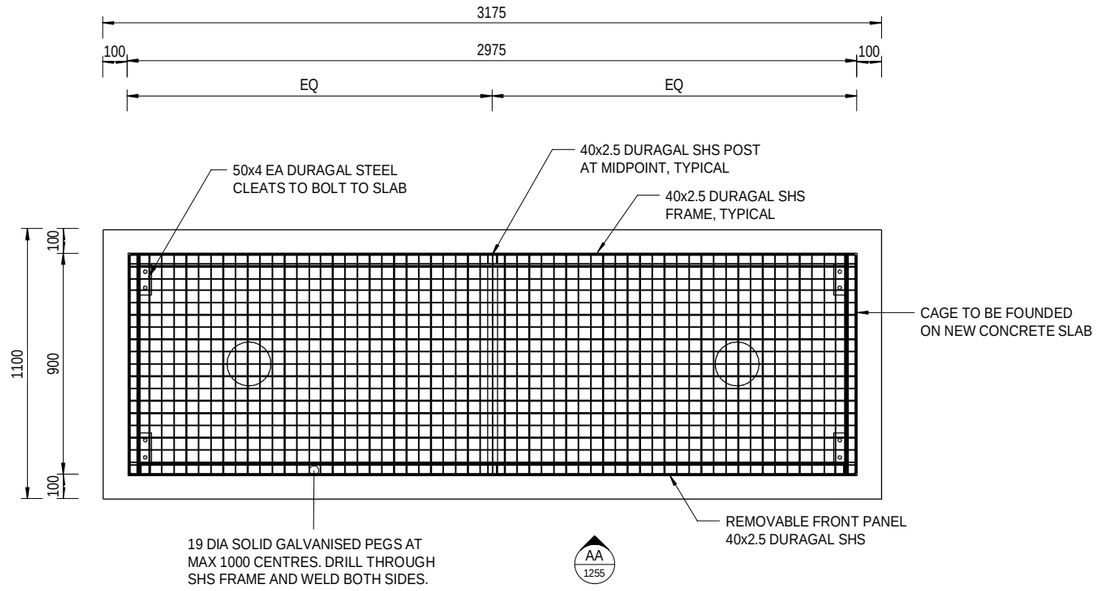
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS

GOLF COURSE RPZD DETAIL - GENERAL ARRANGEMENT

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-S1254	20/01/2023 8:39:59 AM	1254

REGISTRATION NUMBER
A0113.028

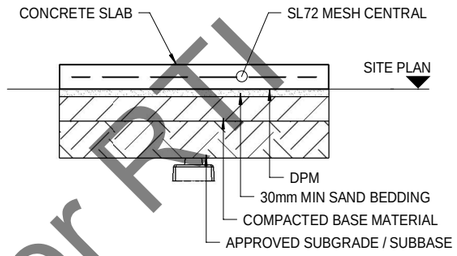
REVISION B



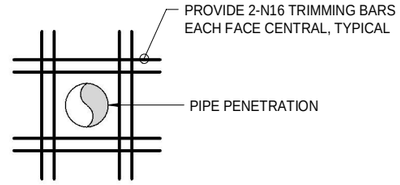
SLAB PLAN
SCALE: 1 : 25

GENERAL NOTES

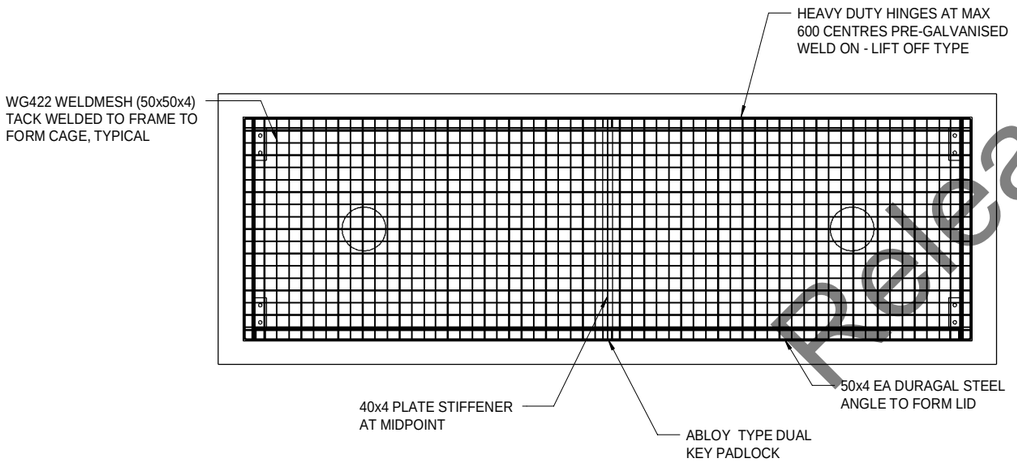
1. ALL DIMENSIONS SHALL BE CONFIRMED ONSITE WITH SUPERINTENDANT PRIOR TO FABRICATION.
2. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS NOTED OTHERWISE.
3. ALL PIPE SUPPORTS SHALL BE DESIGNED TO SUIT THE PIPES AND ASSEMBLY SIZES SELECTED.
4. ALL CONCRETE TO BE 25MPa UNLESS NOTED OTHERWISE.
5. WG422 WELDMESH (50x50x4) TACK WELDED TO FRAME TO FORM CAGE.
6. ALL WELDS TO BE 4 CONTINUOUS FILLET WELD - AVOID BURN THROUGH.
7. ALL WELDS AND CUT ENDS TO BE COATED WITH GALMET COLD GALVANISING OR SIMILAR APPROVED.



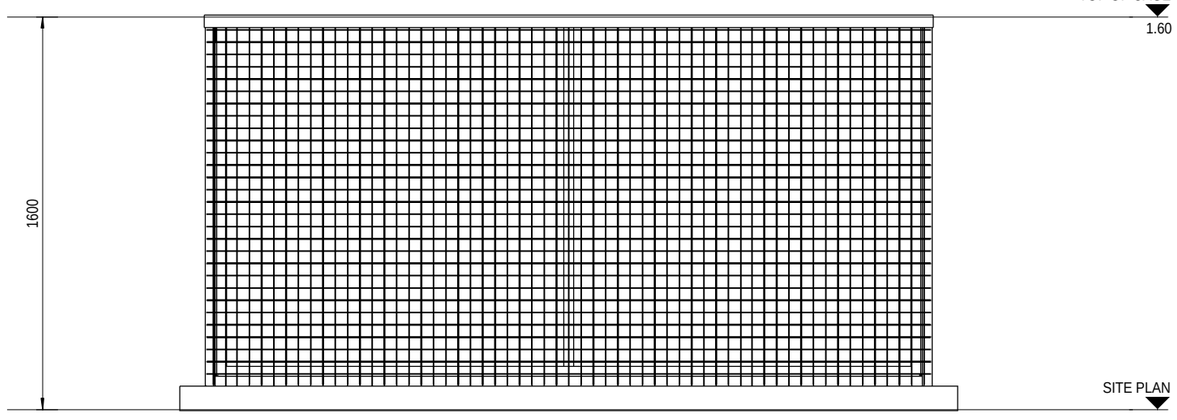
SLAB REINFORCEMENT DETAIL
SCALE: 1 : 25



SLAB PENETRATION DETAIL
SCALE: 1 : 25



CAGE PLAN
SCALE: 1 : 25



ELEVATION AA
1 : 25

No.	Amendment Description	Initials	Date
B	RE-ISSUED FOR APPROVAL	BWH	20/01/2023
A	FOR APPROVAL	BWH	04/07/2022

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SCALES
AS SHOWN
250 0 250 500 750 1000
SCALE IN mm - 1:25

Co-ordinate System: MGA ZONE 55 | Height Datum: AHD

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Department of State Growth
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS

HINGED LOCKABLE ANTI-VANDAL CAGE

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-S1255	20/01/2023 8:40:00 AM	1255

REGISTRATION NUMBER
A0113.028

REVISION B

WATER MAIN FITTINGS AND THRUST RESTRAINTS

CHAINAGE MARKER	FITTING	THRUST TYPE	MIN. THRUST AREA (m2)
WM-101	TIE-IN TO EXISTING WATERMAIN AND HORIZONTAL BEND 11.25°	INLINE	0.41
WM-102	VERTICAL JOINT DEFLECTION 1.98°	N/A	N/A
WM-103	VERTICAL JOINT DEFLECTION 0.99°	N/A	N/A
WM-104	DN100 BRANCH TEE AND STOP VALVE	PLAIN	0.21
WM-105	VERTICAL JOINT DEFLECTION 0.50°	N/A	N/A
WM-106	VERTICAL JOINT DEFLECTION 0.57°	N/A	N/A
WM-107	VERTICAL JOINT DEFLECTION 1.55°	N/A	N/A
WM-108	VERTICAL JOINT DEFLECTION 3.26°	N/A	N/A
WM-109	VERTICAL JOINT DEFLECTION 1.49°	N/A	N/A
WM-110	VERTICAL JOINT DEFLECTION 0.80°	N/A	N/A
WM-111	VERTICAL JOINT DEFLECTION 3.98°	N/A	N/A
WM-112	VERTICAL JOINT DEFLECTION 3.69°	N/A	N/A
WM-113	VERTICAL JOINT DEFLECTION 3.67°	N/A	N/A
WM-114	HORIZONTAL BEND 11.25° HORIZ. JOINT DEFLECTION 0.74°	PLAIN	0.41
WM-115	HORIZONTAL BEND 11.25°	PLAIN	0.41
WM-116	NEW PROPERTY CONNECTION AND DN25 LOW HAZARD WATER METER	PLAIN	0.18
WM-117	HORIZONTAL BEND 6.00° HORIZONTAL JOINT DEFLECTION 0.30°	PLAIN	0.21
WM-118	DN150 BRANCH TEE, HORIZONTAL BEND 11.25o, STOP VALVE AND TIE-IN TO EXISTING WATERMAIN	INLINE	0.41
WM-201	TIE-IN TO EXISTING DN150 CICL SUB MAIN	PLAIN	0.36
WM-202	VERTICAL JOINT DEFLECTION 4.00°	N/A	N/A
WM-203	VERTICAL JOINT DEFLECTION 0.48°	N/A	N/A
WM-204	VERTICAL BEND 11.25°	PLAIN	0.18
WM-205	VERTICAL BEND 11.25°	PLAIN	0.18
WM-206	NEW TASWATER METER	PLAIN	0.36
WM-302	VERTICAL 11.25° BEND + JOINT DEFLECTION 3.25°	PLAIN	0.41
WM-303	VERTICAL 11.25° BEND + JOINT DEFLECTION 3.69°	PLAIN	0.41
WM-304	VERTICAL JOINT DEFLECTION 4.76°	N/A	N/A
WM-305	VERTICAL JOINT DEFLECTION 3.33°	N/A	N/A
WM-306	VERTICAL 6° BEND + JOINT DEFLECTION 1.59°	PLAIN	0.21
WM-307	TIE-IN TO EXISTING WATERMAIN	N/A	N/A

THRUST BLOCK DESIGN IS BASED ON
THE FOLLOWING:

AHBP = 100 kPa
DESIGN HEAD = 109m
MIN TEST PRESSURE = 1365 kPa
TEST PRESSURE SPECIFIED = 1500 kPa

NOTE:

1. CONCRETE THRUST RESTRAINTS SHALL COMPLY WITH TASWATER STANDARD DRAWINGS TW-W-300 AND MRWA-W205A

SETOUT POINTS

POINT	EASTING	NORTHING
WM-101	540932.607	5258620.711
WM-102	540947.405	5258630.961
WM-103	540980.287	5258653.738
WM-104	541023.031	5258683.350
WM-105	541038.649	5258694.171
WM-106	541050.979	5258702.713
WM-107	541064.131	5258711.825
WM-108	541108.520	5258742.576
WM-109	541116.740	5258748.270
WM-110	541149.621	5258771.049
WM-111	541172.637	5258786.994
WM-112	541186.612	5258796.675
WM-113	541200.586	5258806.356
WM-114	541247.831	5258839.085
WM-115	541257.696	5258849.542
WM-116	541263.755	5258853.852
WM-117	541295.023	5258876.089
WM-118	541316.180	5258894.950
WM-119	541323.502	5258901.478
WM-201	541380.710	5258935.505
WM-202	541376.130	5258944.395
WM-203	541370.277	5258956.192
WM-204	541358.090	5258977.824
WM-205	541356.126	5258981.309
WM-206	541354.690	5258983.858
WM-302	541018.068	5258688.286
WM-303	541015.940	5258690.401
WM-304	540991.831	5258714.375
WM-305	540986.158	5258720.016
WM-306	540983.322	5258722.836
WM-307	540979.420	5258726.715

No.	Amendment Description	Initials	Date
C	RE-ISSUED FOR APPROVAL	C.M.	20/01/2023
B	UPDATES TO WATER MAIN TABLE	C.M	06/10/2022
A	DETAILED DESIGN	D.C.	17/03/2021

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SCALES
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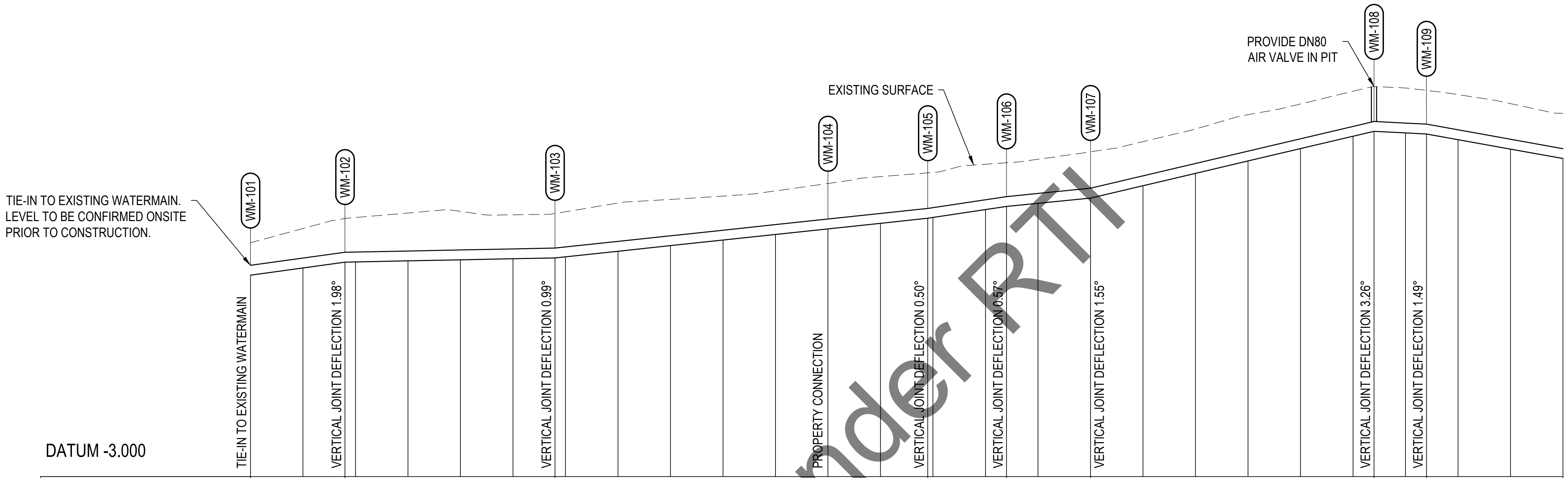
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS

WATER MAIN SETOUT, FITTING AND THRUST TABLE

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C1259	20-Jan-23, 11:37 AM	1259

REGISTRATION NUMBER
A0113.028

REVISION C



DATUM -3.000

PIPELINE GRADE: G=2.7% L=18m | G=0.4% L=40m | G=2.1% L=71m | G=3.0% L=15m | G=2.0% L=16m | G=4.7% L=54m | G=-1.0% L=10m | G=-3.6% L=40m

CHAINAGE	PIPE COVER	DEPTH TO INVERT	GROUND LEVELS	PIPE INVERT
0.00	-0.820	-1.233	3.897	2.664
10.00	-1.088	-1.501	4.439	2.938
18.00	-1.253	-1.666	4.824	3.158
20.00	-1.278	-1.691	4.858	3.166
30.00	-1.410	-1.823	5.029	3.206
40.00	-1.433	-1.846	5.092	3.247
50.00	-1.259	-1.672	4.958	3.287
58.00	-1.279	-1.692	5.011	3.319
60.00	-1.302	-1.715	5.077	3.362
70.00	-1.418	-1.831	5.406	3.574
80.00	-1.347	-1.760	5.547	3.787
90.00	-1.259	-1.672	5.672	3.999
100.00	-1.245	-1.658	5.870	4.212
110.00	-1.314	-1.727	6.151	4.424
120.00	-1.364	-1.777	6.413	4.637
129.00	-1.317	-1.730	6.558	4.828
130.00	-1.302	-1.715	6.574	4.858
140.00	-1.313	-1.726	6.885	5.158
144.00	-1.251	-1.664	6.942	5.278
150.00	-1.263	-1.677	7.075	5.398
160.00	-1.346	-1.759	7.357	5.598
170.00	-1.263	-1.676	7.744	6.068
180.00	-1.275	-1.688	8.226	6.538
190.00	-1.349	-1.762	8.771	7.008
200.00	-1.286	-1.699	9.178	7.478
210.00	-1.300	-1.713	9.661	7.948
214.00	-1.290	-1.703	9.839	8.136
220.00	-1.294	-1.707	9.784	8.076
224.00	-1.245	-1.658	9.694	8.036
230.00	-1.300	-1.713	9.533	7.820
240.00	-1.318	-1.731	9.191	7.461
250.00	-1.308	-1.721	8.822	7.101

DN375 PN35 DICL WATERMAIN PROFILE

No.	Amendment Description	Initials	Date
B	RE-ISSUED FOR APPROVAL	C.M.	20/01/2023
A	DETAILED DESIGN	D.C.	17/03/2021

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SCALES 1:1000 H 1:200 V (A3)

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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DESIGNED s36 [redacted]
REVIEWED s36 [redacted]

Department of State Growth

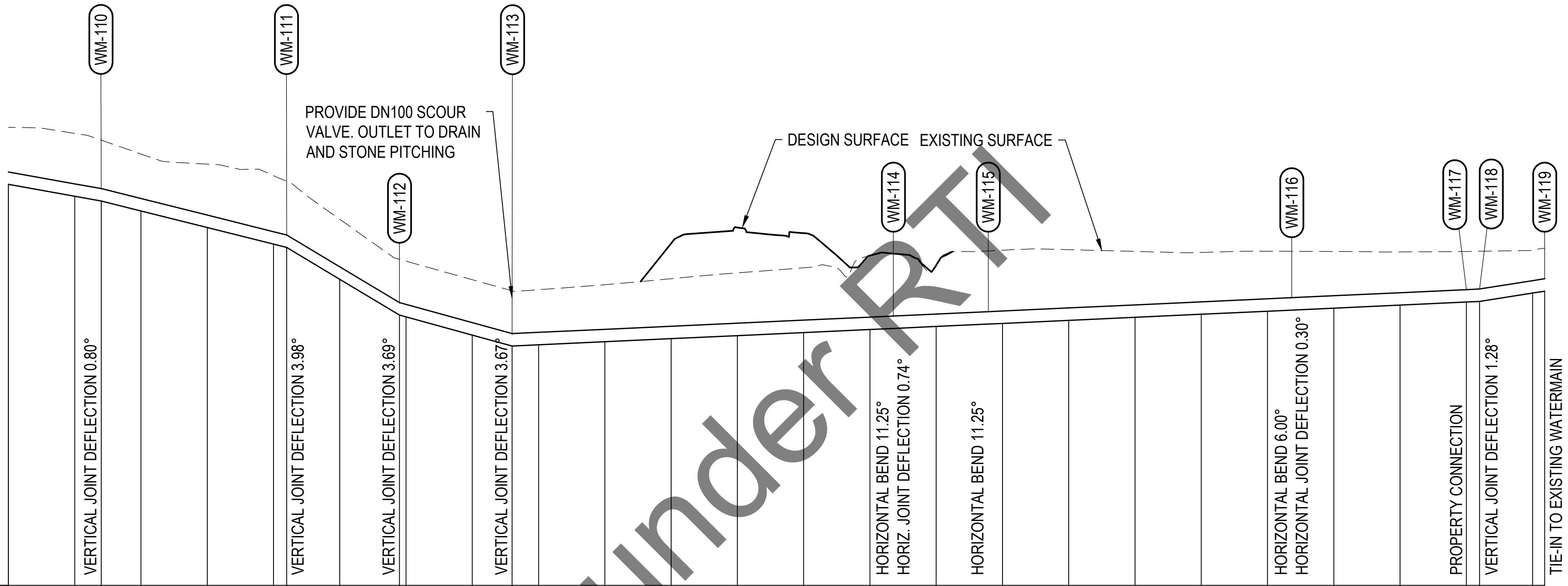
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS

DN375 PN35 DICL WATERMAIN PROFILE - DRG 1

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C1261	20-Jan-23, 9:05 AM	1261

REGISTRATION NUMBER A0113.028

REVISION B



DATUM -5.000

PIPELINE GRADE: L=40m G=-3.6% | L=28m G=-5.0% | L=17m G=-12.0% | L=17m G=-5.5% | G=0.9% L=146m | G=3.2% L=10m

CHAINAGE	PIPE COVER	DEPTH TO INVERT	GROUND LEVELS	PIPE INVERT
250.00	-1.308	-1.721	8.822	7.101
260.00	-1.485	-1.898	8.640	6.742
264.00	-1.424	-1.837	8.435	6.598
270.00	-1.307	-1.720	8.018	6.298
280.00	-1.500	-1.914	7.712	5.798
290.00	-1.653	-2.067	7.364	5.298
292.00	-1.587	-2.000	7.196	5.198
300.00	-1.397	-1.810	6.049	4.238
309.00	-1.267	-1.680	4.838	3.158
310.00	-1.266	-1.679	4.782	3.103
320.00	-1.256	-1.669	4.222	2.552
326.00	-1.253	-1.666	3.888	2.222
330.00	-1.248	-1.662	3.921	2.259
340.00	-1.305	-1.720	4.071	2.351
350.00	-2.460	-2.876	5.319	2.443
360.00	-2.847	-3.264	5.799	2.535
370.00	-2.583	-3.001	5.629	2.627
380.00	-1.811	-2.231	4.950	2.719
383.517	-1.838	-2.251	5.010	2.759
390.00	-1.426	-1.847	4.659	2.812
397.851	-1.785	-2.198	5.091	2.893
400.00	-1.788	-2.211	5.114	2.904
410.00	-1.711	-2.135	5.130	2.996
420.00	-1.565	-1.990	5.078	3.088
430.00	-1.440	-1.866	5.047	3.180
440.00	-1.383	-1.810	5.083	3.272
	-1.346			
450.00	-1.282	-1.710	5.075	3.364
460.00	-1.175	-1.605	5.061	3.456
470.00	-1.095	-1.526	5.075	3.549
472.00	-1.102	-1.515	5.082	3.567
480.00	-0.880	-1.293	5.113	3.820
481.81	-0.840	-1.253	5.174	3.877

DN375 PN35 DICL WATERMAIN PROFILE

No.	Amendment Description	Initials	Date
B	RE-ISSUED FOR APPROVAL	C.M.	20/01/2023
A	DETAILED DESIGN	D.C.	17/03/2021

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SCALES 1:1000 H 1:200 V (A3)

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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DESIGNED s36 [redacted]

REVIEWED s36 [redacted]

Department of State Growth

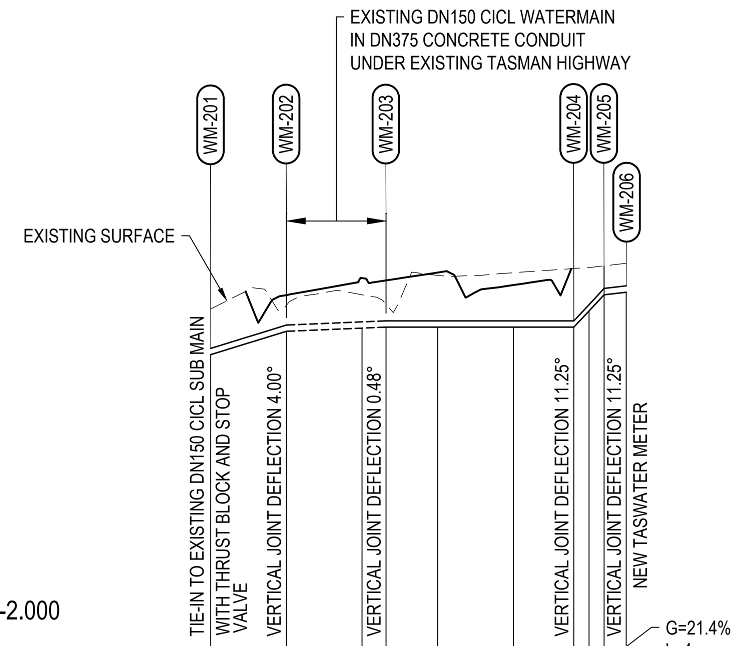
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS

DN375 PN35 DICL WATERMAIN PROFILE - DRG 2

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C1262	20-Jan-23, 9:05 AM	1262

REGISTRATION NUMBER A0113.028

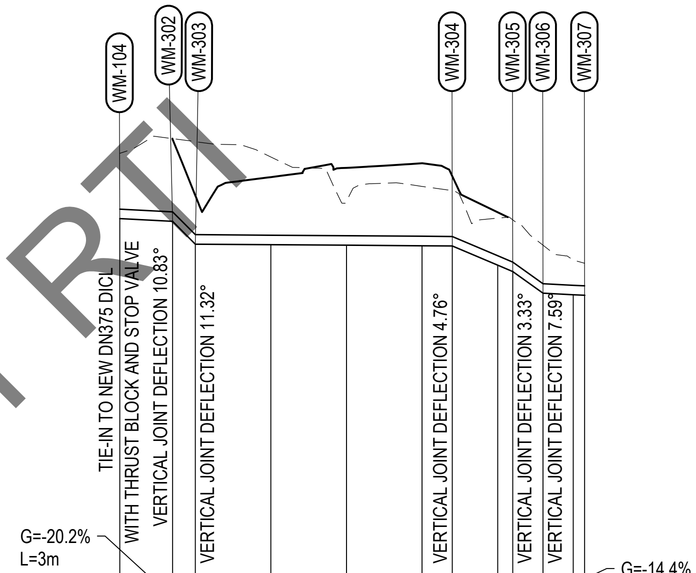
REVISION B



DATUM -2.000

PIPELINE GRADE	G=6.2% L=10m	EXISTING	L=25m G=0.0%	G=21.4% L=4m; G=2.3% L=3m						
PIPE COVER	-1.043	-0.793	-1.157	-1.120	-1.280	-0.947	-1.386	-0.981	-0.599	-0.600
DEPTH TO INVERT	-1.210	-0.960	-1.324	-1.287	-1.447	-1.114	-1.553	-1.148	-0.766	-0.767
GROUND LEVELS	6.967	7.333	7.781	7.770	7.930	7.597	8.036	8.060	8.106	8.175
PIPE INVERT	5.756	6.373	6.457	6.483	6.483	6.483	6.483	6.912	7.340	7.408
CHAINAGE	0.00	10.00	20.00	23.17	30.00	40.00	48.00	50.00	52.00	54.93

DN150 PN35 DICL WATERMAIN PROFILE



DATUM -5.000

PIPELINE GRADE	L=7m G=-1.0%; G=-20.2% L=3m	L=34m G=-0.1%	L=8m G=-8.5%	G=-14.4% L=4m	G=-1.0% L=5.5m							
PIPE COVER	-1.478	-1.935	-1.036	-1.538	-1.798	-1.932	-1.595	-1.148	-1.115	-1.020	-0.666	-0.600
DEPTH TO INVERT	-1.728	-2.185	-1.286	-1.788	-2.048	-2.182	-1.845	-1.398	-1.365	-1.270	-0.916	-0.850
GROUND LEVELS	6.151	6.539	5.036	5.522	5.768	5.888	0.000	4.497	0.000	0.000	3.326	3.245
PIPE INVERT	4.424	4.354	3.749	3.735	3.721	3.707	3.701	3.193	3.024	2.450	2.410	2.395
CHAINAGE	0.00	7.00	10.00	20.00	30.00	40.00	44.00	50.00	52.00	56.00	60.00	61.50

DN250 PE100 PN10 SLEEVING PIPE FOR
DN100 PN35 PN16 WATERMAIN

No.	Amendment Description	Initials	Date
B	RE-ISSUED FOR APPROVAL	C.M.	20/01/2023
A	DETAILED DESIGN	D.C.	17/03/2021

A3 original | This sheet may be prepared using colour and may be incomplete if copied

SCALES
1:1000 H 1:200 V (A3)

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

pitt&sherry
Tasmanian Government

DESIGNED s36 [redacted]
REVIEWED s36 [redacted]

Department of State Growth
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS

WATERMAIN PROFILES - DRG 3

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C1263	20-Jan-23, 9:06 AM	1263

REGISTRATION NUMBER
A0113.028

REVISION B

From: s 36
To: [redacted]
Subject: Re: Clearance under power line on Milford
Date: Wednesday, 1 February 2023 8:50:15 AM
Attachments: image001.png
image002.png

Hi [redacted]
The power line is shown at ch 760 on Drawing 2105 of the Milford Access set
Regards
s 36

Sent from my iPhone

On 1 Feb 2023, at 08:23, [redacted]@stategrowth.tas.gov.au> wrote:

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi s 36

Thank you. The for spending that through. The snippet is not clear as to where those poles are, are you/TN able to provide a clearer picture of where the poles are?

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] s 36 [redacted]
www.stategrowth.tas.gov.au

Courage to make a difference through
TEAMWORK | INTEGRITY | RESPECT | EXCELLENCE

In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

From: s 36 [redacted]@pittsh.com.au>
Sent: Tuesday, 31 January 2023 5:36 PM
To: [redacted]@stategrowth.tas.gov.au>
Subject: Clearance under power line on Milford

Hi [redacted]

Refer below Out of scope [redacted] wherein a clearance of 5.5 m is recommended which is less than the 5.7 m that has been surveyed.

Regards

s 36 [redacted]

Principal Engineer

s 36 [redacted] | [redacted] | [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone +s 36 [redacted]

pittsh.com.au

From: s 36 [redacted]
Sent: Wednesday, 2 November 2022 3:28 PM
To: [redacted]@stategrowth.tas.gov.au>
Subject: RE: Milford Driveway Drawings

Hi [redacted]

I have checked with the designer and he advises that the power line at ch 760 does in fact have sufficient clearance. Its 5.7 metres above the new road levels at the lowest point.

Regards

s 36 [redacted]

Principal Engineer

s 36 [redacted] | [redacted] | [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | s 36 [redacted]

pittsh.com.au

From: s 36 [redacted]
Sent: Tuesday, 1 November 2022 7:45 PM
To: [redacted]@stategrowth.tas.gov.au>
Subject: FW: Milford Driveway Drawings

Hi [redacted]

Driveway drawings attached. We have provided 225 mm diameter culverts along the driveway (450 mm at the entrance). The 225s need about 400 mm cover so we have had to lift the road by about 600 mm at the culvert locations. Is that what s 36 [redacted] wants? If not then no culverts, road is at ground level and all water goes over the road and we could put a concrete spoon drain at the existing shallow drain crossings. You will have to markup the location of existing water troughs and proposed new ones. We haven't noted that the power line at ch 760 needs to be raised to 5.5 metres, but I'll get that done. Let me know if there is anything else you want added before you send to s 36 [redacted].

Regards

s 36 [redacted]

Principal Engineer

s 36 [redacted] | [redacted] | [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | s 36 [redacted]

pittsh.com.au

Out of scope

[redacted]

From: [redacted]
To: s 36 ; [redacted]
Subject: RE: Tasman Highway Upgrade - Airport Interchange to Midway Point Causeway - Methodology for Assessment of Impact and Offset areas
Date: Tuesday, 31 January 2023 2:26:00 PM
Attachments: s 36 [redacted]

Hi s 36 [redacted]

Apologise, I thought I got this back to you last week. See comments from [redacted] and myself in the document.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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TEAMWORK | INTEGRITY | RESPECT | EXCELLENCE

In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

From: s 36 [redacted]@pittsh.com.au>
Sent: Tuesday, 3 January 2023 10:23 AM
To: [redacted]@stategrowth.tas.gov.au>; [redacted]
[redacted]@stategrowth.tas.gov.au>
Subject: Tasman Highway Upgrade - Airport Interchange to Midway Point Causeway - Methodology for Assessment of Impact and Offset areas

Good morning and Happy New Year [redacted]

Attached for your review is the proposed methodology for assessment of the impact and offset areas that was discussed at our meeting with DCCEEW on 22 November last. Without pre-empting any comments or amendments you may have I have forwarded this to DCCEEW to get it in the queue. If you do have any changes, I will forward an update to DCCEEW prior to their review.

Regards

s 36 [redacted]

Principal Engineer

s 36 [redacted] | [redacted] | [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | s 35 [redacted]

pittsh.com.au

Attachment 1

northbarker
ECOSYSTEM SERVICES

Tasman Highway Upgrade

Hobart Airport to Sore

EPBC 2020/8805

Offset Appraisal

22 December 2022

The purpose of this document is to seek DCCEEW endorsement of the methodology for assessing the impact area and offset area. It also provides a method for monitoring the condition of the offset area over time. Once endorsed the impact and offset areas can be scored a condition (Habitat Quality) score. The information included in this appraisal will be incorporated along with the data from assessment into the Orchid Management Plan.

NB The Orchid Management Plan will describe ongoing management of the Orchid Management Area on Milford. That document is to be distinguished from the Roadside Conservation Site Management Plan on State Growth land and the orchid management prescriptions in the Construction Management Plan.

The assessment by DAWE, now DCCEEW, subsequently referred to as the Department, has determined [1] there to be residual significant impacts to two critically endangered orchids (MNES) as summarized in Table 1. The area of known range has been taken from mapped area of critical habitat for each species from the *Orchid Impact Assessment and Mitigation Plan* (North Barker 02-02-2022).

Table 1: Impact to known range of orchids

Species	Direct Impact	Indirect Impact
Milford leek-orchid (*Prasophyllum milfordense)*	0.08 ha (0.40%)	0.04 ha (0.31%)
Sagg Spider-orchid (*Caladenia saggicola*)	0.08 ha (0.37 %)	0.05 ha (0.24%)

The Department has also determined that the without avoidance of impacts, the residual significant impacts will require offsetting.

Following review of an earlier draft of this docu[illegible] and subsequent meeting on 22 November 2022 between the consultants, DCEEW and D[illegible] the methodology has been adapted to provide greater rigor to scoring habitat quality for use within the offset calculator but also for future condition monitoring.

[1] (email from s36 [redacted] to s36 [redacted] (16/3/2022)

s 36 [redacted]@northbarker.com.au) 20221222

Offset Area

The Orchid Habitat Management Area incorporates 5.5 ha of critical orchid habitat (the offset) immediately adjoining the impact area (0.13 ha). (Figure 1). The Orchid Habitat Management Area (6.1 ha) is bounded by the new Milford property boundary with the Tasman Highway to the north, Pittwater Road to the west and an existing management track to the south and east. (Figure 2). It incorporates over 30 % of the critical orchid habitat capturing significant areas of orchid locations for both species (Figure 3).

The location for the Orchid Habitat Management Area has been selected as it incorporates areas of orchid habitat most likely impacted by secondary effects from the existing and potentially future road disturbance. It corresponds to Milford Forest Management Unit 4 in the Milford Fire Management Plan 2008.

The offset area will be secured within a covenant on title.

s 36 [redacted]@northbarker.com.au) 20221222

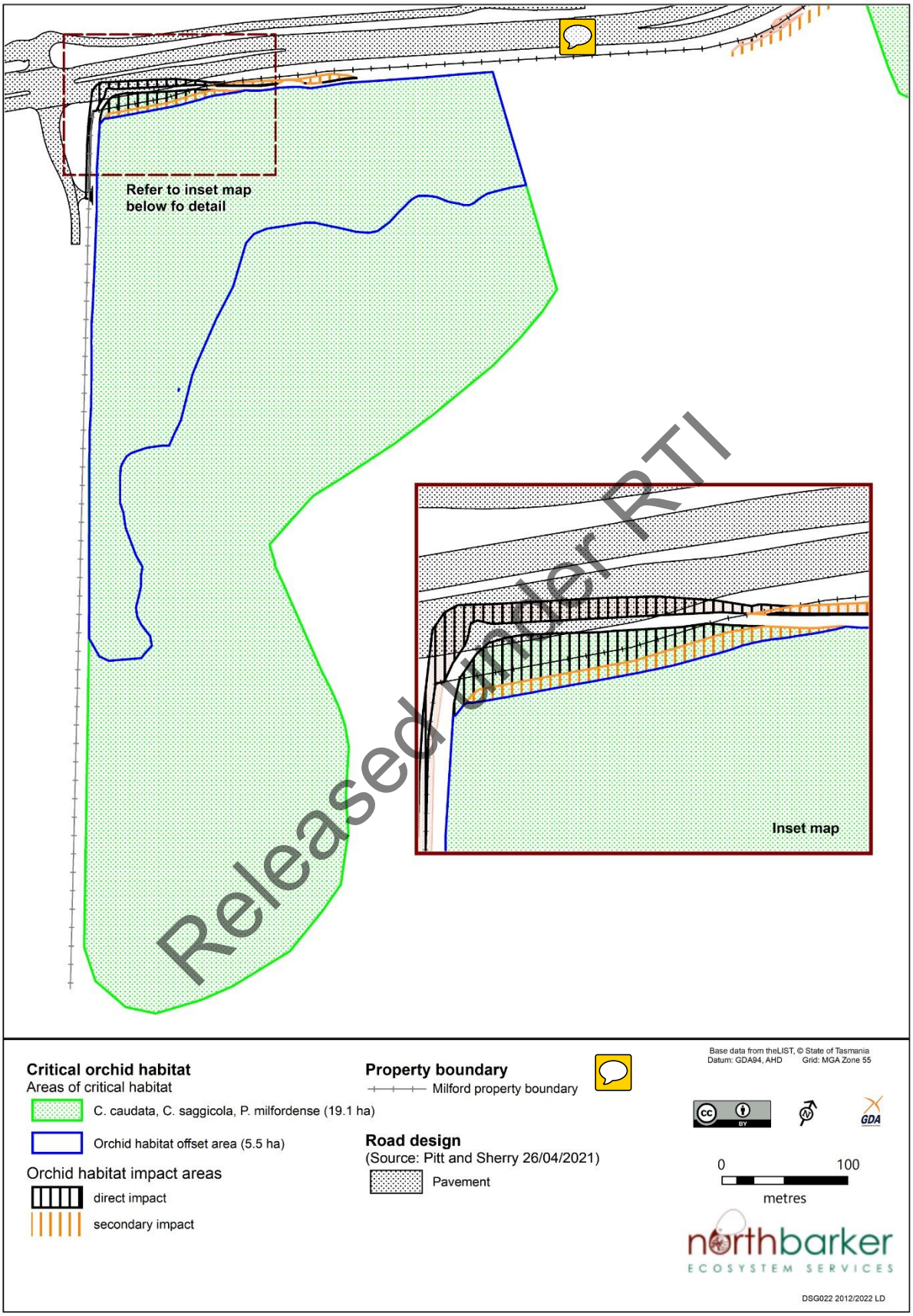

Figure1: Critical Orchid Impact and Offset Areas

s 36 [redacted]@northbarker.com.au) 20221222

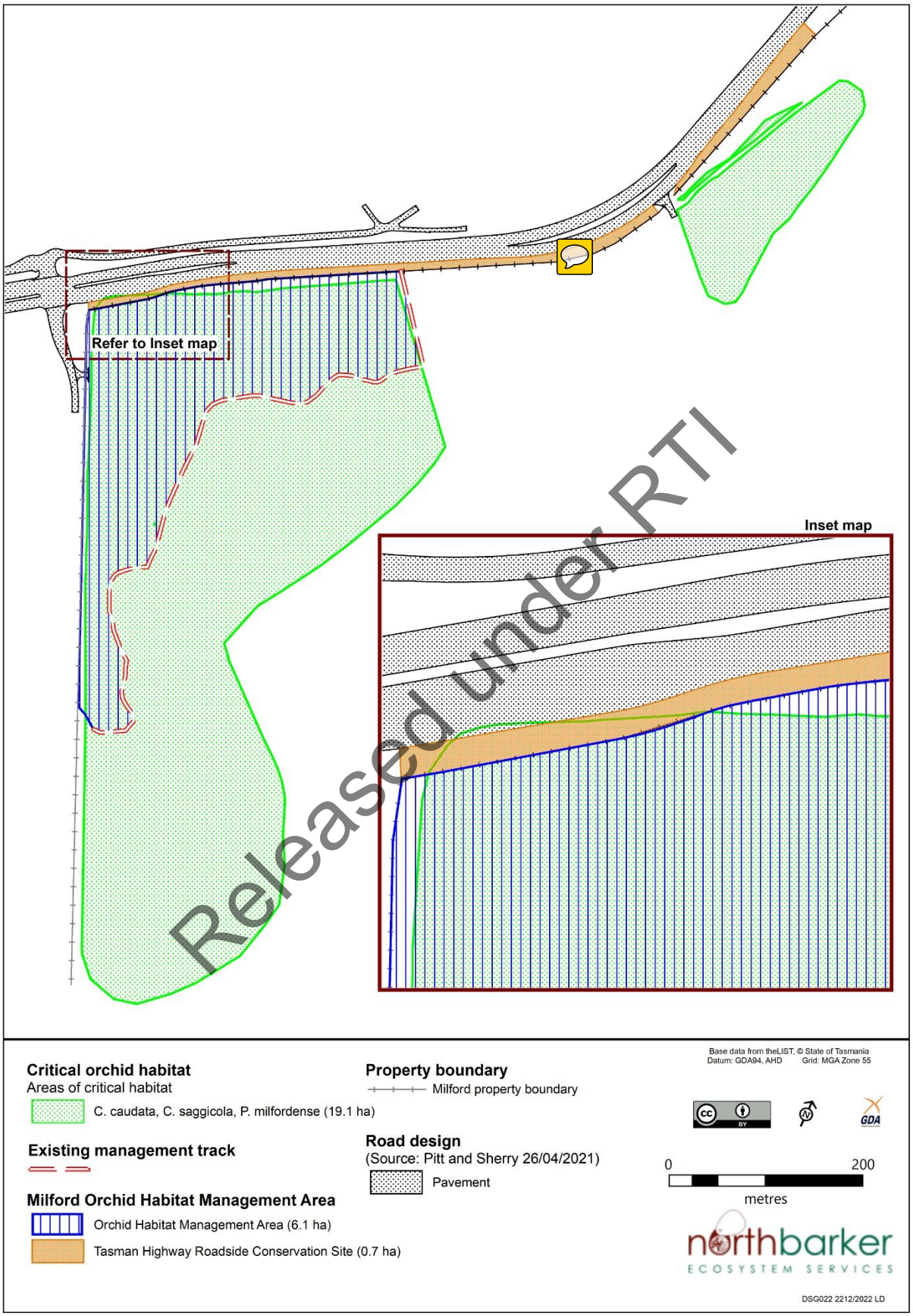

Figure 2: Orchid Management Area

s 36 [redacted]@northbarker.com.au) 20221222

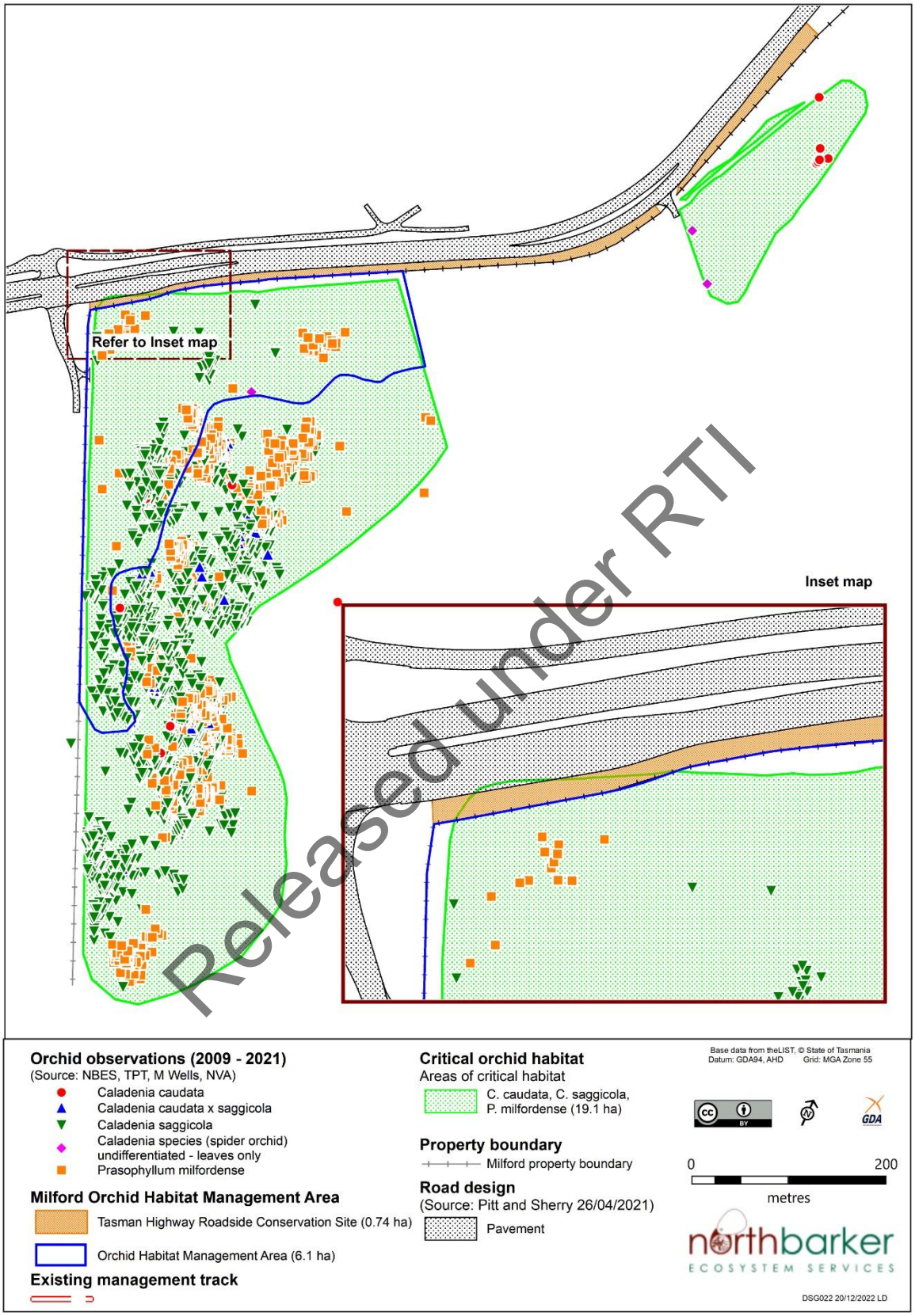

Figure 3: Orchid records and Orchid Management Area

Offset calculator

The Offset calculator takes into account the area of offset and management actions required to form the offset for the direct and indirect impacts.

The areas of impact and offset used in the calculations incorporates habitat for both species and so can be assessed concurrently. Both species are categorized as critically endangered which means the annual probability of extinction used by the calculator for both species is the same.

In the calculator we have taken a conservative approach and accumulated the areas of direct impact to 0.16 ha (0.08+0.08).

It is unclear how the direct and indirect offsets can be calculated on a single calculator. The offset calculator also doesn't appear to be able to take into account different offset area to impact area when considering indirect impacts that will not result in total loss but instead affect habitat quality.

A conservative approach has therefore been taken for indirect impacts by assuming total loss of habitat and quantifying the impact area as an accumulation of the two species. – 0.09 ha (0.05 +0.04). The area affected by indirect impacts is very likely to retain some habitat values for orchids.

For the purposes of the calculator total Impact Area = 0.25 ha

Habitat Quality

The Calculator relies on a Habitat Quality measure for the habitat to be scored between 1-10.

The Habitat Quality score is utilized to apply the Offset calculator. The Guidelines indicate quality to be made up of three components: site condition, site context and species stocking rates. "The weighting given to each component is dependent of the ecological requirements of the impacted species".

In this case we are considering habitat for three threatened orchid species. These are all terrestrial species.

Site condition. Variable habitat quality factors most applicable to the edaphic requirements of these species relate to the level of competition in the ground layer. Overdeveloped biomass can inhibit the vigor of orchids through competition for light and also within the rootzone. At Milford competition from introduced weeds, and native vegetation, notably bracken and understory shrubs, are the most significant variables affecting orchid habitat suitability. These deserve a heavy weighting. Other factors that can influence suitability for orchids are animal diggings from non-native species including rabbits and feral chickens. The digging can damage orchid tubers.

Other features that could potentially impact on site condition for orchids can include soil type, mycorrhizae presence, and access to pollinating insects. The impact area and offset area are part of the same site and adjoining one another within the same portion of the vegetation community that has already been identified as critical habitat for these species. Soil type is the same. It is assumed with a high level of confidence that the pollinator is present and can access all parts of the critical habitat. The mycorrhizae will exist where the orchids are growing being mutually dependent.

Site context. The proximity to habitat edge is relevant to habitat quality. Vegetation within his edge is more prone to disturbances from roadside activities. To avoid doubling up this should not include consequential impacts of weed infestation covered under site condition elsewhere, so it is given less weighting than site condition. Proximity to pavement edge is included recognizing that habitat <13m may be affected by infiltration (NBES 2022).

s 36 [redacted]@northbarker.com.au) 20221222

Stocking rates. There can be no better way of confirming habitat quality for orchids than to have plants present. The very best habitat for the orchids support plants at high stocking rates. To attain the highest score for habitat quality plants would need to be present in good numbers.

Table 2: Habitat Quality Metric

Habitat Component	Measure	Scores	Maximum Score
Site Condition	Invasive shrubby weeds	<5% - 2 5-25% - 1 >25% - 0	2
	Invasive ground cover herbs and grassy weeds	<5% - 3 5-25% - 2 25-50%- 1 >50% - 0	3
	Native competition: bracken and tall shrubs	< 50% - 1 >50% - 0	1
	Feral animal digging	<5% - 1 >5% - 0	1
Site context	Proximity to earthworks	>13m - 1 <13m - 0	1
Stocking rates	Orchids in area	>1/10sqm - 2 <1 / 10sqm - 1 0 - 0	2
Total maximum			10

The Habitat Quality Score will also be applied to monitor the condition of the offset area over time.

To create a reliable and repeatable habitat quality score there will be multiple sampling points. The impact area is small and can be scored as single site. The offset area will be subdivided into 32 of 50 m x 50 m grids (up to 0.25 ha if entirely within the offset area) (Figure 4).

Sampling will be taken at the centre of each grid using a 5 m x 5 m quadrat. 32 samples represents 1.45 % of the total area.

s 36 [redacted]@northbarker.com.au) 20221222

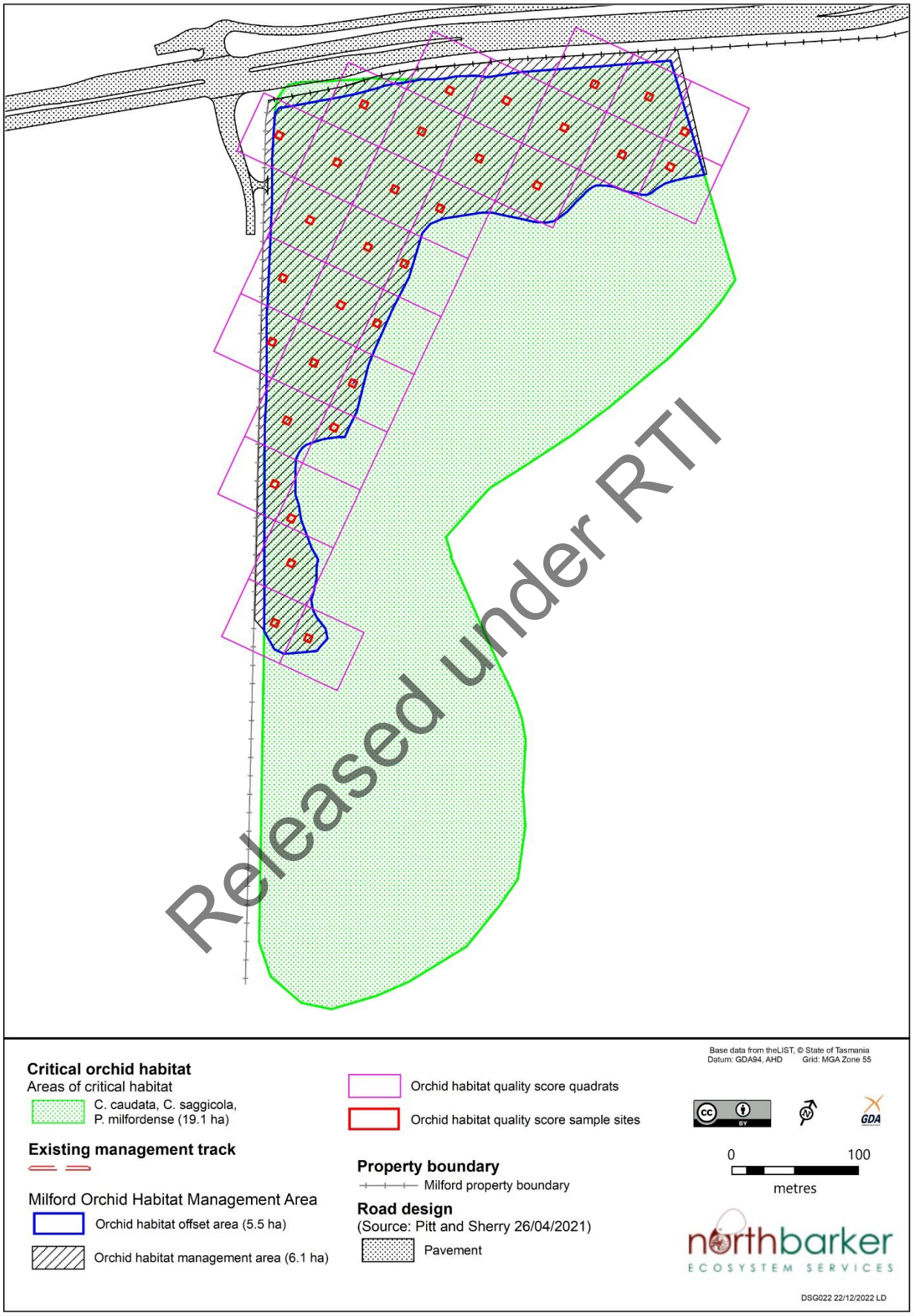

Figure 4: Orchid habitat quality sampling points

The following features require a score in the Offset Calculator:

Time over which loss is averted

The intention is for ongoing management subject to ongoing agreement with the landowner. 20 years is the maximum number allowed in the calculator.

Time until ecological benefit

The main management activity that affects habitat quality will be the removal and control of weed infestations. This has been put at three years for the completion of all primary weed management. Further ecological benefit will be achieved as follow up weed treatment is undertaken

Start Area (ha)

The Offset Area occupies 5.5 ha of critical orchid habitat.

Start Quality

The method for scoring this is discussed above under Habitat Quality. It will require further assessment of the impact and offset areas in line with the criteria provided in the Habitat Quality metric (Table 2).

Future Quality Score without offset

The habitat, even 50 m from the boundary edge, is being impacted by colonisation of weeds. The land owner has been successful at controlling woody weeds but is unlikely to have the resources to control the further spread of herbaceous weeds such as freesia and panic veldt grass which are more challenging but pernicious species that could degrade habitat suitability for orchids across the entire habitat area. The Habitat Quality in the offset management area is likely to worsen and so will be given a score of 0 under the criterion for *Invasive ground cover herbs and grassy weeds*.

Future Quality Score with offset

It is anticipated that the weed management will ensure the existing weed threat is reduced thus increasing the condition score above current rating The Habitat Quality in the offset management area is likely to improve and so will be given a score of 3 under the criterion for *Invasive ground cover herbs and grassy weeds*.

Risk of loss.

The Offset Guide states that risk of loss "describes the chance that the habitat on the proposed offset site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future." This will be given a score of 0 without offset. DCCEEW have advised that "risk of loss does not include loss that requires an assessment and offset under any legislation. As the offset area includes two critically endangered EPBC Act protected species any potential cause of loss would require assessment and offset under the EPBC Act."

Confidence in result

"This describes the level of certainty about the success of the proposed offset.". Managing weeds is a tangible task with an achievable outcome. To achieve the benefit does not require total elimination weeds just control to prevent weeds adversely impacting on the orchids now and into the future. A confidence level of 75% is cautionary and conservative. The Orchid Management Plan will include clear commitments that prescribe weed

s 36 [redacted]@northbarker.com.au) 20221222

management works to tackle the herbaceous weeds and monitor other sources of competition.

% of Impact Offset

This needs to exceed the minimum of 90% direct offset requirement.

From: [redacted]
To: s 36 [redacted]
Subject: RE: Milford Access Track Passing Bay
Date: Tuesday, 31 January 2023 4:50:00 PM

Hi s 36 [redacted]

Can you flick through TN's email advising that s36 current TN poles have sufficient clearance under the new access track and don't need modification? She would like a copy.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
PH: 6166 3422 | s 36 [redacted]
www.stategrowth.tas.gov.au

Courage to make a difference through
TEAMWORK | INTEGRITY | RESPECT | EXCELLENCE

In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

From: s 36 [redacted] @pittsh.com.au>
Sent: Tuesday, 20 December 2022 1:21 PM
To: [redacted] @stategrowth.tas.gov.au>
Subject: Re: Milford Access Track Passing Bay

Hi [redacted]

Can you confirm with s 36 [redacted] that the offset is in Unit 4, or otherwise advise to continue on that basis. Based on previous advice we are working on the assumption that the offset is on Unit 4. s 36 [redacted]

Regards
s 36 [redacted]

Sent from my iPhone

> On 19 Dec 2022, at 15:36, [redacted] @stategrowth.tas.gov.au> wrote:
>
> CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.
>
> Thanks mate, I'll await s 36 [redacted] feedback on unit 4 as an offset.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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Please note I do not work Fridays.

From: s 36 [redacted] @pittsh.com.au>
Sent: Monday, 19 December 2022 10:18 AM
To: [redacted] @stategrowth.tas.gov.au>
Subject: Milford Access Track Passing Bay

Hi [redacted]

Attached please find an outline for the passing bay under the power line on Milford. Overall length 25 metres. This should be more than adequate for light vehicles. (The guidelines suggest 20 metres long but its unclear if this includes tapers. The passing bays on the new access off Pittwater are much longer but these are to suit a B double)
Do you need to run this past s 36 [redacted]

Regards

<image001.png>

s 36 [redacted]

Principal Engineer

s 36 [redacted] | [redacted] | [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | s 36 [redacted]

pittsh.com.au

From:
To:
Subject: Milford - Compensatory planting
Date: Monday, 30 January 2023 10:36:34 AM
Attachments: image001.png
Out of scope
Out of scope
Out of scope
Out of scope
Milford NoAW and Outstanding Issues.msg

Good morning

Refer attached emails regarding the compensatory planting. The initial request for the tree planting definitely came from s 36, although there is no official request from her. It definitely did not come from the Department as was opposed to it.

Out of scope

39

Regards

s 36

Principal Engineer

s 36

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36

pittsh.com.au

Attachment 1

From:
To: [redacted]; s 36 [redacted]
Subject: Milford NoAW and Outstanding Issues
Attachments: image001.png
s 36, s 39 [redacted]

H s 36 [redacted] & [redacted]

Attached please find the revised completed NoAW letter with attachments (needs someone to sign it). Attachments 1 to 5 referred to in the letter are too big to email. [redacted] the letter , attachments & issues are also in D22/65743. s 36 [redacted] attachments are here J:\HOB\2019\151-200\HB19197\31P - Corresp To Client\Milford Acquisition\Milford NoAW Rev 03 Attachments 1 to 5.pdf

Regards

[redacted]

s 36 [redacted]

Principal Engineer

s 36 [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36 [redacted]

pittsh.com.au

Attachment 1a

Department of State Growth
STATE ROADS DIVISION

Salamanca Building Parliament Square
4 Salamanca Place, Hobart TAS
GPO Box 536, Hobart TAS 7001 Australia
Ph 0409938618
Email s 36 pittsh.com.au Web www.stategrowth.tas.gov.au
Our Ref: D20/327933

Tasmanian Government

s 36

Tasman Highway Upgrade – Airport to Western Causeway

Dear s 36

Notice of Accommodation Works – Milford – March 2022

1431 Tasman Highway, Cambridge	PID: 2865497

Further to previous discussions with respect to the above project, and following completion of the Planning Process and Tribunal Hearing, I am writing to inform you of the Department's final advice on the accommodation works on your property.

Please be notified that the Department intends to act based on the information outlined in this document and include it as part of the construction contract documentation. Also note that in Attachment 1 for conciseness we have only supplied Drawings 1105 to 1114 and 1205 to 1214.

Below is a summary of the intended accommodation works in relation to your property.

Access

The current main Milford access at chainage 2340 (refer Drawing 1112 in Attachment 1) will be retained, however turning movements will be restricted to left turn in, left turn out only. The following works will be carried out.

i. Regrading of the access inside your property line to approximately 8 metres from the existing gate and sealing of the access.

ii. Replacement of gate and railing fence to details shown in Attachment 2.

iii. Replacement of the cattle grid with a new 4.8 m wide grid to details shown on Attachment 3.

iv. Reinstatement of access and gates to Taswater easement on both sides of the access.

v. Provision of short layby on the highway shoulder on the eastern side of the access as shown on Drawing 1112 in Attachment 1.

vi. Relocation of the existing highway access gate at ch 1833 to Pittwater Road approximately 80 metres from the new Pittwater Road junction. New 4.2 m gate to be provided, access to be sealed to the boundary. Refer Drawing 1108 in Attachment 1.

vii. Reinstatement of the fire/service access track on the southern side of the highway boundary as shown on Drawings 1108, 1109, 1111 and 1112 in Attachment 1.

viii. The Department considers that, notwithstanding the removal of right turn movements from the access at ch 2340, the works proposed under items vi and vii above provide sufficient and comparable access to current arrangements for firefighting and for emergency activities associated with Hobart Airport.

ix. As the Department could not reach agreement with you on the scope and standard of the proposed new access off Pittwater Road this matter will now be assessed by the Valuer General and will be an item of compensation.

Compensatory Planting

x. An area of approximately 1.2 hectares on Milford has been fenced to your satisfaction and preliminary planting has been completed, with further planting and maintenance to be carried out in accordance with the details supplied by Wildseed Tasmania. Refer Attachment 4. We note that some aspects of this proposal may need to be modified depending on how various species respond. We remain committed to working with you and Wildseed to achieve a high quality outcome. The Department will maintain the planting until March 2032 which is the 10 year period stated in the Planning Permit. After this time sole responsibility for the trees will revert to you as owner.

The Department does not intend to create a covenant over the planted area and any compensation that may be applicable for loss of productive farmland will be assessed by the Valuer General

Fencing

xi. Rabbit proof fence to be provided on the new boundary over a length of approximately 990 metres to the details shown in Attachment 2. In line with your request, we have amended the droppers from treated pine to hardwood. We have also added some points of clarification to the sketches in Attachment 2.

Service relocation

Approximately 80 metres of the Taswater 375 mm watermain east of Pittwater Road will be relocated to the new road reserve. The connection to the Pines will also be relocated closer to Pittwater Road.. This work will be carried out by the Department's selected road contractor who will advise you of any interruptions to supply. Other existing connections to the main will be unaffected.

Several power poles on the highway need to be relocated and upgraded. As a result your power supply line will be renewed from the highway to the first pole inside your property (a distance of approximately 26 metres). This is shown on Drawing 1210 and also in Attachment 5.This work will be carried out by Tasnetworks and they will contact you about interruptions to supply. A further requirement of Tasnetworks is that a 12 metre wide easement must declared beneath this new line to replace the existing "implied" easement that has been in place

since the line was installed. Your approval is required for this easement and the relevant documentation is included in Attachment 5.

Watermain Easement

Some changes to the declared Taswater Easement on Milford are necessary because of the new highway boundary. These changes are shown on Drawings 1108 to 1112 and ensure that Taswater are able to use the realigned sections of the fire/service access track and formalise the location of the easement on the southern side of the existing track.

Drainage

New drainage for the highway is shown on Drawings 1205 to 1214 in attachment 1. We note your concerns about drainage and runoff on Pittwater Road in areas that are outside the Department's jurisdiction. We have referred this matter to the Clarence City Council.

. I also advise that the Valuer General in assessing compensation may take into account any considered betterment as a result to the works on Milford.

If you require any clarification, then please feel free to contact me.

Yours sincerely

Attachment 1b

Milford Issues

Issue	Comment
Planning Permit Advice (f) Council encourages consultation between the owner of Milford and the Department of State Growth in relation to the design of alternative access from Pittwater Road and invites a suitable permit application to implement such a design	Department's view is that consultation has occurred and agreement on scope and extent, particularly with respect to landscaping, could not be reached.
Planning Permit Advice (f) Council encourages consultation between the owner of Milford and the Department of State Growth in relation to the provision of fire protection compliant access for Tasmanian Fire service (TFS) into the Milford Forest	The Department is realigning 2 sections 120 metres long and 190 metres long of an existing much longer track. There is no requirement under the Planning Scheme to provide a compliant fire access trail. If there was this would have been enforced by the Tribunal. Further widening of the access track to provide passing bays would impact on known orchid distributions. The realignment of the existing track together with the proposed adjacent access track on the southern side of the highway reserve (for Taswater access to sections of their watermain that are in the highway reserve) provide a "deemed to comply" solution
General standard of the compensatory planting area and funding over 10 years	Meeting required with s 36 [redacted] to resolve any differences in approach. s 36 [redacted] has quoted us s 39 [redacted]
Stormwater Robyn is concerned about highway runoff into the orchids. We are required to minimize flow into the orchid habitat.	We have prepared comprehensive stormwater management plans demonstrating minimal impact on the orchid area. A very high standard silt trap fence will need to be erected along the Milford highway boundary and

Stormwater runoff from Pittwater Road	regularly inspected to ensure no dirty water or sediment gets onto Milford during construction. There is also a runoff problem from Pittwater Road (refer photo below) as this runoff discharges directly into orchid habitat. This is not our responsibility, but I will take it up with Council. They need to reduce the width of these shoulders/parking areas and restore with native vegetation.
Approval of Orchid Management Plan and access to Milford into the future to implement it. Input to the Plan by s 36	s 36 advised in her submission to the Tribunal *"I have not yet been provided with a copy of this proposed Orchid Habitat Management Plan, let alone agreed to it".* I am seeking clarification from s 36 on what has been provided to s 36 and recommend that we get a copy to s 36 asap. s 39
Water meter on Drawing 1208 – s36 marked drawing 1108 *"watermeter to be relocated to other end of easement"*	I understand that this is the water supply from the main to the Pines Landscaping. This needs clarification with s 39
Interface between Milford access track and the realigned highway access at ch 2340	Clarify details with s 36

Pittwater Road stormwater issues

From: [redacted]
To: [redacted]
Cc: [redacted]
Subject: RE: Department comments: Tasman Highway Upgrade Hobart Airport to Sorell Causeway (EPBC 2020/8805) [SEC=OFFICIAL]
Date: Monday, 16 January 2023 12:03:00 PM

Hi s 36

Did s 36 send through the plots of the large trees on the Milford boundary are they on an updated drawing set?

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | MB: s 36
www.stategrowth.tas.gov.au

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In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

From: s 36 [redacted] @pittsh.com.au>
Sent: Tuesday, 6 September 2022 2:36 PM
To: [redacted] @stategrowth.tas.gov.au>
Subject: FW: Department comments: Tasman Highway Upgrade Hobart Airport to Sorell Causeway (EPBC 2020/8805) [SEC=OFFICIAL]

Hi [redacted]

Out of scope [redacted].
I have also requested that s 36 [redacted] send us his GPS plots of the large trees adjacent to the Milford boundary and we will see if we can plot them onto the drawings.

Regards

s 36 [redacted]

Principal Engineer

s 36 [redacted] | [redacted] | [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36 [redacted]

pittsh.com.au

Out of scope [redacted]

Document 37

From: [redacted]
To: [redacted]
Subject: RE: Pittwater Road Drainage
Date: Monday, 14 November 2022 10:01:58 PM
Attachments: image001.png
image002.png
image003.png
image004.jpg
image005.jpg
image006.jpg
Pittwater Road Drainage Improvements.pdf

Hi [redacted]

I meant to send this through earlier(draft for comment). You shouldn't be working so late. Its ok for me because I work or don't work when I want to.

s.36

Principal Engineer

s.36

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s.36

pittsh.com.au

From: [redacted] @stategrowth.tas.gov.au>
Sent: Monday, 14 November 2022 9:48 PM
To: s.36 @pittsh.com.au>
Subject: RE: Pittwater Road Drainage

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi s.36

We've spoke a lot on the phone recently. Can you send through your plans for the hard stands please?

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] s.36
www.stategrowth.tas.gov.au

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Please note I do not work Fridays.

From: s.36 @pittsh.com.au>
Sent: Thursday, 3 November 2022 10:13 AM
To: [redacted] @stategrowth.tas.gov.au>
Subject: Re: Pittwater Road Drainage

Not before 12 noon

Sent from my iPhone

> On 3 Nov 2022, at 10:07 [redacted] @stategrowth.tas.gov.au> wrote:
>
> CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.
>
> I'll call once I'm done with this meeting.
>
> Thanks,
>
> [redacted]
> Programming and Delivery | Department of State Growth
> 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
> [redacted] s.36
> www.stategrowth.tas.gov.au
>
> Courage to make a difference through
> **TEAMWORK | INTEGRITY | RESPECT | EXCELLENCE**
>
> *In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.*
>
> **Please note I do not work Fridays.**
>
> ---
>
> **From:** s.36 @pittsh.com.au>
> **Sent:** Thursday, 3 November 2022 9:42 AM
> **To:** [redacted] @stategrowth.tas.gov.au>
> **Subject:** Re: Pittwater Road Drainage
>
> Hi [redacted]
> Please call about this one. I've also had a discussion with s.36 from CCC. No point both of us working on it.
>
> Sent from my iPhone
>
> > On 3 Nov 2022, at 09:17 [redacted] @stategrowth.tas.gov.au> wrote:
> >
> > CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.
> >
> > Hi s.36
> >
> > FYI, I'm meeting a stormwater officer out there on Monday next week. He works under s.36 although maybe we can get a push from another angle.
> >
> > Thanks,
> >
> > [redacted]
> > Programming and Delivery | Department of State Growth
> > 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
> > [redacted] s.36
> > www.stategrowth.tas.gov.au
> >
> > Courage to make a difference through
> > **TEAMWORK | INTEGRITY | RESPECT | EXCELLENCE**
> >
> > *In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.*
> >
> > **Please note I do not work Fridays.**

Out of scope

[redacted]

Pittwater Road Drainage Improvements

Background

On the eastern side of Pittwater Road immediately south of the junction with the Tasman Highway are five informal pull off areas. The five areas are surfaced with brown gravel and are subject to ponding water which becomes contaminated with fines from the brown gravel following rains. If the ponding water overflows the pull off areas it represents a potential threat to nearby orchid habitat on the Milford property. This drainage issue has been recognised as a facilitated impact by the Department of Climate Change, Energy, the Environment and Water (DCCEEW) in its assessment under the EPBC Act of the proposed adjacent Tasman Highway upgrade. Under the Act, facilitated impacts must be either mitigated, or addressed through a suitable offset. It is recommended that mitigation treatment be carried out by way of preventing use of the pull off areas and revegetating them.

Description and Location of Pull Off Areas

The five areas are located along a 450 metre section of Pittwater Road on the eastern side immediately south of the junction with the Tasman Highway. The areas are listed below.

Area 1

Location – 59 metres from Tasman Highway Length - 17 metres Width – 2.5 metres Area – 45 m^2 approximately	

Area 2

Location – 83 metres from Tasman Highway Length - 43 metres Width – 5 metres Area – 200 m^2 approximately	

Area 3

Location – 159 metres from Tasman Highway Length - 30 metres Width – 2.5 metres Area – 60 m^2 approximately	

Area 4

Location – 194 metres from Tasman Highway Length - 21 metres Width – 2 metres Area – 40 m^2 approximately	

Area 5

Location – 376 metres from Tasman Highway Length - 63 metres Width – 6.5 metres Area – 350 m^2 approximately	

Proposed Treatment

It is recommended that parking be prohibited in each area by placement of 100 mm x 100 mm treated pine bollards at 2 metre spacing 0.5 metres from the edge of the sealed pavement. This matchers the existing shoulder width along most of Pittwater Road. The recommended length of the bollards is 1.5 metres with 0.5 metres in the ground.

The brown gravel behind the bollards is to be scarified to approximately 150 mm depth and the existing depressions filled in with scarified material. Following scarifying and filling, each area is to be seeded with ryecorn and a mixture of native grasses.

At area 5, where there is an existing access, it is recommended that the bollards be turned in at a 15 m radius to match the access.

The estimated cost of the proposed work is s 38

From: [redacted]
To: s 36
Cc: [redacted]
Subject: RE: Offset
Date: Monday, 14 November 2022 9:36:00 PM
Attachments: image001.png

Hi s 36

As discussed on the phone today [redacted] agrees that a offset strategy document may not be required as the impacts are well understood and there will be a singular offset although the strategy will need to be clearly spelt out in the other documentation. We will need a offset proposal and OMP DCCEEW - Proposing an environmental offset

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36
www.stategrowth.tas.gov.au

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Please note I do not work Fridays.

From: s 36 [redacted]@pittsh.com.au>
Sent: Monday, 7 November 2022 5:04 PM
To: [redacted]@stategrowth.tas.gov.au>
Subject: Offset

Hi [redacted]

I don't find an offset strategy mentioned in this document. If there is another reference to it please let me know.

Regards

[redacted]
s 36 [redacted]
Principal Engineer
s 36 [redacted]
Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36 [redacted]

Document 39

From: [redacted]
To: s 36
Subject: RE: RE: Tasman Highway Airport to Midway Point Causeway - Change Order Design Completion
Date: Thursday, 12 January 2023 4:03:00 PM
Attachments: image002.png
image003.png

Thanks s 36

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] s 36
www.stategrowth.tas.gov.au

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Please note I do not work Fridays.

From: s 36 [redacted] @pittsh.com.au>
Sent: Tuesday, 20 December 2022 7:51 PM
To: [redacted] @stategrowth.tas.gov.au>
Subject: RE: RE: Tasman Highway Airport to Midway Point Causeway - Change Order Design Completion

To answer the question, I wouldn't be concerned about a potential overrun on the landscaping (depending on what scope you agree with s 36). It a pretty small item in the overall project budget, there will be ups and downs across all the items in the estimate, and we still carry a healthy contingency.

16	**Base Estimate (Total Construction Cost + Client Costs)**				s 38 [redacted]
17	Contingency - inherent risks				
18	Contingency - contingent risks				
19	**Total Contingency**				
20	**Total Contingency as percentage of Base Estimate**				
21	**Project Estimate**				
	Cashflow: Start Construction April 2022, Finish Construction May 2023				
22	**Escalation (applied to Project Estimate)**				
22a	% escalation (compared to base estimate + contingency)				
23	**Total Outturn Cost**				

Time, on a number of fronts, remains our biggest risk and area of largest additional cost.

Regards

s 36 [redacted]

Principal Engineer

s 36 [redacted] | [redacted] | [redacted]
Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36 [redacted]
pittsh.com.au

From: s 36 [redacted]
Sent: Tuesday, 20 December 2022 7:44 PM
To: [redacted] @stategrowth.tas.gov.au>
Subject: RE: RE: Tasman Highway Airport to Midway Point Causeway - Change Order Design Completion

Hi [redacted]

Latest estimate attached. We now have s 38 [redacted] for the landscaping based on the plants shown on the s 36 [redacted] drawings. There is no mulch included in this as its not indicated on the drawings, but includes tree guards, water crystals and 2 year maintenance . Plant sizes are 150 mm plants in pots and tubestock. If the scope is limited to this, which is standard Department practice I'm pretty confident in the costs. The total cost of the access is s 38 [redacted] is included in the estimate provided in October.

Regards

s 36 [redacted]

Principal Engineer

s 36 [redacted] | [redacted] | [redacted]
Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36 [redacted]
pittsh.com.au

From: [redacted] @stategrowth.tas.gov.au>
Sent: Tuesday, 20 December 2022 4:50 PM
To: s 36 [redacted] @pittsh.com.au>

Subject: RE: RE: Tasman Highway Airport to Midway Point Causeway - Change Order Design Completion

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Hi s 36 .

Thank you for the explanation and further detail. I am concerned about s 36 comment that s 38 would not go far. You've previously advised s 38 was sufficient, can you let me know if there is a budget risk with this item?

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36
www.stategrowth.tas.gov.au

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Please note I do not work Fridays.

From: s 36 [redacted] @pittsh.com.au>
Sent: Monday, 19 December 2022 8:30 PM
To: [redacted] @stategrowth.tas.gov.au>
Subject: CM: RE: Tasman Highway Airport to Midway Point Causeway - Change Order Design Completion

Hi [redacted]

Milford Access.
I tried to provide sufficient explanation in the text viz:
This access was the subject of a previous change order, however work was suspended when the Department advised pitt&sherry that the access was not being provided. Following further negotiations with the owner of Milford, the Department advised pitt&sherry to complete the design of the new access. Additional costs have been incurred in assigning new designers to the task, incorporating additional drainage requirements and preparing a final landscape design.

You will note s 38 [redacted] for final detailing by Sue Small (refer attached). This includes site visits by s 38 for an amount of s 38 . This latter amount may not be needed and we won't charge you if it isn't, s 39 [redacted]
We previously did not consider drainage by an hydraulics engineer, however once the extent of raising of the road for the culverts (up to 600 mm) was recognised I considered it best to carry out an analysis of catchments and likely discharge across the road. That's another s 39 [redacted]
The remaining s 38 approx is

i. Rework associated with assigning & briefing another designer, designer retrieving files and getting up to speed.
ii. There's an allowance for the designer to go through the design with s 36 and that still applies (noting s 36 has asked for your approval to engage someone to review the design). In a more normal situation, I would meet with [redacted] and go though it all and potentially resolve any issues she might have.
iii. Dealing with further enquiries from s 36 and potential design changes (an unknown quantity, s 39 [redacted]

BoQs and Specifications
There are two BoQs one for the Golf Course and one for the road.
The Golf Course BoQ needs to be reviewed and revised to ensure that it adequately accounts for additional items that have been identified during ongoing discussions with the Golf Club up until the scope of work was finalised and signed off by the Golf Club in September this year. These items include - toilet at driving range, driving range fitout, CCTV, power supply to existing maintenance shed, agitators on Golf course dam, bird monitoring during contract works, anti bird nesting provisions in dam rock face, reshaping provisions of fairways after initial earthworks, and overall works sequencing once timing of the works is known. – s 39 [redacted]
The Road works needs to be substantially reworked to allow for
Removal of works from ch 400 to 1200 which are now being completed under the Airport Interchange Contract, reassessment quantities for services due to conversion to underground power between ch 1200 and 1700, inclusion of the Milford access (drainage, earthworks, pavement, landscape items, other sundry items), addition of Pittwater Road drainage/shoulder removal items, inclusion of any requirements arising out of the EPBC approval/Roadside conservation zone (when known). s 39 [redacted]

The Golf Course specification needs to be updated to reflect all the additional items listed for the BoQ. Additionally we need to include requirements for procurement for water if required during grassing of the reconstructed works, inclusion of plumbing permit and conditions, review of specification with the Golf Club (best done in face to face meeting, noting the club has a requirement for establishment of an advisory committee to review specification, proposed sequencing of works and quality/progress during construction), and any items that might arise from the legal agreement with the Golf Club. The works sequencing will require further input from the Golf Club when we know the start date as all discussions to date have been hypothetical. s39 [redacted].
Similarly, the roadworks specification needs to be updated to reflect all the additional items listed for the BoQ. Additionally we need to include the EPBC approval conditions (including Offset Management Plan, Orchid Management Plan and clarification of responsibilities for satisfying those conditions between Contractor and Principal). In line with recent discussions there is likely to be a need for more stringent weed control and more rigorous follow up and response to growth of weeds than is contained in the standard specification. The current standard of weed management by Contractors during the defects liability/maintenance period simply won't cut it in this case. There are also likely to be additional requirements arising from the lease agreement with HIAPL and the Tripartite Deed. s39 [redacted]

I trust the above provides sufficient clarification, however if you have any further questions it's probably best to discuss.

Regards

s 36 [redacted]

Principal Engineer

s 36 [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36 [redacted]

pittsh.com.au

From: [redacted] @stategrowth.tas.gov.au>
Sent: Monday, 19 December 2022 5:04 PM
To: s 36 [redacted] @pittsh.com.au>

Subject: RE: Tasman Highway Airport to Midway Point Causeway - Change Order Design Completion

Hi s 36 .

Can you please provide more information on item iii. You previously provided a quote to undertake the driveway works although you are requesting additional funds.

To update golf course spec, roadworks spec and BoQs s39

Thanks,

Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
s 36
www.stategrowth.tas.gov.au

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Please note I do not work Fridays.

From: s 36 @pittsh.com.au>
Sent: Monday, 28 November 2022 4:45 PM
To: @stategrowth.tas.gov.au>
Cc: Consultants <consultants@stategrowth.tas.gov.au>
Subject: Tasman Highway Airport to Midway Point Causeway - Change Order Design Completion

Good afternoon

Attached please find our change order for design completion, including construction phase services. Your early approval of this, as well as the change orders submitted on 5 September would be greatly appreciated.

Regards

s 36

Principal Engineer

s 36

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s36

pittsh.com.au

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Attachment 1

s 38

Attachment 2

susan small landscape architects

To:
Pitt & Sherry
s 36
@pittsh.com.au

30.9.22

Hi s 36

Fee Proposal for Documentation of replacement driveway
Milford, 1431 Tasman Highway Cambridge

Thankyou for your request to provide landscape documentation suitable for tendering associated with the replacement driveway at Milford. I did provide a fee for documentation of the above works previously however I have now adjusted the sum to allow for the extent of works as designed, and discussions with Pitt & Sherry, and owners 36 during this period. I've also included time for tender discussions and occasional site visits during construction.

I would like confirmation of what will be included in the tender for the works. At this stage I am presuming it is:

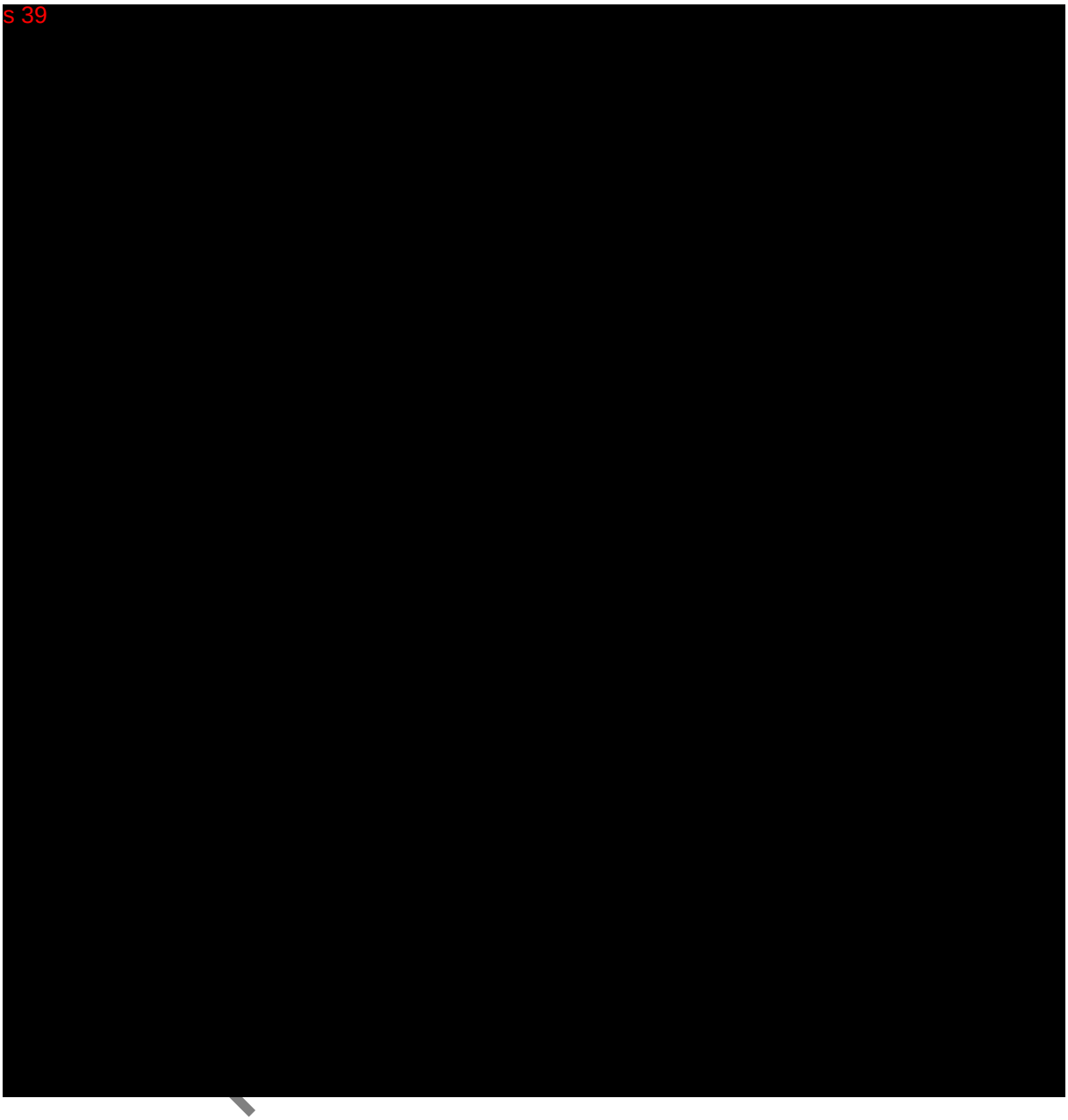
- all the elements of driveway construction including formation of the 4M wide driveway, passing bays, culverts, road side drainage and finished gravel surfacing.
- the nominated gates, relocation of existing fences, and new fences as indicated on SSLA's plans?
- planting of the works and plant protection as indicated or is the budget still 15K which will be very minimal compared to what's on the plans at present?
- Will there be a defects and plant establishment period ?

As discussed we can begin our part of the works when we receive a preliminary draft of the geometry of the driveway (and contours?) and would need at least four to six weeks to prepare the documents for tendering.

Regards,

s 36

Encl: SSLA Fee Submission – Milford access, Cambridge


s 39

From: [redacted]
To: s 36 [redacted]
Cc: [redacted]
Subject: RE: Offset Habitat Strategy
Date: Wednesday, 21 December 2022 8:40:00 AM

Hi s 36 [redacted]

Thank you for the explanation. As previously discussed, please send the methodology for assessment to myself/[redacted] before sending it to Canberra. s36 has previously said no issues with getting access to Milford, we just need to give her some notice.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] s 36 [redacted]
www.stategrowth.tas.gov.au

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Please note I do not work Fridays.

From: s 36 [redacted] @pittsh.com.au>
Sent: Tuesday, 20 December 2022 6:08 PM
To: [redacted] @stategrowth.tas.gov.au>
Subject: RE: Offset Habitat Strategy

Hi [redacted]

s 36 [redacted] is working on his revised methodology for Assessment of Unit 4. We'll send this to DCCEEW for review. That will be in the New Year. When we get a response from DCCEEW we'll do the field assessment of Unit 4 and put the numbers into the offset calculator. After that we will finalise the offset strategy – it requires the following

a) a description of the offset site(s) including location, size, condition and environmental values
b) details of the surveys undertaken in accordance with the survey guidelines used to confirm the presence of the protected matter at the offset site
c) details of the quality of the offset site and habitat characteristics for the protected matter
d) details of on-going threats to the protected matter at the offset site
e) comparison of the environmental values as compared to the impact site
f) Justification

I am thinking at least end of February depending on timely response from DCCEEW and agreement from s 36 [redacted] on when we can go onto Milford, although I assume that this won't be a problem.

Regards

s 36 [redacted]

Principal Engineer

s 36 [redacted] | [redacted] | [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36 [redacted]

pittsh.com.au

From: [redacted]@stategrowth.tas.gov.au>
Sent: Tuesday, 20 December 2022 4:55 PM
To: s 36 [redacted]@pittsh.com.au>
Cc: [redacted]@stategrowth.tas.gov.au>
Subject: Offset Habitat Strategy

Hi s 36 [redacted]

I assume you won't be presenting the habitat assessment strategy/proposal, advised as required by DCCEEW last month, to DSG this year? Will this be ready in the first half of January?

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] s 36 [redacted]
www.stategrowth.tas.gov.au

Courage to make a difference through
TEAMWORK | INTEGRITY | RESPECT | EXCELLENCE

In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

Document 41

From:
To:
Subject: Notes of meeting with DCCEEW Assessment team 22/11/2022
Date: Tuesday, 20 December 2022 7:53:38 PM
Attachments: image001.png

Hi

Here are the notes from the meeting.

PRESENT

s 36 (DCCEEW), s 36 (North Barker), s 36 (Pitt & Sherry), (DSG)

BACKGROUND

Pitt and Sherry/North Barker determined an initial offset area and outline methodology using DCCEEW's offset calculator and sought confirmation of the inputs (refer first attachment). Following advice from DCCEEW, further clarification was requested on the suitability of declaring a smaller Road Side Conservation Site and a larger combined mitigation and offset area. Clarification was also requested on the initial response from DCCEEW which advised "*Your final offset documentation set will need to include more detail informing the quality score, which should be a quantitative measure. Please justify how the score was calculated, and include details of what habitat characteristics would define a score higher and lower than the selected score. Your justification may include reference to habitat survey results.*" (refer second attachment)

MATTERS DISCUSSED

s 36 explained that the initial assessments resulted in 2.8 Ha (approx.) of mitigation and 1.5 Ha (approx.) of offset. The mitigation area extended approximately 50 metres into the Milford property. At the request of the landowner mitigation and offset were now being contemplated on Unit 4 of the Milford farm management zones. This encompasses the easternmost area of orchid habitat. (refer 3rd attachment). The total area of the mitigation/offset area is 6Ha approx. which is the whole of Unit 4. It is proposed that the Road Side Conservation Site extend only to the Milford property boundary. This will better delineate Contractor responsibilities during construction/defects liability and ongoing management activities on the Milford property

DCCEEW advised that the impact area, mitigation area and offset area all need to be clearly delineated. A single management plan can be prepared however it will need to have area specific management measures. The offset should be the area where we can get the most gain. The documentation to date has focussed on weed management, however DCCEEW asked what are the reasons the orchids have survived on this site eg soil, hydrology?. What are the other threats eg animals digging.

s 36 noted the presence of dumped roosters near Pittwater Road and rabbits and also advised that the orchids exploit wet conditions.

s 36 DCCEEW asked, in relation to site conditions, what else do the orchids need eg soil type, pollinators, mychorrhriza, others? (s 36 noted that soil type is very consistent

across the site). s 36 also asked whether there are differences in mychorriza across the site. s 36 advised that she did not see a particular need for soil sampling on the site. Documentation should reflect any differences in the mitigation area and the offset area. s 36 also recommended that we thoroughly review the DCCEEW website content including manuals, policies and guidelines to ensure our documentation is sufficient. s 36 recommended that we break down the proposed offset area (blue on attachment 3) into smaller areas (cells) and individually rate these cells then aggregate those ratings into an overall score for the area. s 36 also suggested that a presence/absence measure be included eg nominate the percentage of cells that contained orchids.

s 36 stated that an offset strategy is highly recommended in addition to the proposal and offset management plan. There is no preference as to whether some of these documents are combined, as long as all of the required information is included.

Regards

s 36

Principal Engineer

s 36

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36

pittsh.com.au

Document 42

From: [redacted]
To: s 36 [redacted]
Subject: RE: Milford Offset Location
Date: Tuesday, 20 December 2022 4:44:00 PM
Attachments: Out of scope [redacted]

Hi s 36 [redacted]

I made that clear in my response.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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TEAMWORK | INTEGRITY | RESPECT | EXCELLENCE

In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

From: s 36 [redacted] @pittsh.com.au>
Sent: Tuesday, 20 December 2022 4:28 PM
To: [redacted] @stategrowth.tas.gov.au>
Subject: Re: Milford Offset Location

Hi [redacted]
That's not really endorsing Unit 4. We will keep working on the basis that it is Unit 4, otherwise we can't prepare a plan, s 36 [redacted] won't comment further and we go nowhere.

Regards
s 36 [redacted]

Sent from my iPhone

> On 20 Dec 2022, at 16:21, [redacted] @stategrowth.tas.gov.au> wrote:
>
> CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.
>
> FYI
>
> Thanks,

Document 43

From: [redacted]
To: s 36 ; [redacted]
Cc: [redacted]
Subject: RE: Weed Control - Tasman Highway - Airport to Midway Point Causeway
Date: Monday, 19 December 2022 1:21:00 PM
Attachments: image001.emz
image005.png
image003.png

Thanks mate

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

From: s 36 [redacted] @pittsh.com.au>
Sent: Monday, 19 December 2022 12:41 PM
To: [redacted] @stategrowth.tas.gov.au>; [redacted] @stategrowth.tas.gov.au>
Cc: [redacted] @stategrowth.tas.gov.au>
Subject: RE: Weed Control - Tasman Highway - Airport to Midway Point Causeway

Yes [redacted], I will do that or add appropriate words in the Contract Specific section.

Regards

s 36 [redacted]

Principal Engineer

s 36 [redacted] | [redacted] | [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36 [redacted]

pittsh.com.au

From: [redacted] @stategrowth.tas.gov.au>
Sent: Monday, 19 December 2022 12:22 PM
To: s 36 [redacted] @pittsh.com.au>; [redacted] @stategrowth.tas.gov.au>
Cc: [redacted] @stategrowth.tas.gov.au>
Subject: RE: Weed Control - Tasman Highway - Airport to Midway Point Causeway

Hi all.

Are all parties happy with this being included in the construction contract? s 36 [redacted] will you be amending spec 176?

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

From: s 36 [redacted] @pittsh.com.au>
Sent: Wednesday, 14 December 2022 3:14 PM
To: [redacted] @stategrowth.tas.gov.au>
Cc: [redacted] @stategrowth.tas.gov.au>; [redacted] @stategrowth.tas.gov.au>
Subject: RE: Weed Control - Tasman Highway - Airport to Midway Point Causeway

Hi s 36 [redacted]

Thanks for this. I think we need to make it clear that, in this case, Section 176 applies to all weeds not just declared weeds.

Regards

s 36 [redacted]

Principal Engineer

s 36 [redacted] | [redacted] | [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36 [redacted]

pittsh.com.au

From: [redacted] @stategrowth.tas.gov.au>
Sent: Wednesday, 14 December 2022 3:09 PM
To: s 36 [redacted] @pittsh.com.au>
Cc: [redacted] @stategrowth.tas.gov.au>; [redacted] @stategrowth.tas.gov.au>
Subject: RE: Weed Control - Tasman Highway - Airport to Midway Point Causeway

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi s 36 [redacted],

The definition of a weed in spec 720 is basically the "dictionary" meaning of "weed"(see below), i.e. all unwanted plants.. Therefore all unwanted plants in areas that are revegetated are to be controlled.

(i) Weed
Any plant which is not desired as follows
(i) Declared weed. Any plant that is a declared weed under as defined in the Weed Management Act 1999 in respect of the project area.
(ii) Species or individual plants specified to be removed.
*(iii) Weeds of planting beds and around individual trees include **any plant not specified in the planting schedule or is not indigenous to the site**. This includes all local environmental weeds and declared weeds.*
(iv) Regionally declared environmental weeds of grassed areas include all species listed in (i) above, broadleaf

species (except broadleaf species specified for sowing) and other weeds where specifically listed.

The standard practice to meet the requirements of 176 (below) is to develop a project specific weed management plan. If this is done quite specific measures can be employed.

The Contractor is to;

- *ensure compliance with the Weed Management Act 1999 by:*
  - *applying management practices to ensure declared weeds outside the construction footprint are not further spread*
  - *ensure that declared weeds listed under the Weed Management Act 1999 are controlled within the construction footprint during the construction phases and the defects liability period.*

Hope this is helpful.

[redacted]

From: s 36 [redacted]@pittsh.com.au>
Sent: Wednesday, 14 December 2022 2:43 PM
To: [redacted]@stategrowth.tas.gov.au>
Cc: [redacted]@stategrowth.tas.gov.au>
Subject: Weed Control - Tasman Highway - Airport to Midway Point Causeway

Hi [redacted]

Just want to make sure our specification for this project is adequate to achieve a high standard of weed control during construction and through the defects liability and landscape maintenance periods. We will be under intense scrutiny from the owner and will also have obligations for weed control under the EPBC approval (when received)
Section 176 of the Specification states
The Contractor is to;

- *ensure compliance with the Weed Management Act 1999 by:*
  - *applying management practices to ensure declared weeds outside the construction footprint are not further spread*
  - *ensure that declared weeds listed under the Weed Management Act 1999 are controlled within the construction footprint during the construction phases and the defects liability period.*

Section 176 is somewhat silent on weeds that are not declared, although we are at liberty in other parts of the specification to list other weeds that we want treated in a similar fashion to declared weeds. That being the case can you advise other weeds that we should be listing, or perhaps it is better to require the Contractor to control both declared and undeclared weeds?

Section 720 is more general and simply refers to weed control. Do you think in this instance quarterly inspections will be sufficient during the maintenance period, or should we make this more frequent>

720.09 LANDSCAPE MAINTENANCE

(a) Scope of Maintenance

The Contractor shall provide a Landscape Maintenance Plan detailing the activities required to maintain the Plant Performance Requirements, with provision for future maintenance activities.
The Contractor shall implement the Landscape Management Plan and the requirements of this specification throughout the contract period.
Maintenance of the landscape work shall include the following tasks:

(i) replanting
(ii) weed control
(iii) watering
(iv) mowing/slashing
(v) reseeding of seeded grass areas
(vi) pest and disease control
(vii) re-mulching

(viii) pruning
(ix) maintaining the site in a neat and tidy condition
(x) repair and removal of tree guards and stakes
(xi) repairs to erosion affected areas
(xii) stockpile areas.

(b) Maintenance Program and Joint Inspections

The Contractor shall prepare and submit a maintenance program showing sufficient information to enable the landscape maintenance works to be evaluated and shall show as a minimum the following:

- *inspection visits during the period of maintenance;*
- *maintenance works during the period of maintenance including an outline of replacement planting regime and proposed pest and weed management activities.*

Quarterly joint inspections shall be undertaken each year by the Contractor and the Superintendent after commencement of the Defects Liability Period.

Any remedial work shall be performed within three weeks of the date of inspection. Grassing and planting may be delayed until suitable conditions prevail subject to independent expert advice and the approval of the Superintendent.

Regards

[redacted]
s 36 [redacted]
Principal Engineer
s 36 [redacted]
Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36 [redacted]
pittsh.com.au

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Document 44

From: [redacted]
To: s 36 [redacted]
Subject: RE: Tasman Highway Upgrade - Airport to Midway Point Causeway
Date: Monday, 19 December 2022 4:12:00 PM

Hi s 36 [redacted]

Following up on the minutes/actions from your meeting with DCCEEW.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

From: s 36 [redacted]@pittsh.com.au>
Sent: Thursday, 8 December 2022 7:22 AM
To: [redacted]@stategrowth.tas.gov.au>
Subject: Re: Tasman Highway Upgrade - Airport to Midway Point Causeway

Next week

Sent from my iPhone

> On 7 Dec 2022, at 17:21, [redacted]@stategrowth.tas.gov.au> wrote:
>
> CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.
>
> Hi s 36 [redacted].
>
> Have you had an opportunity to compile your notes and actions and confirm these were the outcomes/actions from the meeting? Could you flick them through before sending them to Canberra so I can compare to our notes.
>
> Thanks,
>
> [redacted]
> Programming and Delivery | Department of State Growth

4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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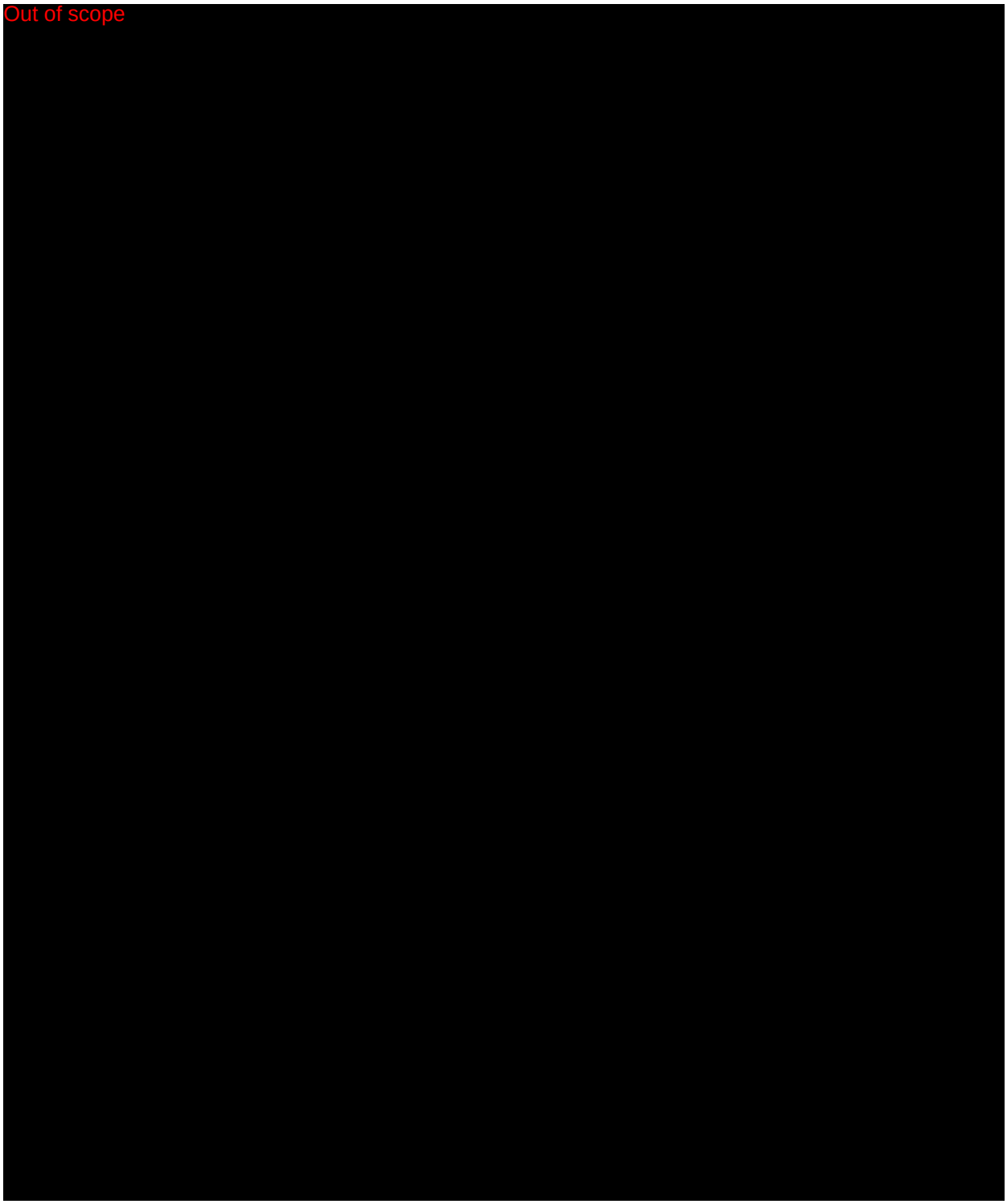
In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

Out of scope



Document 45

From: [redacted]
To: [redacted]
Subject: RE: Milford Additional Driveway
Date: Monday, 19 December 2022 10:35:22 AM

Ok we'll run with the layout we have.

Regards
s 36 [redacted]

Principal Engineer

s 36 [redacted] | [redacted] | [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36 [redacted]

pittsh.com.au

From: [redacted]@stategrowth.tas.gov.au>
Sent: Monday, 19 December 2022 10:23 AM
To: s 36 [redacted]@pittsh.com.au>
Subject: FW: Milford Additional Driveway

FYI.

I don't think s36 [redacted] needs a technical review and the driveway is designed to standard and will go through a DA process.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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Please note I do not work Fridays.

Out of scope [redacted]

Document 46

From: [redacted]
To: [redacted]
Subject: Milford Access Track Passing Bay
Date: Monday, 19 December 2022 10:18:15 AM
Attachments: image001.png
Milford Access Track - Passing Bay.pdf

Hi [redacted]

Attached please find an outline for the passing bay under the power line on Milford. Overall length 25 metres. This should be more than adequate for light vehicles. (The guidelines suggest 20 metres long but its unclear if this includes tapers. The passing bays on the new access off Pittwater are much longer but these are to suit a B double)
Do you need to run this past s 36 [redacted]

Regards

[redacted]

s 36 [redacted]

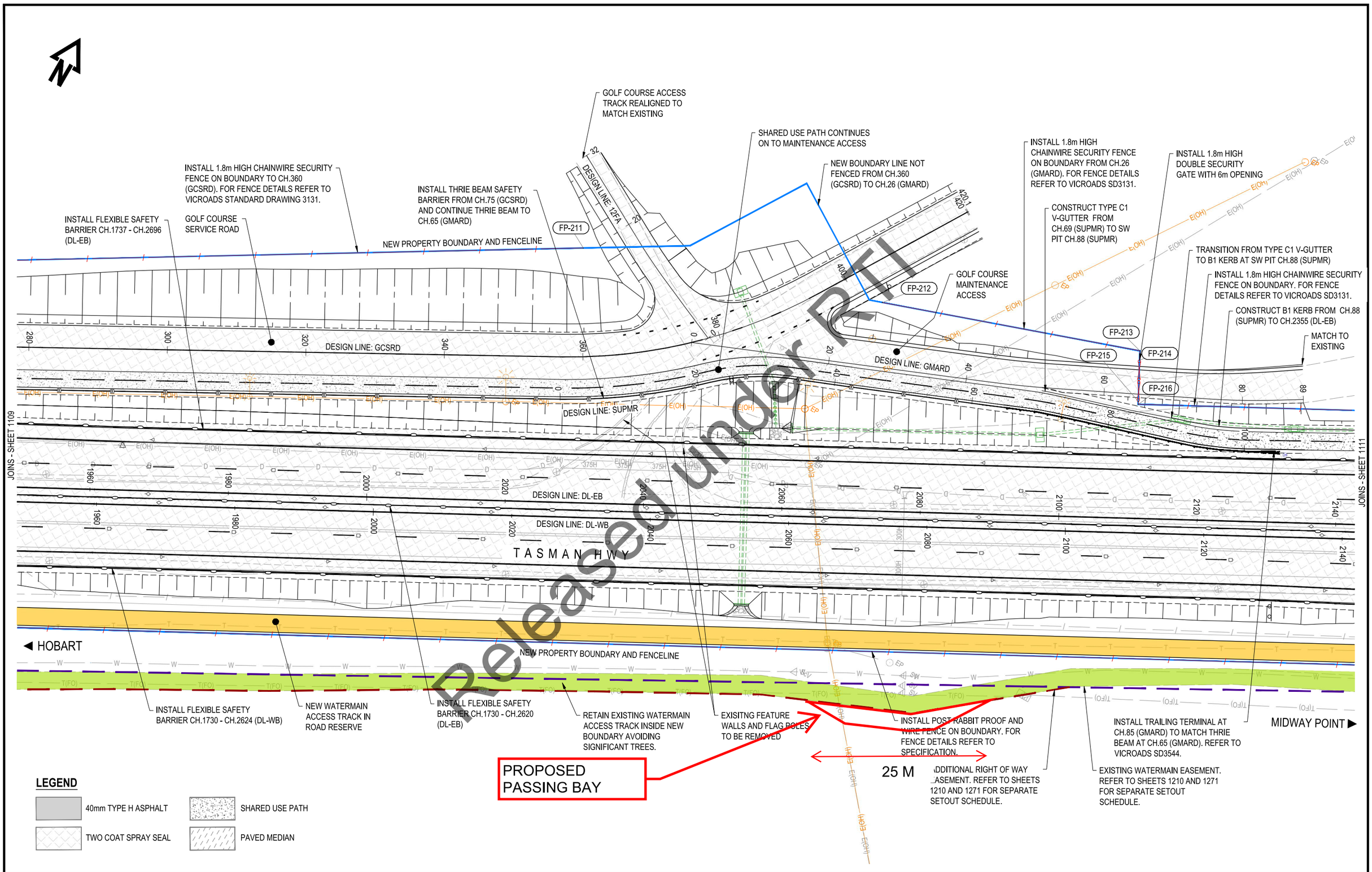
Principal Engineer

s 36 [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36 [redacted]

pittsh.com.au

Attachment 1



No.	Amendment Description	Initials	Date
B	DETAILED DESIGN	D.C.	08/02/2022
A	DETAILED DESIGN	D.C.	17/03/2021

A3 original | This sheet may be prepared using colour and may be incomplete if copied

SCALES
1:500m (A3)
5 0 5 10 15 20
SCALE IN METRES - 1:500

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

pitt&sherry

Tasmanian Government

DESIGNED . . . . . .
REVIEWED . . . . . .

Department of State Growth

TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS

GENERAL ARRANGEMENT - DRG 10

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C1110	28-Jul-22, 1:55 PM	1110

REGISTRATION NUMBER
A0113.028

REVISION B

From: s 36
To: [redacted]
Subject: Re: Pittwater Road Drainage
Date: Thursday, 8 December 2022 10:54:54 AM

Our contractor is best, that way we control when and how it's done. Might be simplest to just include it in our roadworks contract, unless you can get it done through your maintenance contract.

Sent from my iPhone

On 8 Dec 2022, at 10:45, [redacted]@stategrowth.tas.gov.au> wrote:

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Sorry, hit send too quickly.

What is the plan for delivery, through council and a grant from DSG or is the expectation DSG engages a contractor to undertake the works?

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

From: [redacted]
Sent: Thursday, 8 December 2022 10:45 AM
To: s 36 [redacted]@pittsh.com.au>
Cc: [redacted]@stategrowth.tas.gov.au>
Subject: RE: Pittwater Road Drainage

Hi s 36

Happy with the approach thank you although we would need to review the native grass mix before it is spread.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

From: s 36 [redacted]@pittsh.com.au>
Sent: Thursday, 8 December 2022 7:33 AM
To: [redacted]@stategrowth.tas.gov.au>
Subject: Re: Pittwater Road Drainage

Native species are proposed. Rye corn is a sterile, quick germinating cover crop that dies off. If we scarify the ground the water will soak into the ground, not collect in puddles. I don't think water runs onto Milford now to any great degree, there is a slight berm behind the shoulder which keeps the water on the roadside. Additionally if we plant the area out and some water ponds it won't be anywhere near as obvious as the big puddles that form now. I told Canberra we were considering this remedy. Their response was that if this was done it would be a very good outcome. If not done we would need to address the situation as a facilitated impact. Are you now happy for me to put the proposal to CCC for approval for DSG to do the work

Sent from my iPhone

On 7 Dec 2022, at 16:53, [redacted]@stategrowth.tas.gov.au> wrote:

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi s 36

Thank you for your work with Council on amending these hardstand areas. Would indigenous plantings rather than rye grass be a better option? Will scarifying the ground stop water getting into Milford? Has this been discussed with Canberra?

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

From: s 36 [redacted]@pittsh.com.au>
Sent: Monday, 14 November 2022 10:01 PM
To: [redacted]@stategrowth.tas.gov.au>
Subject: RE: Pittwater Road Drainage

Hi [redacted]

I meant to send this through earlier(draft for comment). You shouldn't be working so late. Its ok for me because I work or don't work when I want to.

s 36 [redacted]

Principal Engineer

s 36 [redacted] | [redacted] | [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36 [redacted]

pittsh.com.au

From: [redacted]@stategrowth.tas.gov.au>
Sent: Monday, 14 November 2022 9:48 PM
To: s 36 [redacted]@pittsh.com.au>
Subject: RE: Pittwater Road Drainage

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi s 36

We've spoke a lot on the phone recently. Can you send through your plans for the hard stands please?

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

From: s 36 [redacted] @pittsh.com.au>
Sent: Thursday, 3 November 2022 10:13 AM
To: [redacted] @stategrowth.tas.gov.au>
Subject: Re: Pittwater Road Drainage

Not before 12 noon

Sent from my iPhone

> On 3 Nov 2022, at 10:07, [redacted] @stategrowth.tas.gov.au> wrote:
>
> CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.
>
> I'll call once I'm done with this meeting.
>
> Thanks,
>
> [redacted]
> Programming and Delivery | Department of State Growth
> 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
> [redacted] s 36 [redacted]
> www.stategrowth.tas.gov.au
>
> Courage to make a difference through
> **TEAMWORK | INTEGRITY | RESPECT | EXCELLENCE**
>
> *In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.*
>
> Please note I do not work Fridays.
>
> ---
>
> **From:** s 36 [redacted] @pittsh.com.au>
> **Sent:** Thursday, 3 November 2022 9:42 AM
> **To:** [redacted] @stategrowth.tas.gov.au>
> **Subject:** Re: Pittwater Road Drainage
>
> Hi [redacted]
> Please call about this one. I've also had a discussion with s 36 [redacted] from CCC. No point both of us working on it.
>
> Sent from my iPhone
>
> > On 3 Nov 2022, at 09:17, [redacted] @stategrowth.tas.gov.au> wrote:
> >
> > CAUTION: This email originated from outside of the organization. Do not click links or

open attachments unless you recognize the sender and know the content is safe.

Hi s 36

FYI, I'm meeting a stormwater officer out there on Monday next week. He works under s 36 although maybe we can get a push from another angle.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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TEAMWORK | INTEGRITY | RESPECT | EXCELLENCE

In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

From: s 36 [redacted] @pittsh.com.au>
Sent: Wednesday, 24 August 2022 12:54 PM
To: [redacted] @stategrowth.tas.gov.au>
Subject: FW: Pittwater Road Drainage

Hi [redacted]

Refer below, reminder sent to Council

Regards

s 36 [redacted]

Principal Engineer

s 36 [redacted] | [redacted] | [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36 [redacted]

pittsh.com.au

Out of scope

[redacted]

Document 48

From: [redacted]
To: [redacted]
Subject: Re: Milford Easement Clearing
Date: Thursday, 8 December 2022 9:23:47 AM

Ok, but I don't think the passing bay will have any impact, it's not in orchid habitat and it's tiny.

Sent from my iPhone

On 8 Dec 2022, at 08:43, [redacted]@stategrowth.tas.gov.au> wrote:

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Hi [redacted].

I'm going to let [redacted] know that if unit 4 can be the offset then we would have more contingency and could incorporate the impacts of a passing opportunity.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] s 36 [redacted]
www.stategrowth.tas.gov.au

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TEAMWORK | INTEGRITY | RESPECT | EXCELLENCE

In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

From: s 36 [redacted]@pittsh.com.au>
Sent: Thursday, 8 December 2022 7:37 AM
To: [redacted]@stategrowth.tas.gov.au>
Subject: Re: Milford Easement Clearing

Not to date, but we will. s 36 [redacted] can look at this when he inspects unit 4. If we put the passing under the power linen and to the east of the mapped orchid habitat it shouldn't be a problem. s 36 [redacted] doesn't think it is.

Sent from my iPhone

On 7 Dec 2022, at 16:41, [redacted]@stategrowth.tas.gov.au> wrote:

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi [redacted].

Can you advise if we've taken the TN asset clearing below into consideration when assessing impacts for the prelim documentation?

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] s 36 [redacted]
www.stategrowth.tas.gov.au

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Out of scope

[redacted]

Document 49

From: [redacted]
To: s 36 [redacted]
Subject: RE: Milford NoAW
Date: Wednesday, 7 December 2022 9:51:00 AM

Hi s 36 [redacted]

I've advises s36 [redacted] that the compensationary planting should stay in the NoAW, if anything she would benefit. Can you please provide an update on the development of the 10 year maintenance plan.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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Please note I do not work Fridays.

From: s 36 [redacted] @pittsh.com.au>
Sent: Thursday, 1 December 2022 1:37 PM
To: [redacted] @stategrowth.tas.gov.au>
Subject: Re: Milford NoAW

I think it should stay in there. We have 10 year maintenance on it. One way or another it will affect compensation. s 39 [redacted]

Sent from my iPhone

> On 1 Dec 2022, at 12:37, [redacted] @stategrowth.tas.gov.au> wrote:
>
> CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.
>
> Hi s 36 [redacted]
>
> In my last meeting with s 36 [redacted] suggested the compensationary planting should be removed from the NoAW as it does not relate to compensation. What are you thoughts? Should all works on a property to captured in the NoAW?

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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Please note I do not work Fridays.

From: [redacted]
To: [redacted]
Cc: [redacted]
Subject: RE: [redacted] Survey of Millford for Caladenia saggicola 8 October 2022
Date: Tuesday, 6 December 2022 10:01:00 AM

And this one

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] s.40
www.stategrowth.tas.gov.au

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-----Original Message-----
From: [redacted]
Sent: Thursday, 6 October 2022 8:31 AM
To: [redacted] @pitsh.com.au>; s.40 [redacted] @pitsh.com.au>
Cc: [redacted] @stategrowth.tas.gov.au>
Subject: RE: [redacted] Survey of Millford for Caladenia saggicola 8 October 2022

Hi s.40

s.40 [redacted] Thank you for the advice, please have the sub-contractor update the PD to reflect that this is not orchid habitat and the plans to show the passing bay.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] s.40
www.stategrowth.tas.gov.au

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-----Original Message-----
From: s.40 [redacted] @pitsh.com.au>
Sent: Thursday, 6 October 2022 8:18 AM
To: [redacted] @stategrowth.tas.gov.au>; s.40 [redacted] @pitsh.com.au>
Cc: [redacted] @stategrowth.tas.gov.au>
Subject: RE: [redacted] Survey of Millford for Caladenia saggicola 8 October 2022

Hi [redacted]

Based on this advice I would put the passing bay where s.42 wants it under the power lines s.40 [redacted]. Make sure you file her email though.

Regards

s.40 [redacted]
Principal Engineer
s.40 [redacted] Hobart Office - Level 1, Surrey House, 199 Macquarie Street PO Box 94 Hobart Tasmania 7001 | Phon[redacted] pitsh.com.au

-----Original Message-----
From: [redacted] @stategrowth.tas.gov.au>
Sent: Wednesday, 5 October 2022 4:53 PM
To: [redacted] @pitsh.com.au>; s.40 [redacted] @pitsh.com.au>
Cc: [redacted] @stategrowth.tas.gov.au>
Subject: FW: [redacted] Survey of Millford for Caladenia saggicola 8 October 2022

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi s.40 [redacted]
Further to our discussions on a passing bay under the TN easement, you advised this area hasn't been surveyed in detail, the focus was on other areas. I'm unsure if you can use the below advice below, or if we need to undertake our own survey, in regard to placing a passing bay within the TN easement. Please let me know.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] s.40 [redacted] outlook.com/?
url=http%3A%2F%2Fwww.stategrowth.tas.gov.au%2F&data=05%7C01%7[redacted] Pxddd1f%40stategrowth.tas.gov.au%7Cfcb10a1f0ed4951c6f0908dab7979750%7C64ebab8acef44b5ca2d32b4c972d96b2%7C0%7C0%7C638024159966602944%7CUnknown%7CTWFpbGZsb3dfeyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=GdRNH7xfWYuvOI5xRpbNYSvoCpwJ3C43Uv7vdhcSLqg%3D&reserved=0

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[redacted]

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From: [redacted]
To: s 36
Cc: [redacted]
Subject: RE: Milford issues
Date: Monday, 5 December 2022 1:37:00 PM
Attachments: image001.png

Hi s 36 .

I met with s 36 this morning, see below in blue.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36
www.stategrowth.tas.gov.au

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From: s 36 @pittsh.com.au>
Sent: Monday, 5 December 2022 7:32 AM
To: [redacted] @stategrowth.tas.gov.au>
Subject: Milford issues

Hi [redacted]

As discussed last week, here are the current Milford issues we need to address

i. Unit 4 – our preliminary assessment determined approximately 2.8 Ha of mitigation and 1.5 Ha of offset – total about 4.3 Ha. We propose to declare the whole of Unit 4 (about 6 Ha) as the mitigation and offset – is s 36 aligned with this? s36 will consult other orchid experts before coming back to us on acceptance and rejection. Both s36 and s 36 were understanding of the reasons why although her concerns were how do you so additionality. I explained that we would adopt many of the methods in her current plan that were in line with current standards and practices. They understood that unit 4 borders the work sites (Tasman Highway and corner of Pittwater Road). I doubt we will get a response by Xmas.

ii. Further field assessment of unit 4 – North Barker need to carry out habitat assessment on unit 4 to confirm the final offset area. They are currently preparing a methodology for this that we will send to DCCEEW for review. Following that review North Barker will need to visit Milford. This looks like being later January/early February. Following that s 36 [redacted] would seek a meeting with s 36 to discuss the overall proposal – RCS, mitigation, offset, management measures before finalising the documentation for

review by s 36 adviser. No issues with NB going to Milford, need to give s36 advanced warning. Can you please develop a brief for s36 s consultant to review any materials, ie. offset management plan, strategy, etc.

iii. s 36 understanding is that s 36 does not favour use of fire to manage the orchid habitat in the future – can s 36 confirm this? s36 doesn't use fire as there is a limited window to do so. She requested that the offset management plan not specifically say fire cannot be used (ie. as to not rule it out in the future).

iv. Any advice on the Pittwater Road drainage – are you happy for me to send that off to Council Should be fine although I'll come back to you in a separate email.

v. Important to convey to s 36 that we are still looking to finalise the Preliminary Documentation for the EPBC approval as soon as possible – ie subject to further work on Unit 4 and s 36 endorsement of management plans, we are nearly there. I've advised her of this. The intention is to send her documentations that are not reliant on the habitat testing on unit 4.

vi. Does s 36 have any comments on the draft covenant for the compensatory planting area? If she does that may assist with the covenant for the offset. I sent a request to Crown law in September on the offset covenant and despit a couple of reminders they haven't started yet. I have not sent this to her, I wasn't aware this was in a position to be issued for comment. Can you resend please.

Regards

[redacted]

s 36

Principal Engineer

s 36 | [redacted] | [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36

pittsh.com.au

From: [redacted]
To: [redacted]
Subject: Re: Pittwater road signals
Date: Tuesday, 15 November 2022 12:41:11 PM

Thanks [redacted]
Best if you confirm the Departments position on what the Department is currently supplying, all also then by the Contractor

Sent from my iPhone

On 15 Nov 2022, at 12:22, [redacted] @stategrowth.tas.gov.au> wrote:

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Thanks mate.

I've asked the signals team to confirm TSC location and schematic layout in the ITS cabinets. We have had issues at midway point on ITS items, can you please confirm the spec and drawings are clear on point of supply, fibre to CCTV cameras and what is free issued/supplied by the contractor in the ITS cabinets.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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From: s 36 [redacted] @pittsh.com.au>
Sent: Tuesday, 15 November 2022 10:06 AM
To: [redacted] @stategrowth.tas.gov.au>
Subject: RE: Pittwater road signals

Hi [redacted]

Refer below in red.

Regards

s 36 [redacted]

Principal Engineer

s 36 [redacted] | [redacted] | [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36 [redacted]

pittsh.com.au

From: [redacted]@stategrowth.tas.gov.au>
Sent: Monday, 14 November 2022 9:55 PM
To: s 36 [redacted]@pittsh.com.au>
Subject: RE: Pittwater road signals

Hi s 36 [redacted]

Thank you for sending these through. Before I continue the discussion internally, will there be early warning signs ahead of the signals, and in both directions or just Sorell bound? Both directions refer attached Drawings 1041, 1407 and 1409 Have the ITS cabinet locations been confirmed? Refer Drawing 1041 Have DSG provided a layout or schematic for the ITS cabinets? Not that I'm aware Is it intended that pedestrians would cross all 6 lanes at once of will they be expected to stop at the traffic island? Cross all lanes in one movement – it's a 36 second movement and that has been factored in to the phasing.
ALSO – THE Traffic signal controller is missing from Drawing 1041 so if your traffic signal people have a preference for the location of that please advise.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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From: s 36 [redacted]@pittsh.com.au>

Sent: Tuesday, 1 November 2022 7:22 PM
To: [redacted]@stategrowth.tas.gov.au>
Subject: RE: Pittwater road signals

Hi [redacted]

Refer attached. We didn't get much back. Most of the discussion centred around the location of the advance warning flashing lights, refer 5th attachment.

Regards

s 36 [redacted]

Principal Engineer

s 36 [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36 [redacted]

pittsh.com.au

From: [redacted]@stategrowth.tas.gov.au>
Sent: Tuesday, 1 November 2022 11:39 AM
To: s 36 [redacted]@pittsh.com.au>
Subject: Pittwater road signals

Hi s 36 [redacted]

I was wondering how much, if any, correspondence we have had with the DSG signals team regarding the signals being installed at Pittwater road as part of our project? There may have been correspondence with Marcus Hamill in the past, Marcus has since left the department.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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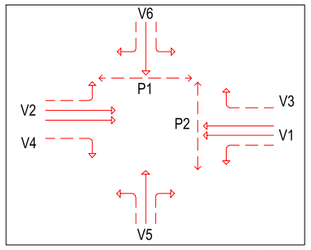
Attachment 1

SIGNAL GROUP	PHASE
V1	B
V2	B
V3	A
V4	A
V5	C
V6	C

SIGNAL GROUP	PHASE
P1	B
P2	C

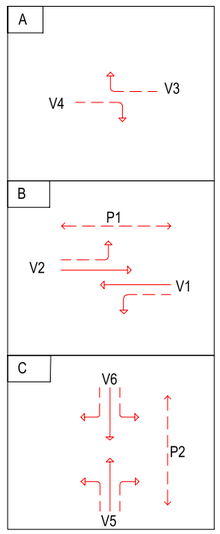
SIGNAL GROUP

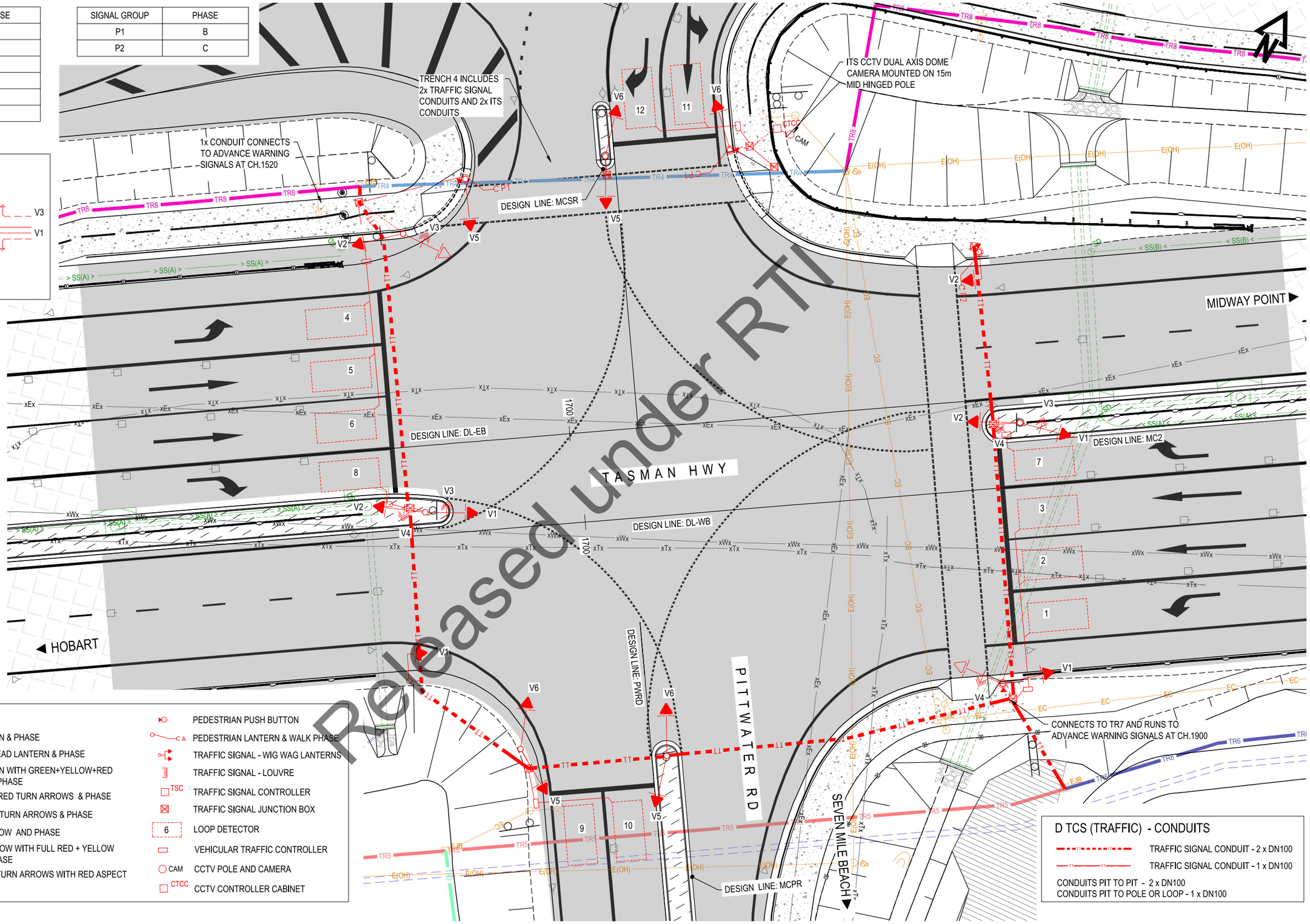


PHASE SEQUENCE

A - B - C - A

PHASE DIAGRAM





D TCS (TRAFFIC)

- 3 ASPECT LANTERN & PHASE
- 3 ASPECT OVERHEAD LANTERN & PHASE
- 3 ASPECT LANTERN WITH GREEN+YELLOW+RED TURN ARROWS & PHASE
- GREEN+YELLOW+RED TURN ARROWS & PHASE
- GREEN + YELLOW TURN ARROWS & PHASE
- GREEN TURN ARROW AND PHASE
- GREEN TURN ARROW WITH FULL RED + YELLOW ASPECTS AND PHASE
- GREEN+YELLOW TURN ARROWS WITH RED ASPECT & PHASE
- PEDESTRIAN PUSH BUTTON
- PEDESTRIAN LANTERN & WALK PHASE
- TRAFFIC SIGNAL - WIG WAG LANTERNS
- TRAFFIC SIGNAL - LOUVRE
- TSC TRAFFIC SIGNAL CONTROLLER
- TRAFFIC SIGNAL JUNCTION BOX
- 6 LOOP DETECTOR
- VEHICULAR TRAFFIC CONTROLLER
- CAM CCTV POLE AND CAMERA
- CTCC CCTV CONTROLLER CABINET

D TCS (TRAFFIC) - CONDUITS

- TRAFFIC SIGNAL CONDUIT - 2 x DN100
- TRAFFIC SIGNAL CONDUIT - 1 x DN100

CONDUITS PIT TO PIT - 2 x DN100
CONDUITS PIT TO POLE OR LOOP - 1 x DN100

No.	Amendment Description	Initials	Date
A	DETAILED DESIGN	D.C.	17/03/2021

A3 original | This sheet may be prepared using colour and may be incomplete if copied | Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

SCALES
1:250m (A3)
2.5 0 2.5 5 7.5 10
SCALE IN METRES - 1:250

pitt&sherry

Tasmanian Government

DESIGNED
REVIEWED

Department of State Growth

TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS

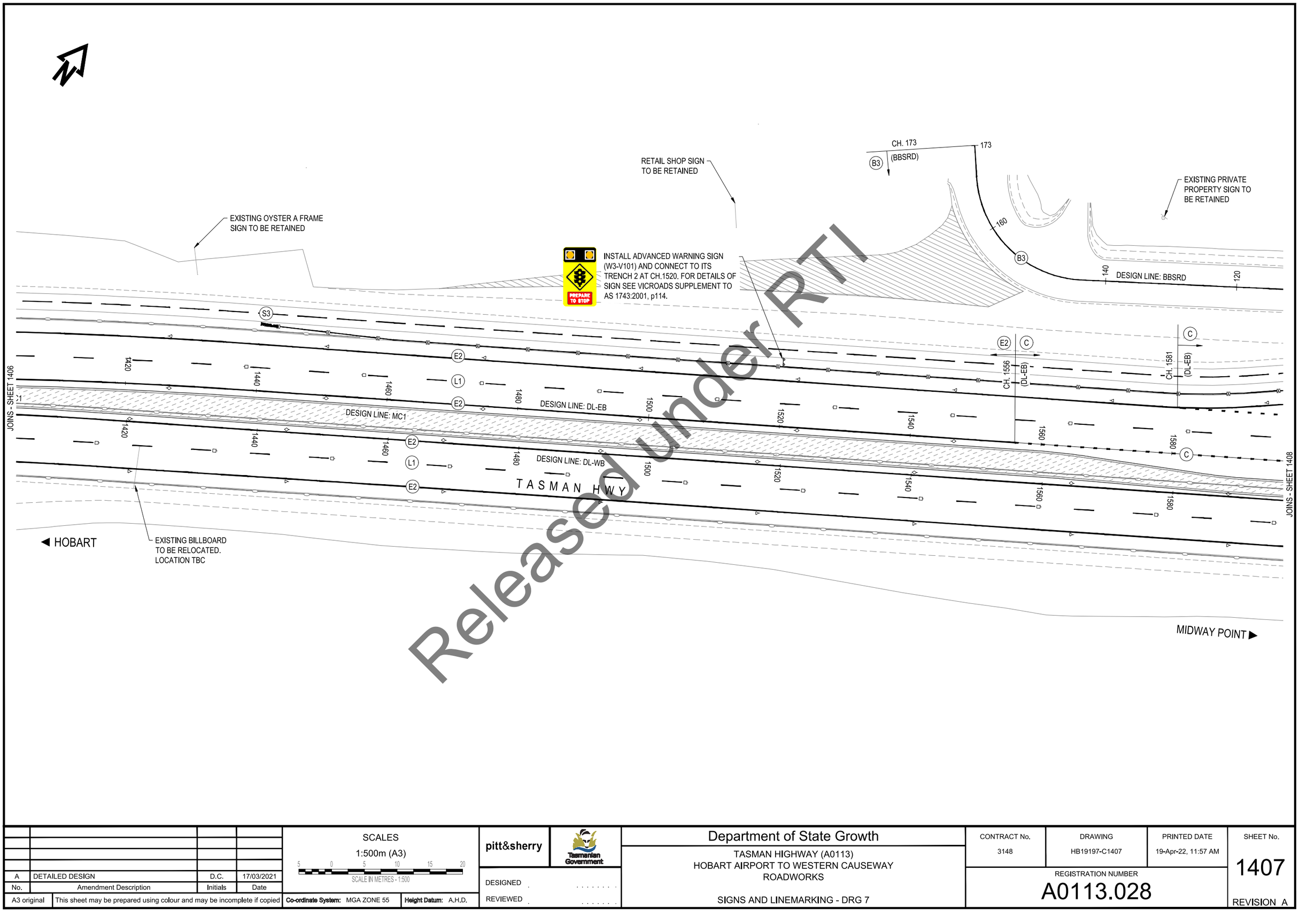
TRAFFIC SIGNALLING - DRG 1

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C1041	19-Apr-22, 4:17 PM	1041

REGISTRATION NUMBER
A0113.028

REVISION A

Attachment 2



No.	Amendment Description	Initials	Date
A	DETAILED DESIGN	D.C.	17/03/2021

A3 original | This sheet may be prepared using colour and may be incomplete if copied

SCALES
1:500m (A3)
5 0 5 10 15 20
SCALE IN METRES - 1:500

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

pitt&sherry

Tasmanian Government

DESIGNED
REVIEWED

Department of State Growth

TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS

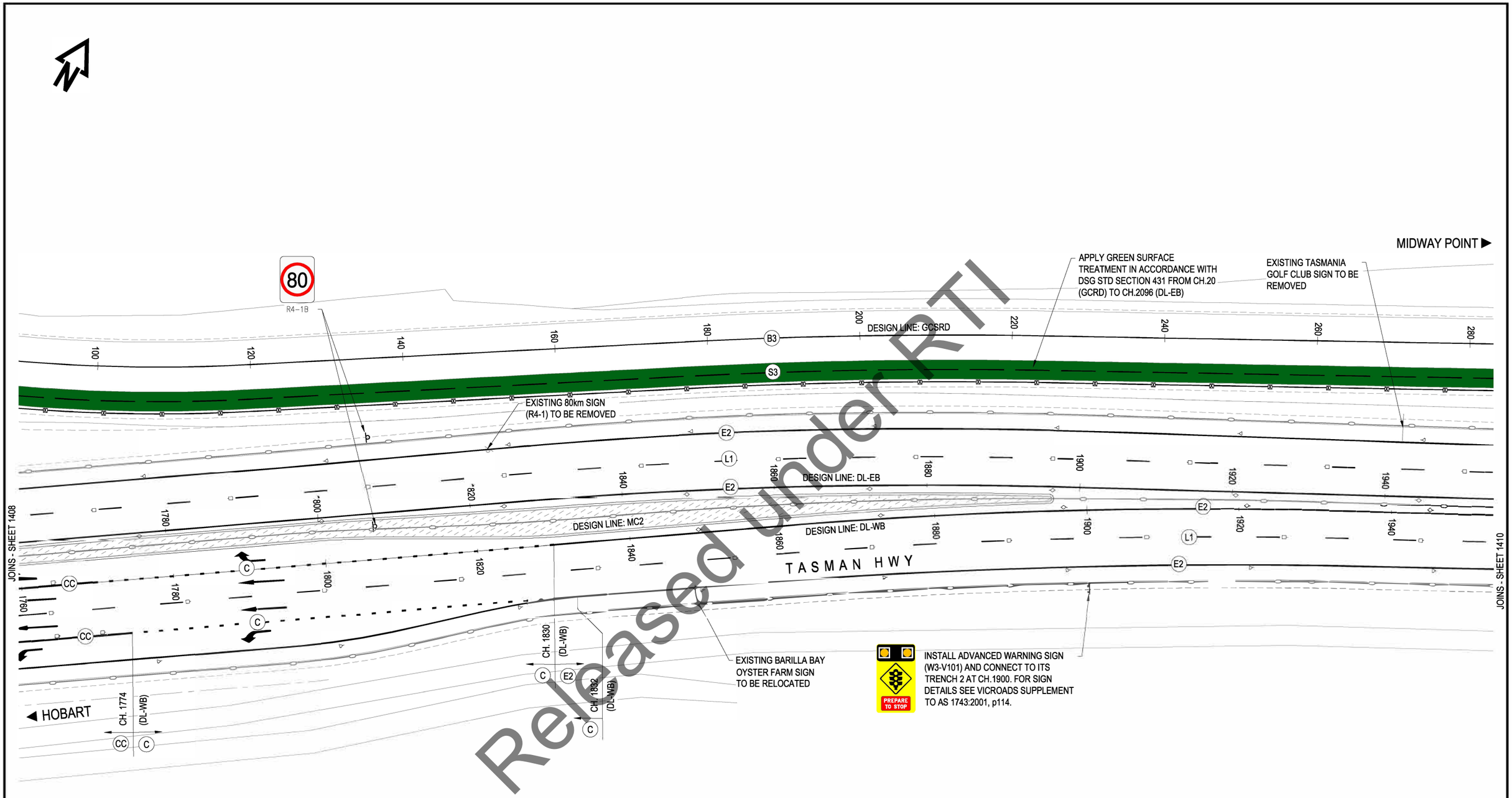
SIGNS AND LINEMARKING - DRG 7

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C1407	19-Apr-22, 11:57 AM	1407

REGISTRATION NUMBER
A0113.028

REVISION A

Attachment 3



No.	Amendment Description	Initials	Date
B	DETAILED DESIGN	D.C.	08/02/2022
A	DETAILED DESIGN	D.C.	17/03/2021

A3 original | This sheet may be prepared using colour and may be incomplete if copied

SCALES
1:500m (A3)
5 0 5 10 15 20
SCALE IN METRES - 1:500

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

pitt&sherry

Tasmanian Government

DESIGNED [redacted]
REVIEWED [redacted]

Department of State Growth

TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS

SIGNS AND LINEMARKING - DRG 9

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C1409	19-Apr-22, 4:49 PM	1409

REGISTRATION NUMBER
A0113.028

REVISION B

Document 53

From: s 36
To: [redacted]
Subject: FW: Milford Driveway Drawings
Date: Tuesday, 1 November 2022 7:45:35 PM
Attachments: image001.png
image002.png
HB19197-2000-2999.pdf

Hi [redacted]
Driveway drawings attached. We have provided 225 mm diameter culverts along the driveway (450 mm at the entrance). The 225s need about 400 mm cover so we have had to lift the road by about 600 mm at the culvert locations. Is that what s 36 wants? If not then no culverts, road is at ground level and all water goes over the road and we could put a concrete spoon drain at the existing shallow drain crossings. You will have to markup the location of existing water troughs and proposed new ones. We haven't noted that the power line at ch 760 needs to be raised to 5.5 metres, but I'll get that done. Let me know if there is anything else you want added before you send to s 36 .
Regards

s 36 [redacted]

Principal Engineer

s 36 [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36 [redacted]

pittsh.com.au

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2103	A	GENERAL ARRANGEMENT PLAN - DRG 3
2104	A	GENERAL ARRANGEMENT PLAN - DRG 4
2105	A	GENERAL ARRANGEMENT PLAN - DRG 5
2106	A	GENERAL ARRANGEMENT PLAN - DRG 6
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2702	A	LONGITUDINAL SECTION (MC00) - DRG 2
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No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

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SCALES
NTS

Co-ordinate System: MGA ZONE 55 **Height Datum:** A.H.D.

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Department of State Growth

TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

TABLE OF CONTENTS

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2001	01-Nov-22, 12:24 PM	2001

REGISTRATION NUMBER
A0113.028

REVISION A

No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

A3 original | This sheet may be prepared using colour and may be incomplete if copied

SCALES
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SCALE IN METRES - 1:2500

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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REVIEWED DJC1

Department of State Growth

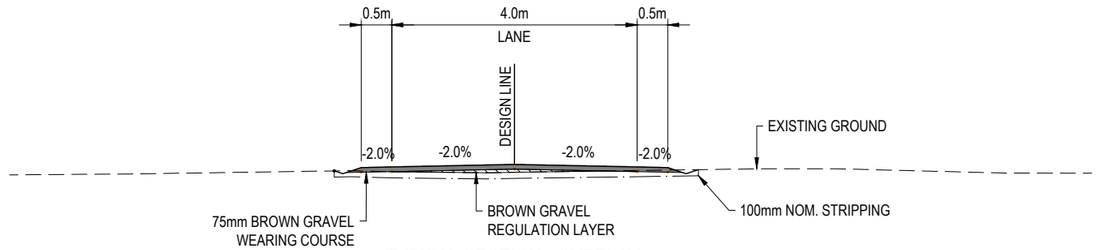
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

KEY PLAN

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2011	01-Nov-22, 12:28 PM	2011

REGISTRATION NUMBER
A0113.028

REVISION A



TYPICAL SECTION - OVERLAY
(CH.885 - CH.959 MC00)
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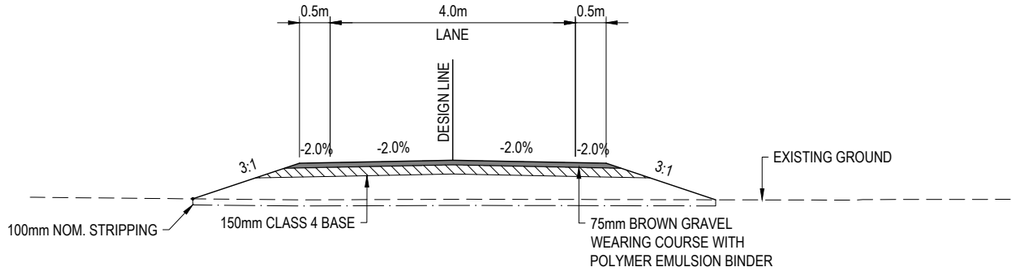
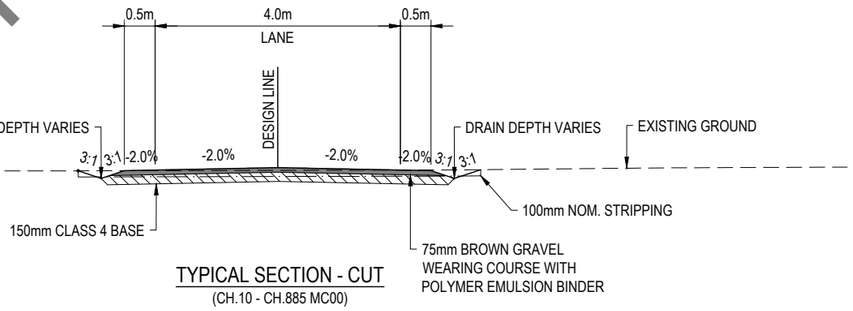


TYPICAL SECTION - FILL
(CH.10 - CH.885 MC00)
SCALE 1:100



TYPICAL SECTION - CUT
(CH.10 - CH.885 MC00)
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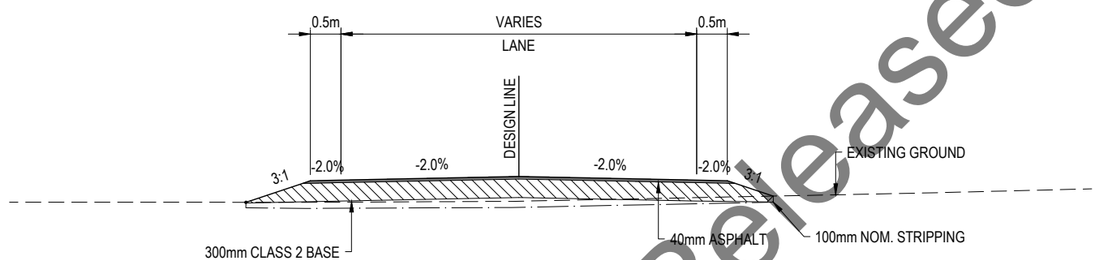
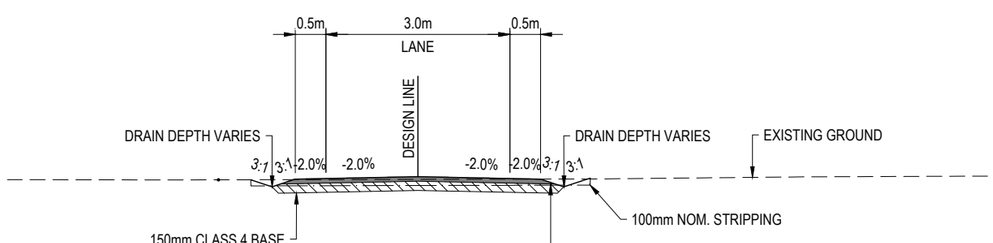


TYPICAL SECTION - ASPHALT
(CH.0 - CH.10 MC00)
SCALE 1:100



TYPICAL SECTION - 3m WIDE
(CH.0 - CH.34 MC10)
SCALE 1:100

No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

A3 original | This sheet may be prepared using colour and may be incomplete if copied

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SCALE IN METRES - 1:100

Co-ordinate System: MGA ZONE 55 **Height Datum:** A.H.D.

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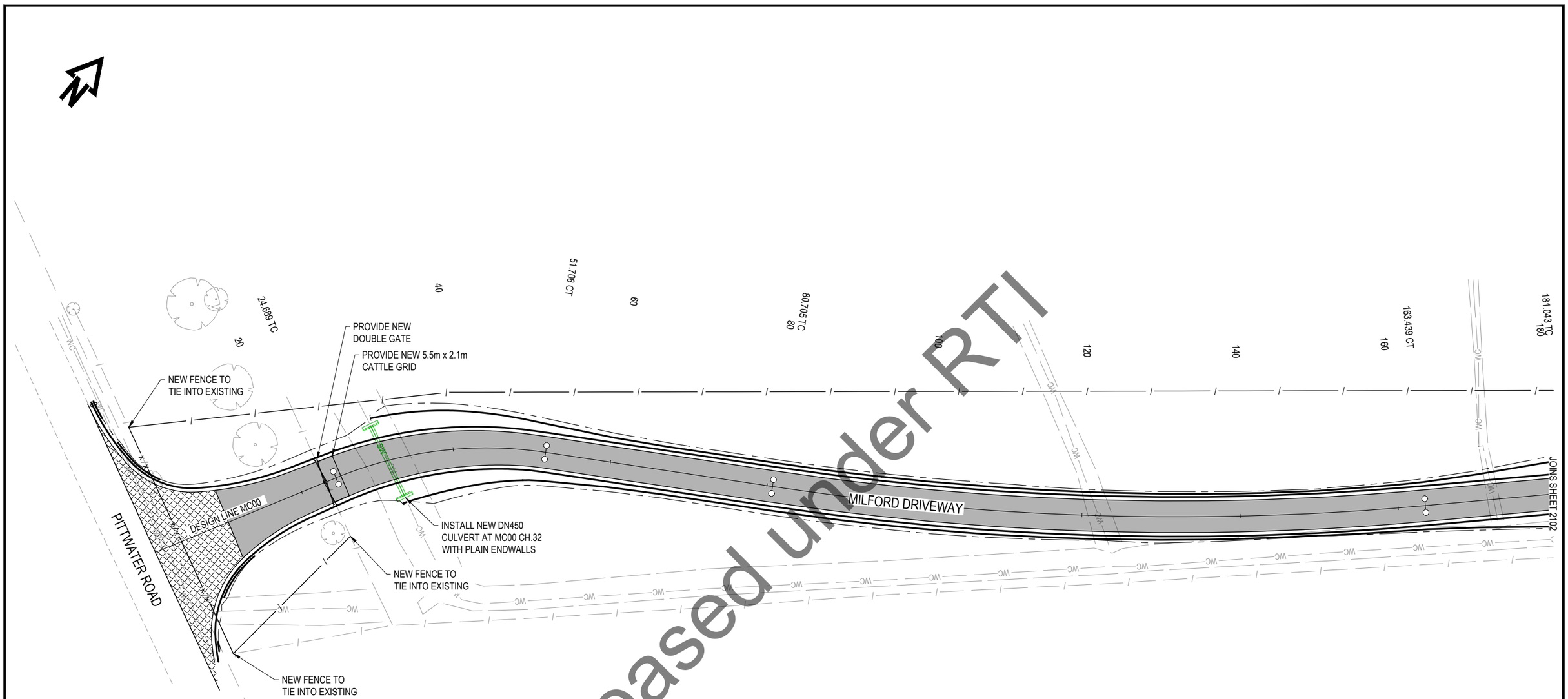
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

TYPICAL SECTIONS

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2031	01-Nov-22, 12:25 PM	2031

REGISTRATION NUMBER
A0113.028

REVISION A



DIAL BEFORE YOU DIG

BASE SURVEY BY: VERIS
SURVEYED ON: 10/08/2021

-WARNING-

BEWARE OF UNDERGROUND SERVICES

THE LOCATION OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THE EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL SERVICES ARE SHOWN.

TO PROTECT THE ENVIRONMENT, CLEARING SHALL BE IN ACCORDANCE WITH THE SPECIFICATION AND CONFINED TO THAT REQUIRED FOR EARTHWORKS, DRAINAGE AND FENCING. EXISTING TREES, SHRUBS AND GRASSES NOT AFFECTED BY THE ABOVE WORKS SHALL BE RETAINED AND DISTURBED AS LITTLE AS POSSIBLE.

LEGEND

- 40mm ASPHALT
- 75mm BROWN GRAVEL WEARING COURSE WITH POLYMER EMULSION BINDER
- 75mm BROWN GRAVEL WEARING COURSE OVERLAY

No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

A3 original | This sheet may be prepared using colour and may be incomplete if copied

SCALES
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5 0 5 10 15 20
SCALE IN METRES - 1:500

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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Department of State Growth

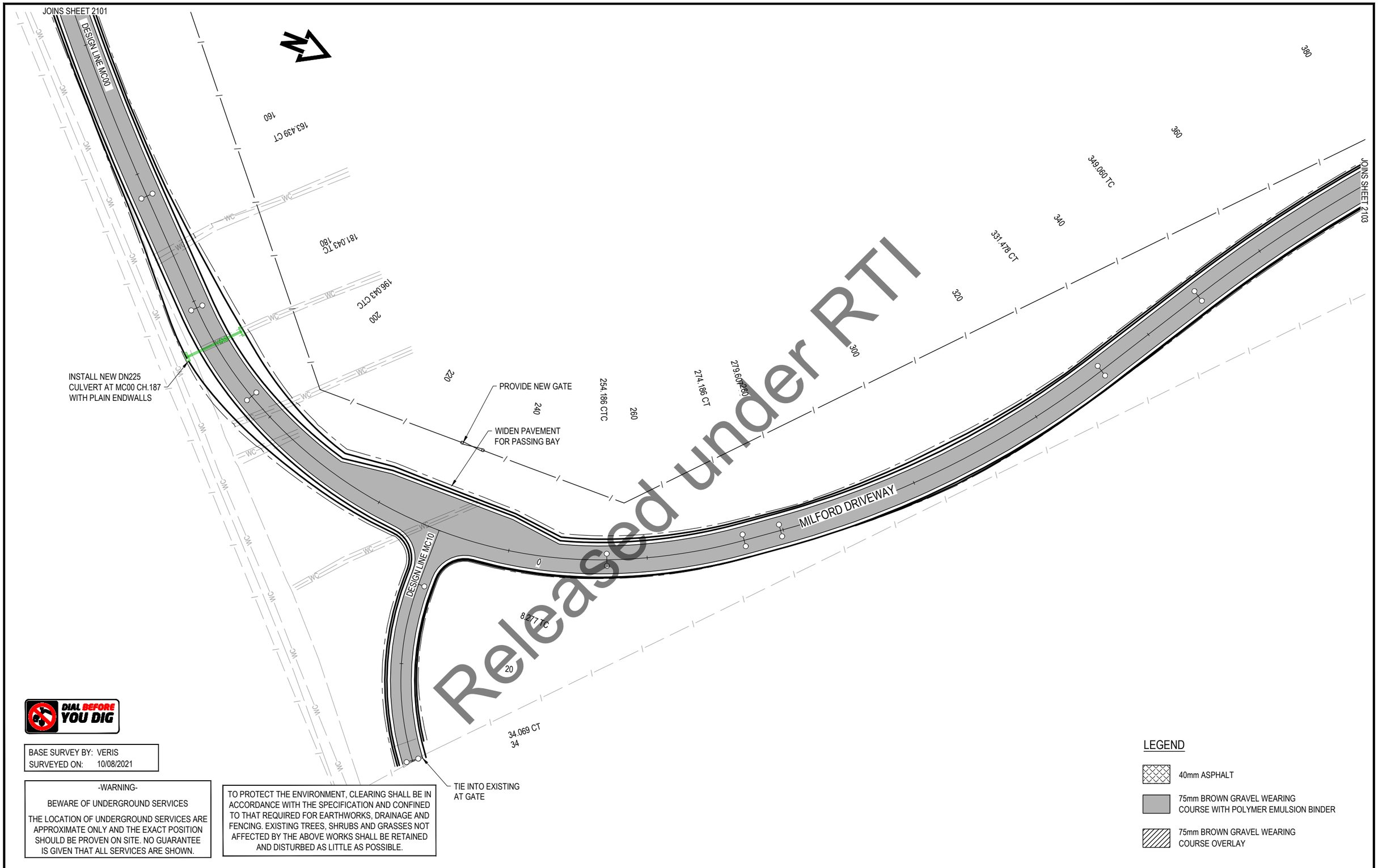
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

GENERAL ARRANGEMENT PLAN - DRG 1

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2101	01-Nov-22, 12:25 PM	2101

REGISTRATION NUMBER
A0113.028

REVISION A



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BASE SURVEY BY: VERIS
SURVEYED ON: 10/08/2021

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No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

A3 original | This sheet may be prepared using colour and may be incomplete if copied

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SCALE IN METRES - 1:500

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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Department of State Growth

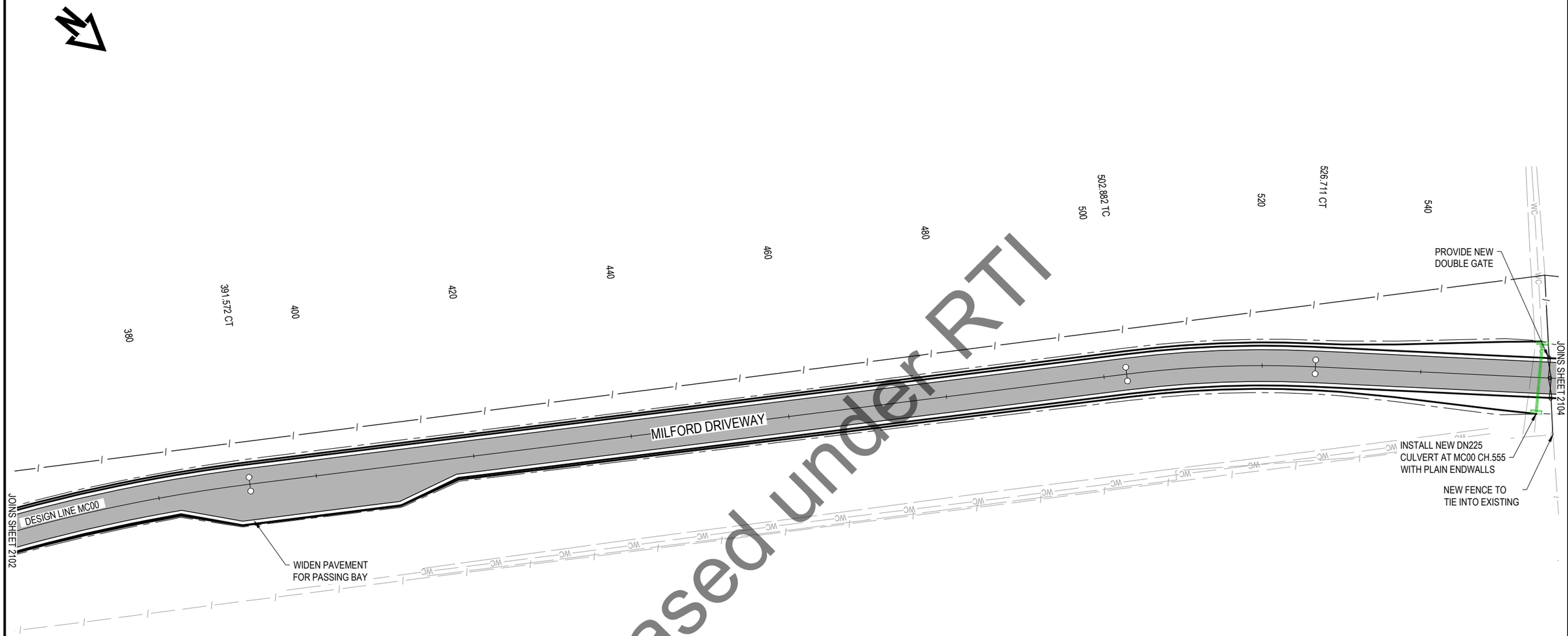
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

GENERAL ARRANGEMENT PLAN - DRG 2

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2102	01-Nov-22, 12:25 PM	2102

REGISTRATION NUMBER
A0113.028

REVISION A



DIAL BEFORE YOU DIG

BASE SURVEY BY: VERIS
SURVEYED ON: 10/08/2021

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No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

A3 original | This sheet may be prepared using colour and may be incomplete if copied

SCALES
1:500 (A3)
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SCALE IN METRES - 1:500

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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Department of State Growth

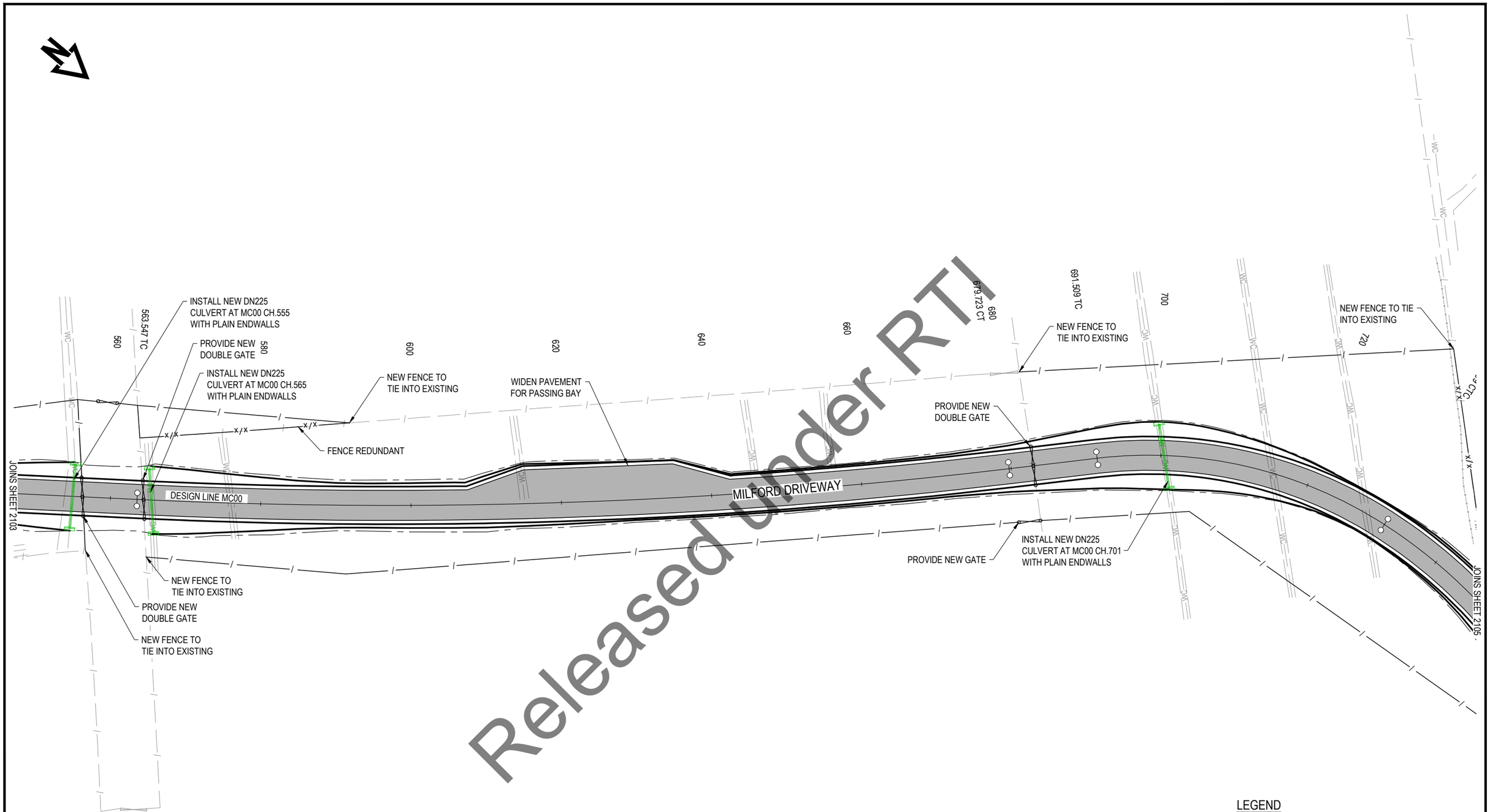
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

GENERAL ARRANGEMENT PLAN - DRG 3

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2103	01-Nov-22, 12:25 PM	2103

REGISTRATION NUMBER
A0113.028

REVISION A



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DIAL BEFORE YOU DIG

BASE SURVEY BY: VERIS
SURVEYED ON: 10/08/2021

LEGEND

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- 75mm BROWN GRAVEL WEARING COURSE OVERLAY

No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

A3 original | This sheet may be prepared using colour and may be incomplete if copied

SCALES
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SCALE IN METRES - 1:500

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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Department of State Growth

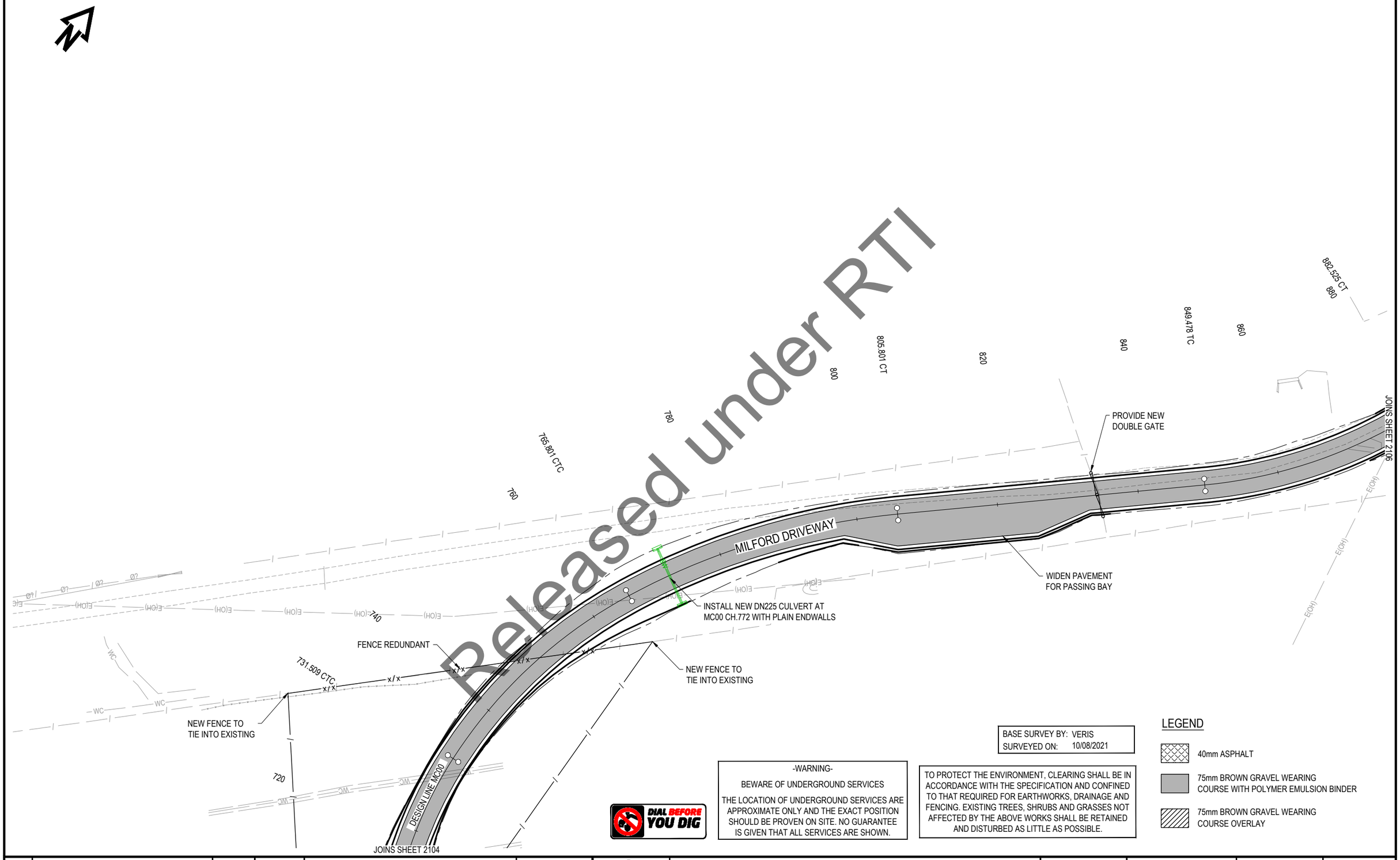
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

GENERAL ARRANGEMENT PLAN - DRG 4

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2104	01-Nov-22, 12:25 PM	2104

REGISTRATION NUMBER
A0113.028

REVISION A



BASE SURVEY BY: VERIS
SURVEYED ON: 10/08/2021

LEGEND

- 40mm ASPHALT
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- 75mm BROWN GRAVEL WEARING COURSE OVERLAY

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No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

A3 original | This sheet may be prepared using colour and may be incomplete if copied

SCALES
1:500 (A3)
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SCALE IN METRES - 1:500

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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Department of State Growth

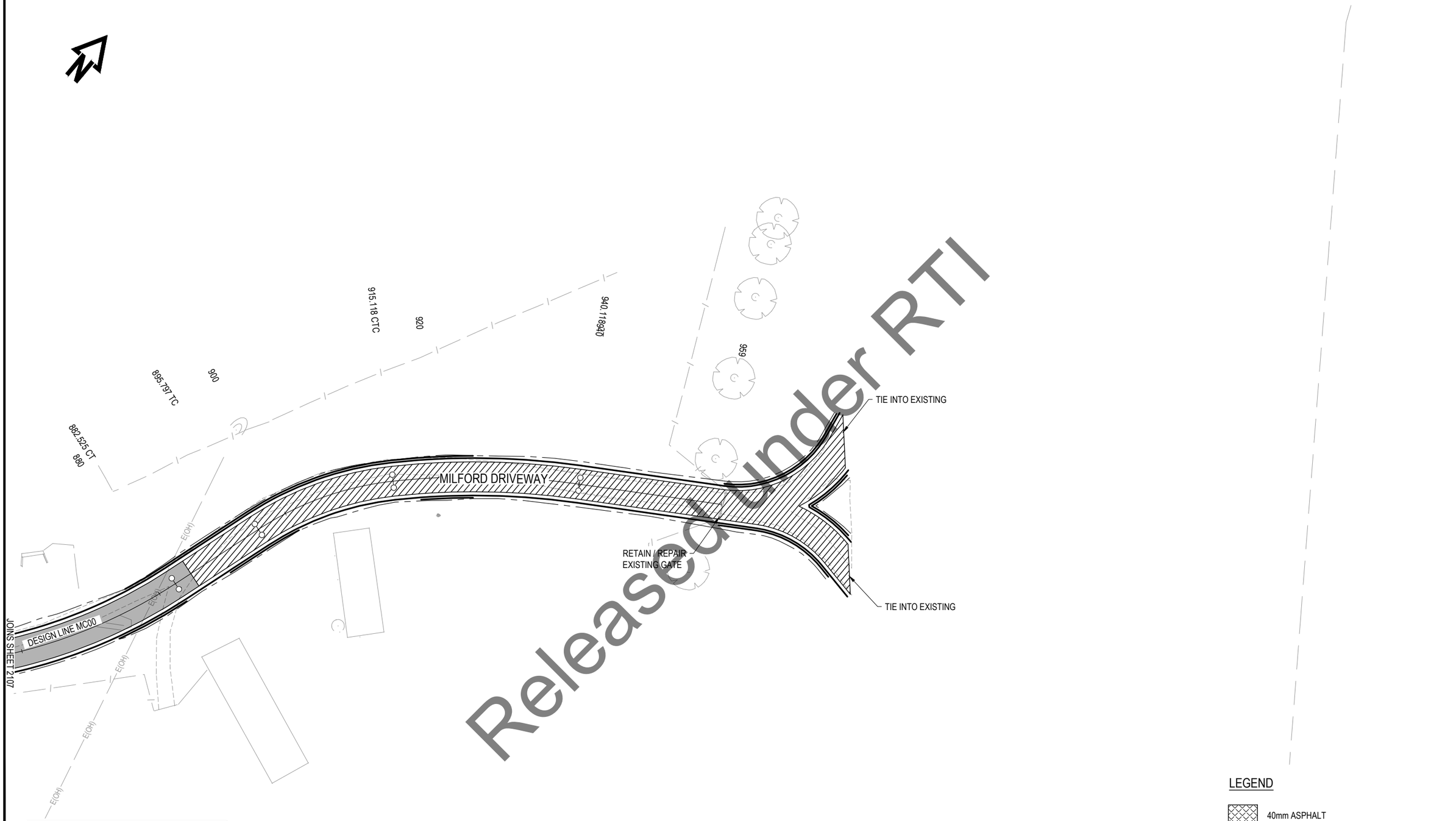
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

GENERAL ARRANGEMENT PLAN - DRG 5

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2105	01-Nov-22, 12:25 PM	2105

REGISTRATION NUMBER
A0113.028

REVISION A



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BASE SURVEY BY: VERIS
SURVEYED ON: 10/08/2021

No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

A3 original | This sheet may be prepared using colour and may be incomplete if copied

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SCALE IN METRES - 1:500

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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Department of State Growth

TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

GENERAL ARRANGEMENT PLAN - DRG 6

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
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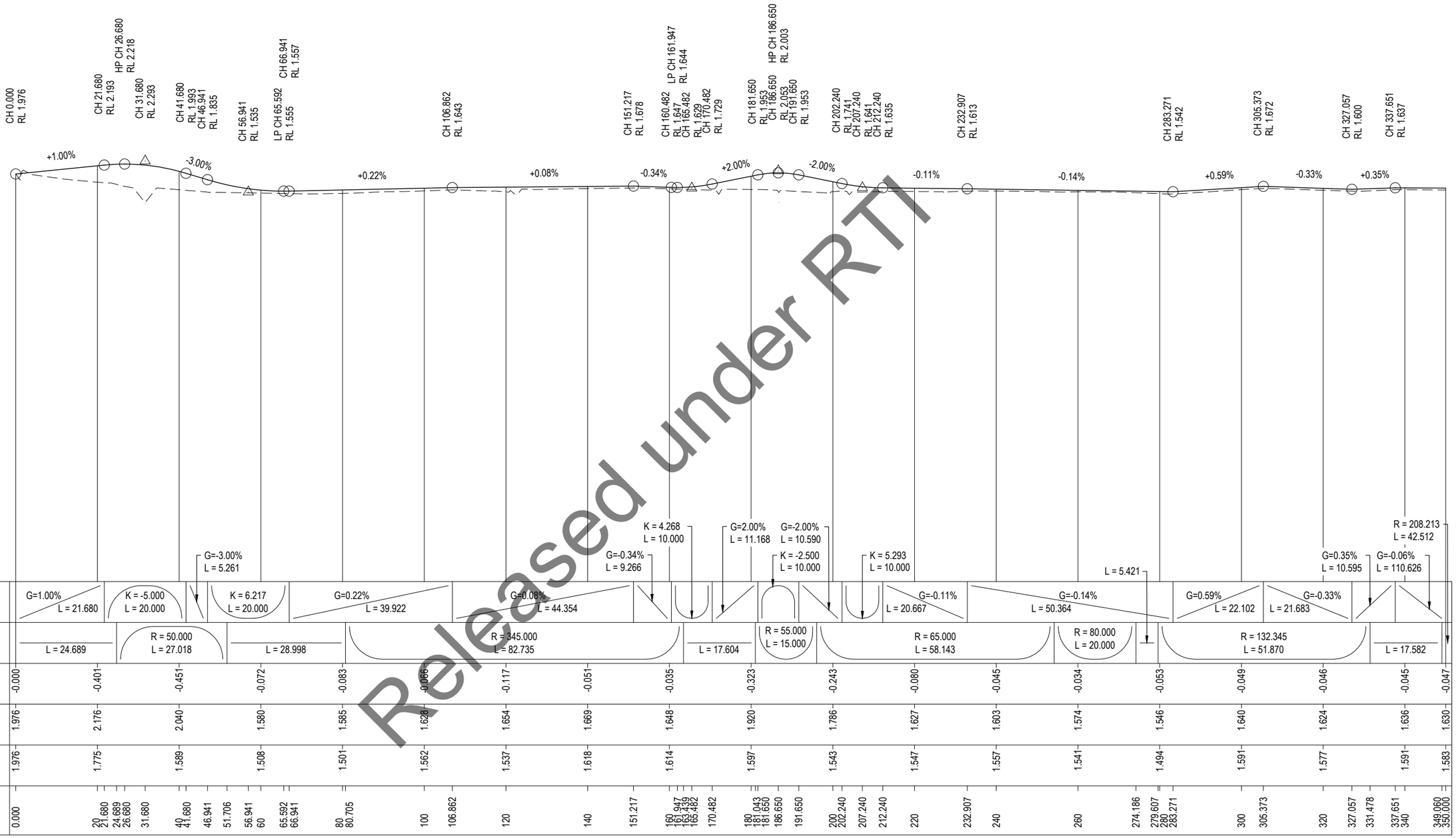
REGISTRATION NUMBER
A0113.028

REVISION A



LONGITUDINAL SECTION MC00

No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

A3 original | This sheet may be prepared using colour and may be incomplete if copied

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Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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DESIGNED HEP
REVIEWED DJC1

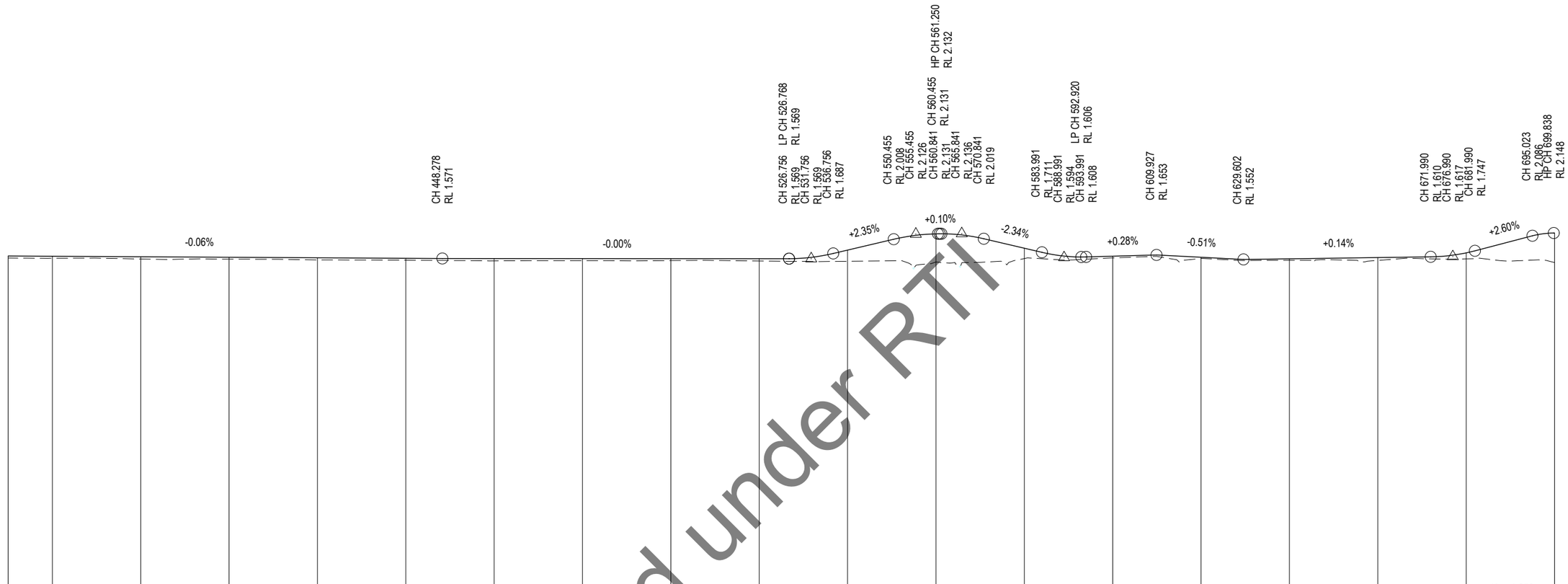
Department of State Growth
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

LONGITUDINAL SECTION (MC00) - DRG 1

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2701	01-Nov-22, 12:25 PM	2701

REGISTRATION NUMBER
A0113.028

REVISION A



LONGITUDINAL SECTION MC00

No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

A3 original | This sheet may be prepared using colour and may be incomplete if copied

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Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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Tasmanian Government

DESIGNED HEP
REVIEWED DJC1

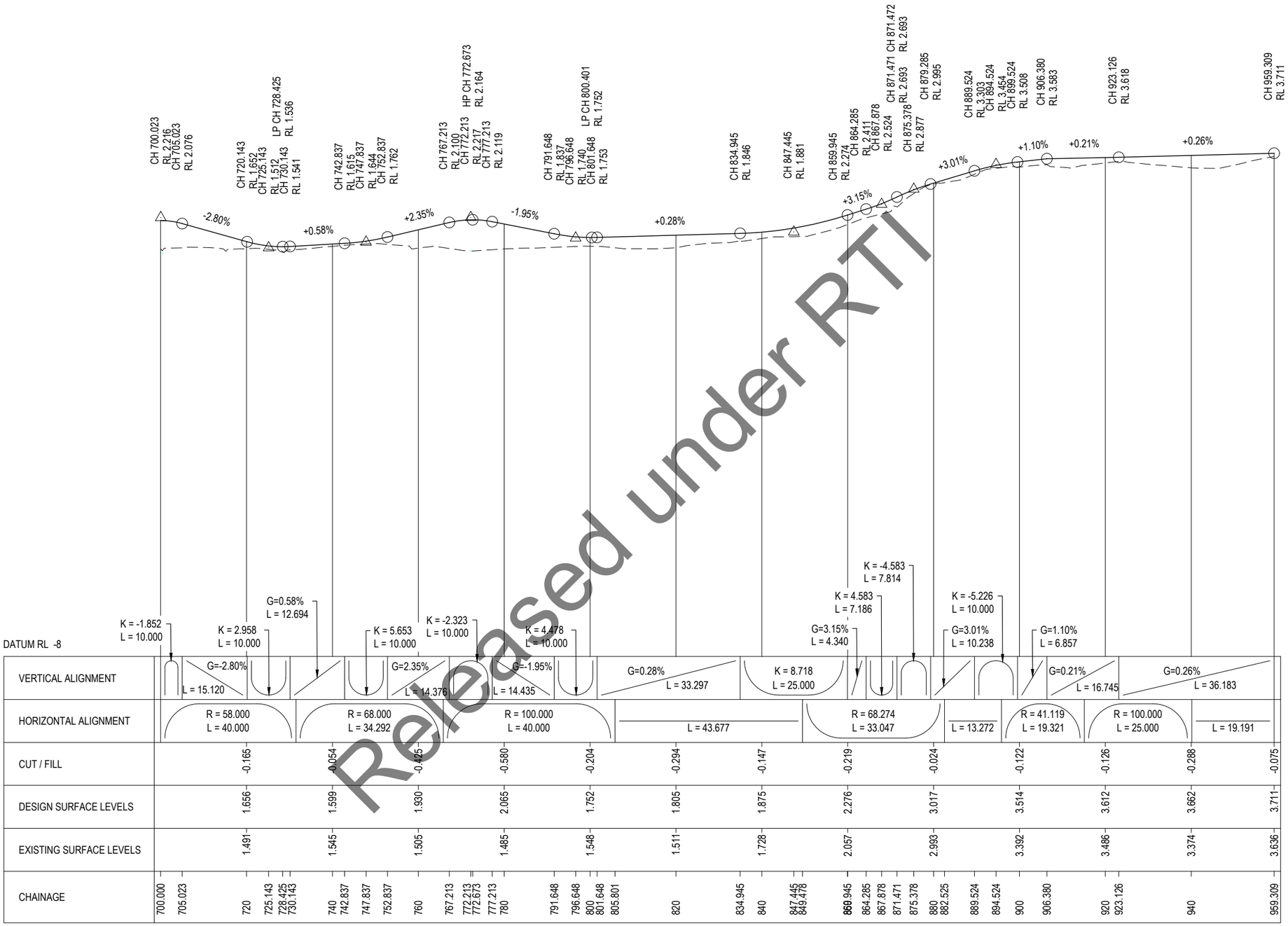
Department of State Growth
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

LONGITUDINAL SECTION (MC00) - DRG 2

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2702	01-Nov-22, 12:25 PM	2702

REGISTRATION NUMBER
A0113.028

REVISION A



LONGITUDINAL SECTION MC00

No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

A3 original | This sheet may be prepared using colour and may be incomplete if copied

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Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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REVIEWED DJC1

Department of State Growth
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

LONGITUDINAL SECTION (MC00) - DRG 3

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2703	01-Nov-22, 12:25 PM	2703

REGISTRATION NUMBER
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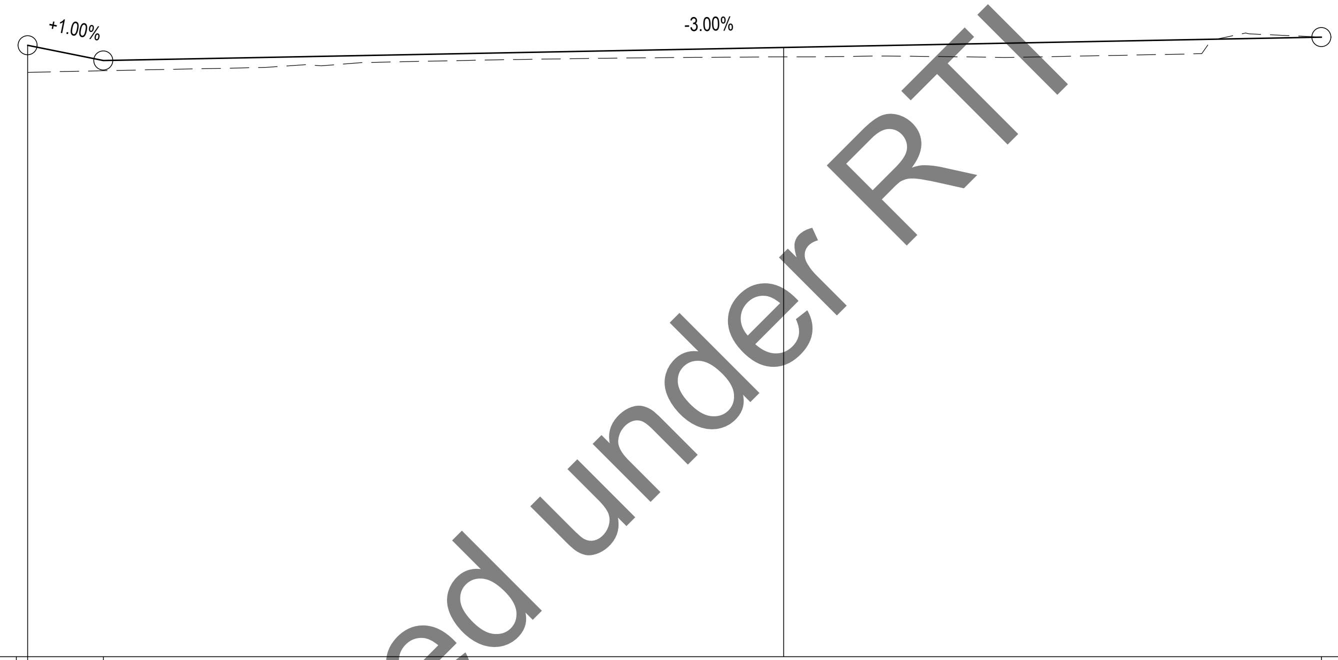
REVISION A



DATUM RL -8

VERTICAL ALIGNMENT	G=-2.00% L = 2.000; G=0.19% L = 32.228
HORIZONTAL ALIGNMENT	L = 8.277; R = 39.379 L = 25.792; L = 0.159
CUT / FILL	-0.071; -0.025; 0.000
DESIGN SURFACE LEVELS	1.616; 1.611; 0.000
EXISTING SURFACE LEVELS	1.545; 1.586; 0.000
CHAINAGE	0.000; 2.000; 8.277; 20; 34.069; 34.228; 35.000

LONGITUDINAL SECTION MC10

A	PRELIMINARY	DJC1	01/11/2022
No.	Amendment Description	Initials	Date

A3 original | This sheet may be prepared using colour and may be incomplete if copied

SCALES
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Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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Department of State Growth

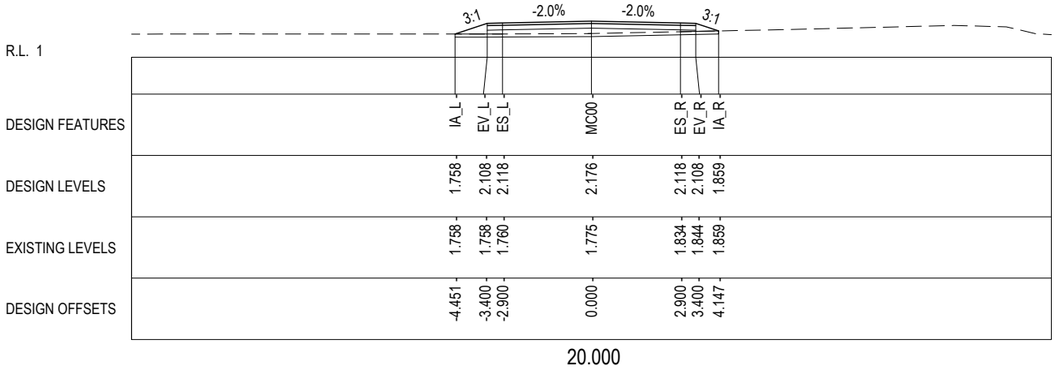
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

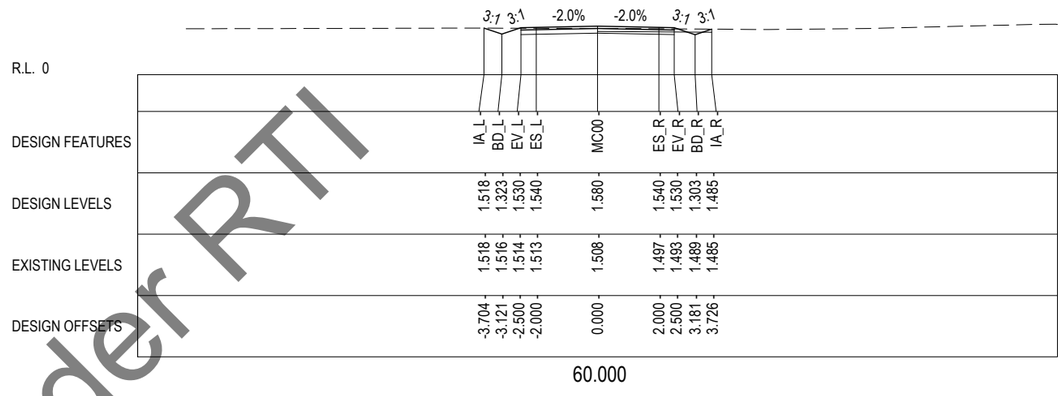
LONGITUDINAL SECTION (MC10) - DRG 1

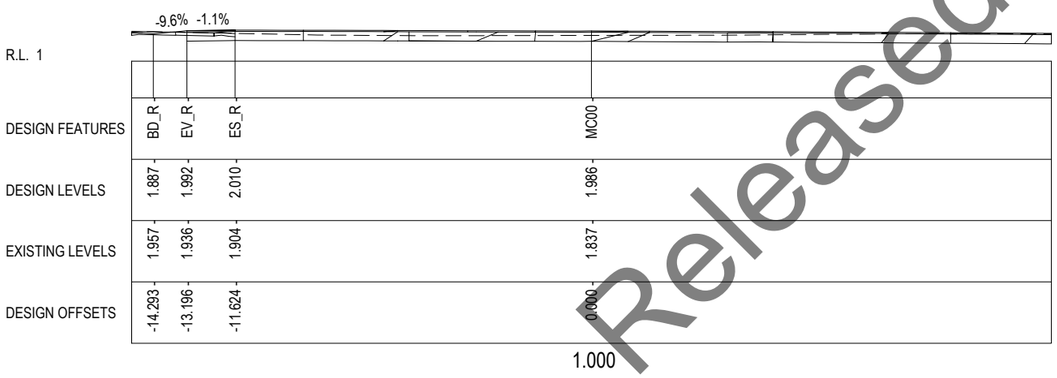
CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2704	01-Nov-22, 12:25 PM	2704

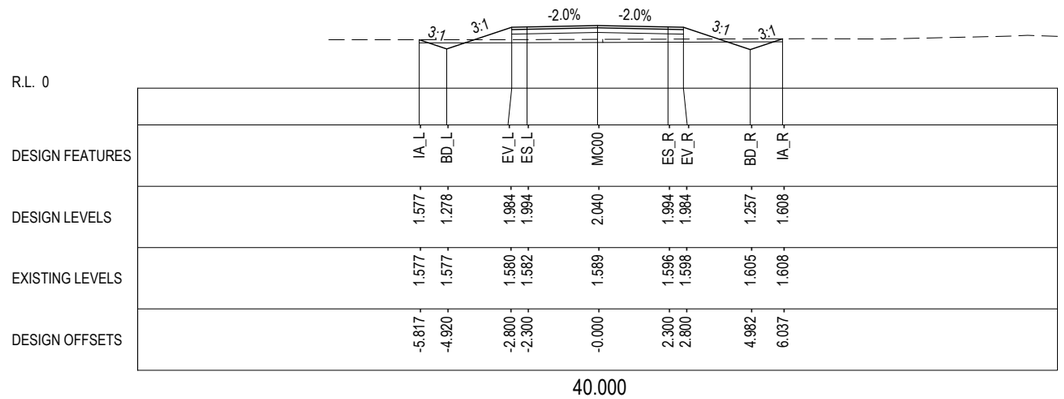
REGISTRATION NUMBER
A0113.028

REVISION A









No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

A3 original | This sheet may be prepared using colour and may be incomplete if copied

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SCALE IN METRES - 1:200

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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Tasmanian Government

DESIGNED HEP
REVIEWED DJC1

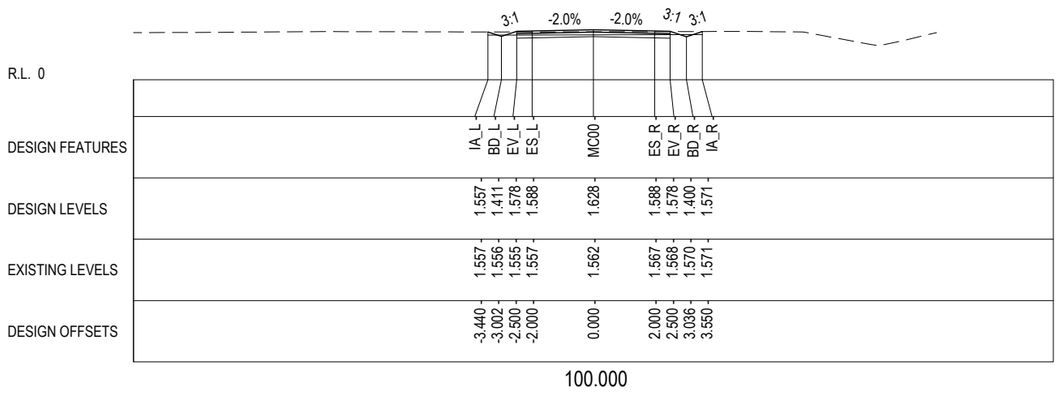
Department of State Growth
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

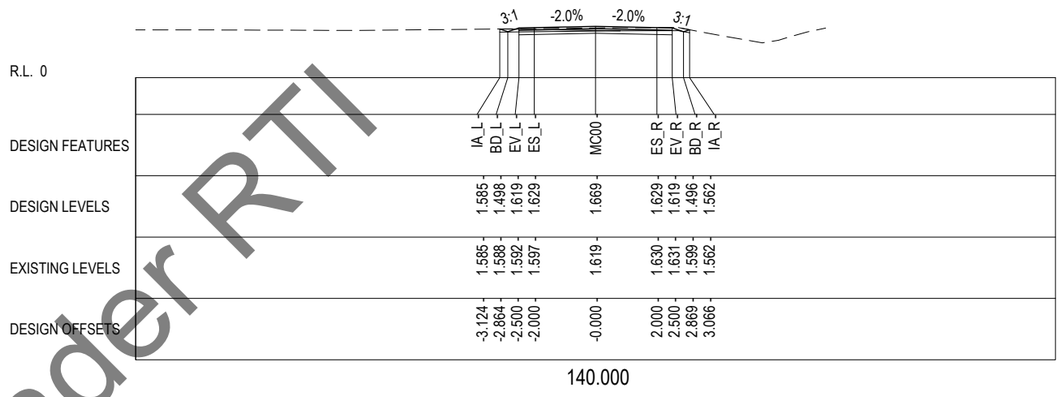
CROSS SECTIONS (MC00) - DRG 1

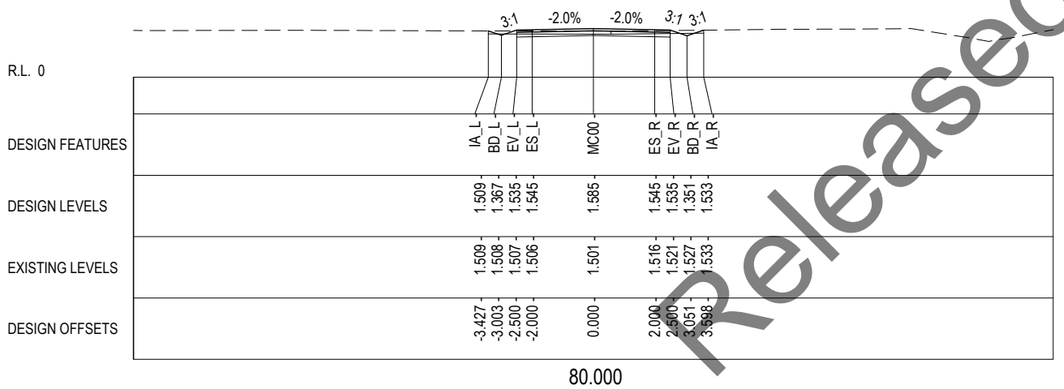
CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2801	01-Nov-22, 12:26 PM	2801

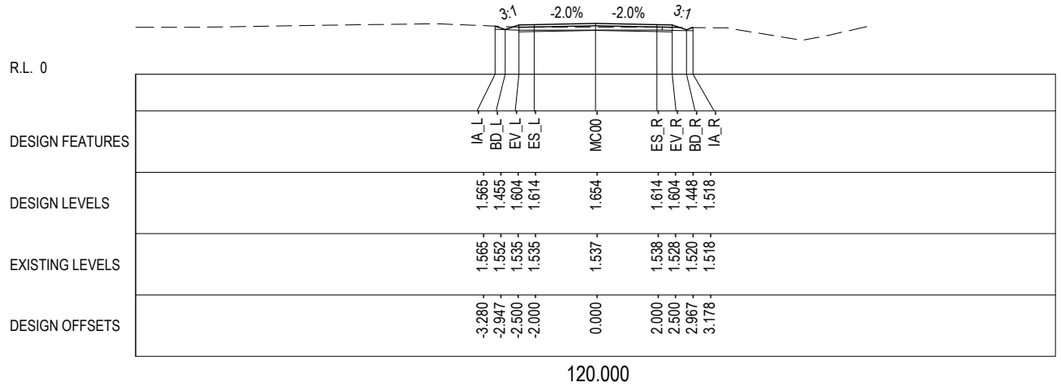
REGISTRATION NUMBER
A0113.028

REVISION A









No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

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SCALE IN METRES - 1:200

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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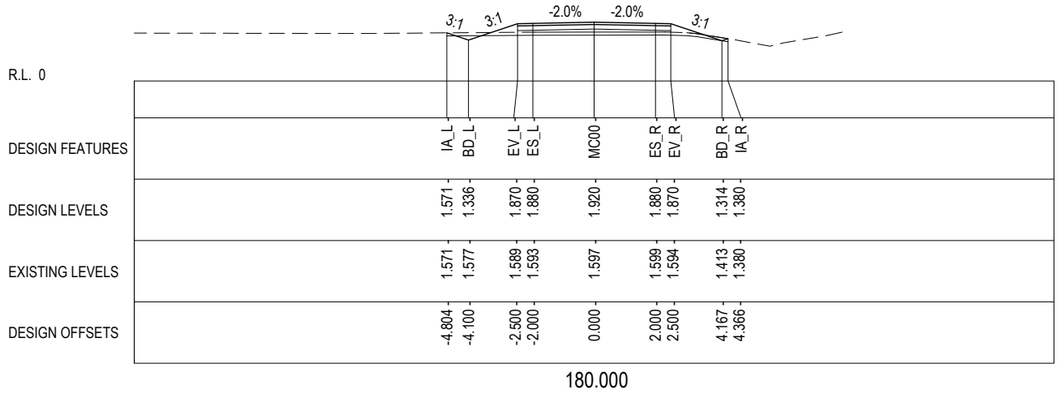
Department of State Growth
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

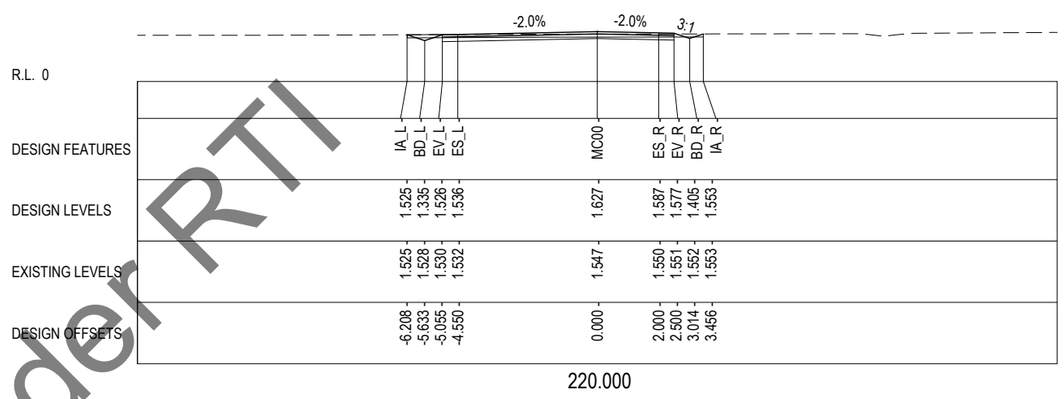
CROSS SECTIONS (MC00) - DRG 2

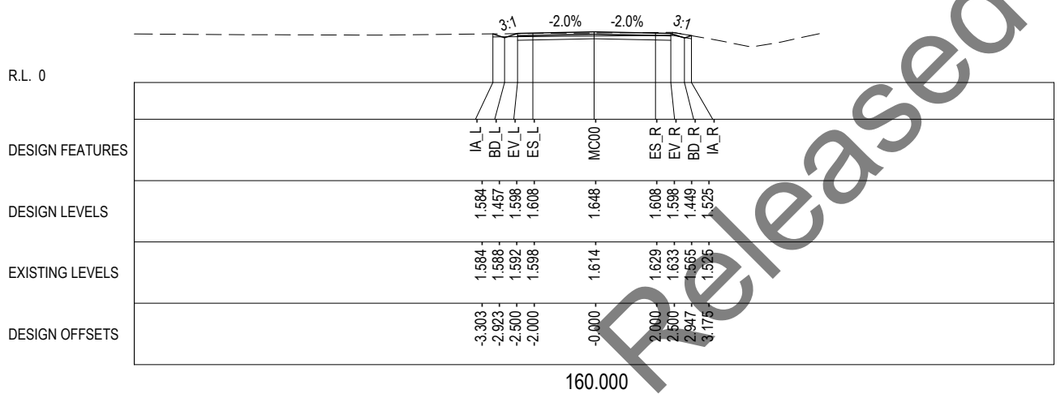
CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2802	01-Nov-22, 12:26 PM	2802

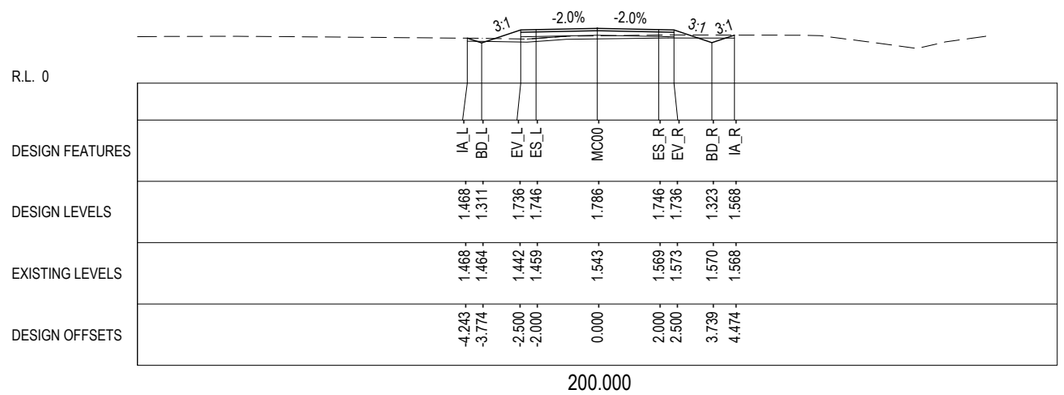
REGISTRATION NUMBER
A0113.028

REVISION A









No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

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SCALE IN METRES - 1:200

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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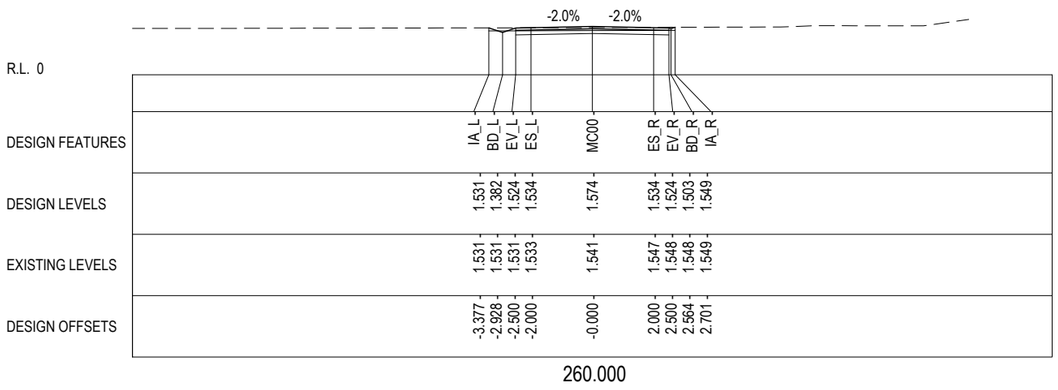
Department of State Growth
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

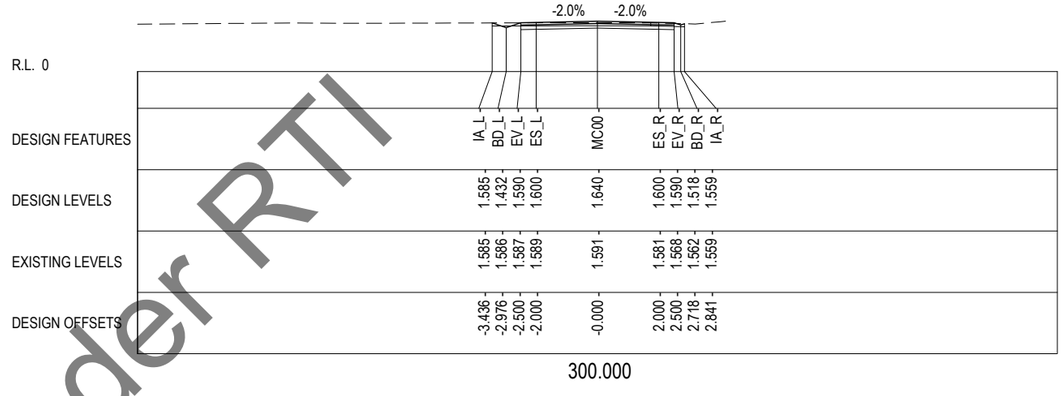
CROSS SECTIONS (MC00) - DRG 3

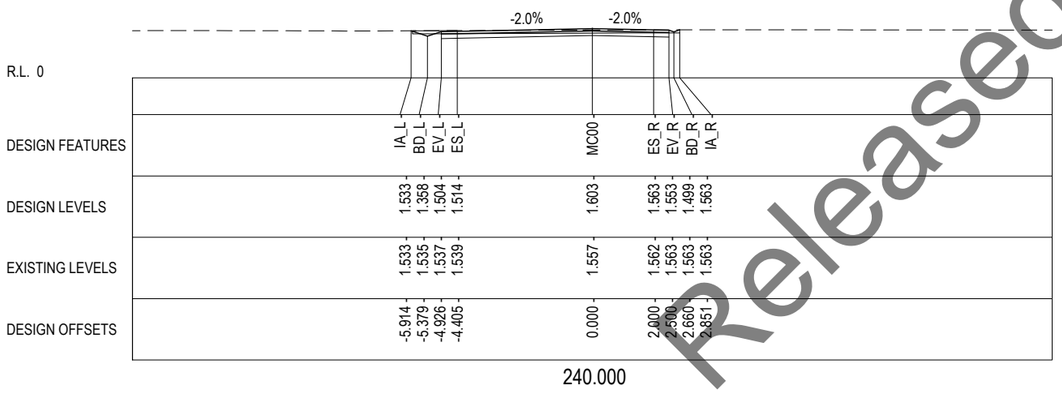
CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2803	01-Nov-22, 12:26 PM	2803

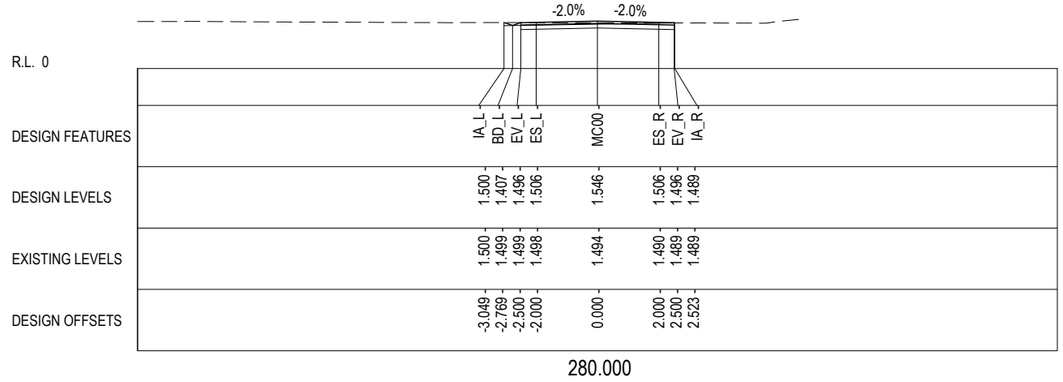
REGISTRATION NUMBER
A0113.028

REVISION A









No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

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Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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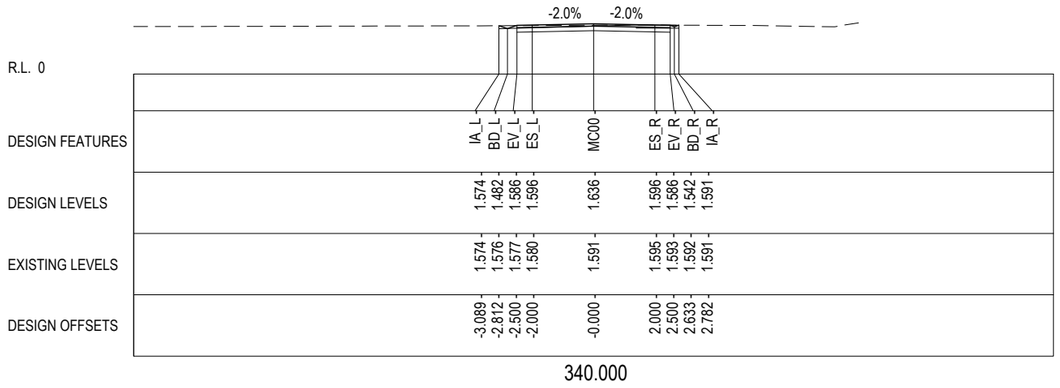
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

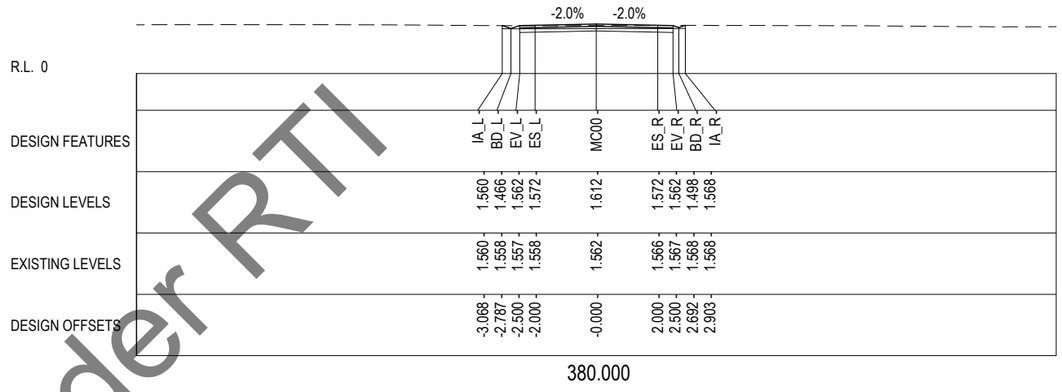
CROSS SECTIONS (MC00) - DRG 4

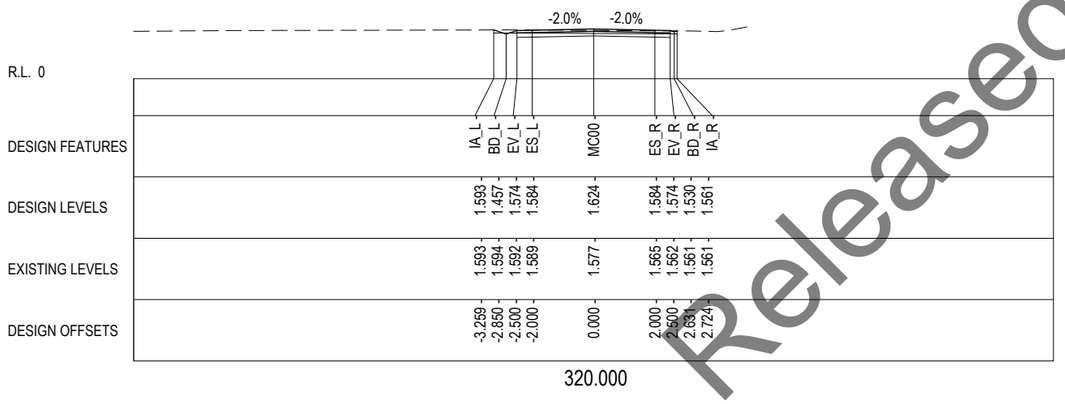
CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2804	01-Nov-22, 12:26 PM	2804

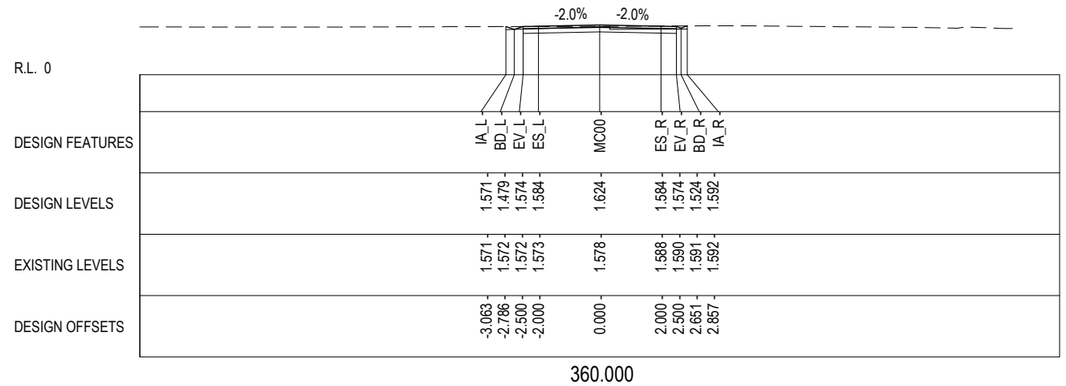
REGISTRATION NUMBER
A0113.028

REVISION A









No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

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Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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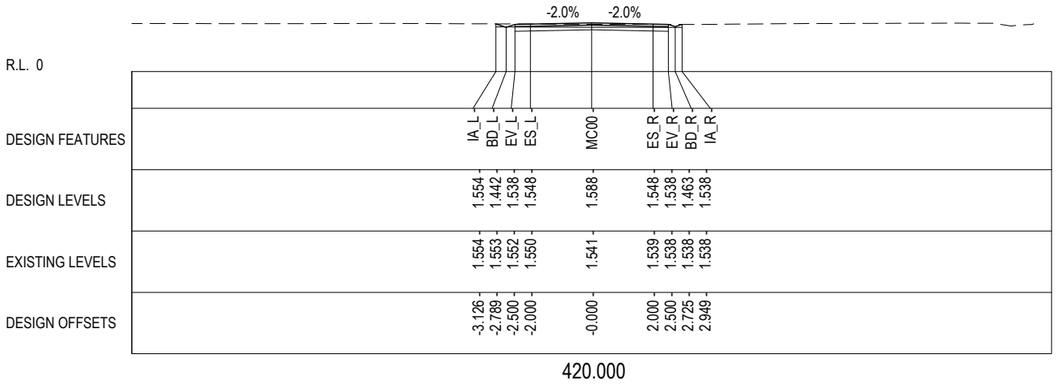
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

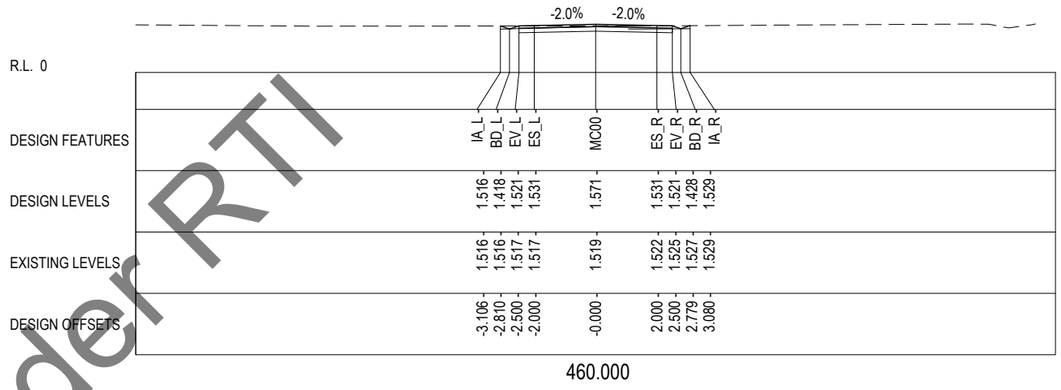
CROSS SECTIONS (MC00) - DRG 5

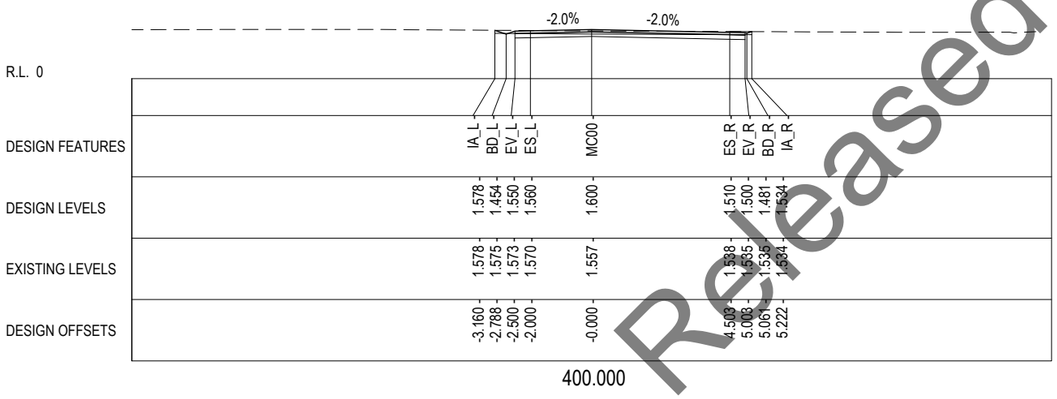
CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2805	01-Nov-22, 12:26 PM	2805

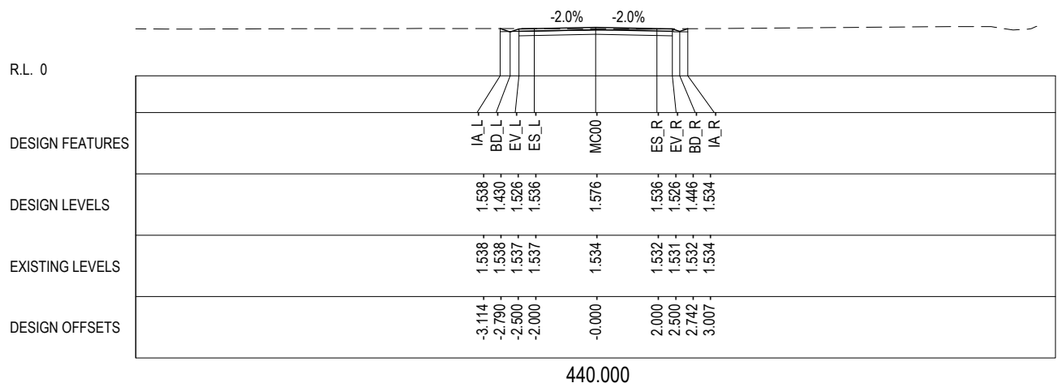
REGISTRATION NUMBER
A0113.028

REVISION A









No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

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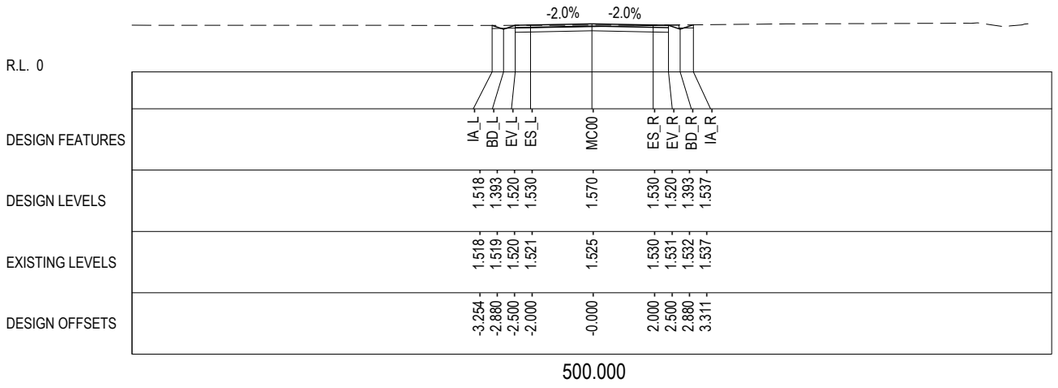
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

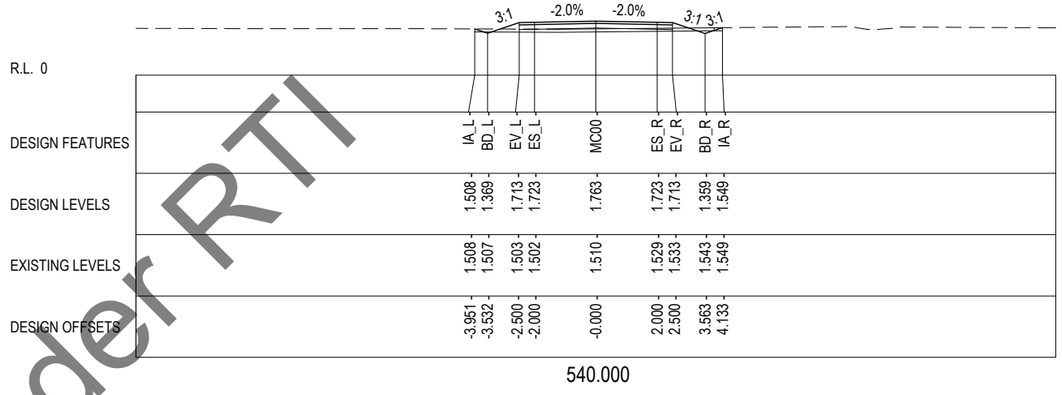
CROSS SECTIONS (MC00) - DRG 6

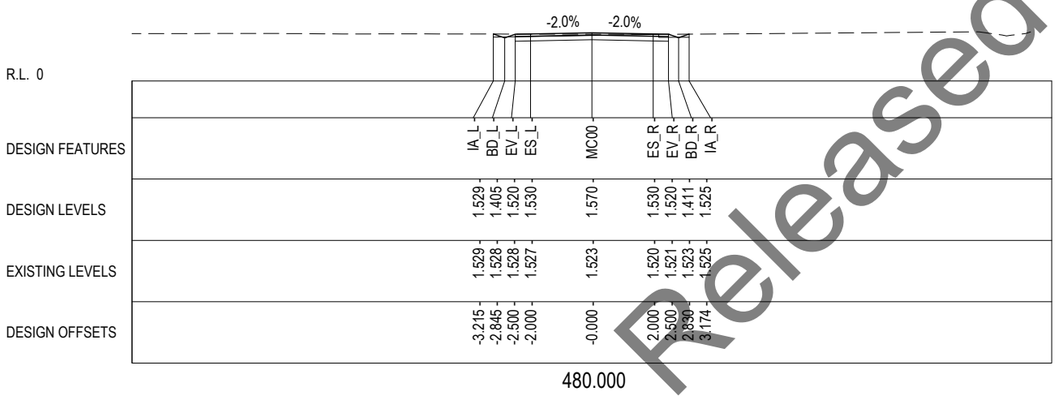
CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2806	01-Nov-22, 12:26 PM	2806

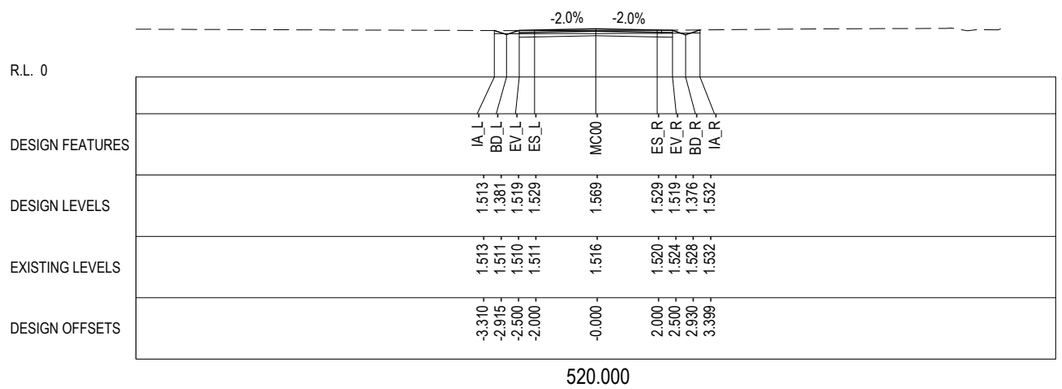
REGISTRATION NUMBER
A0113.028

REVISION A









No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

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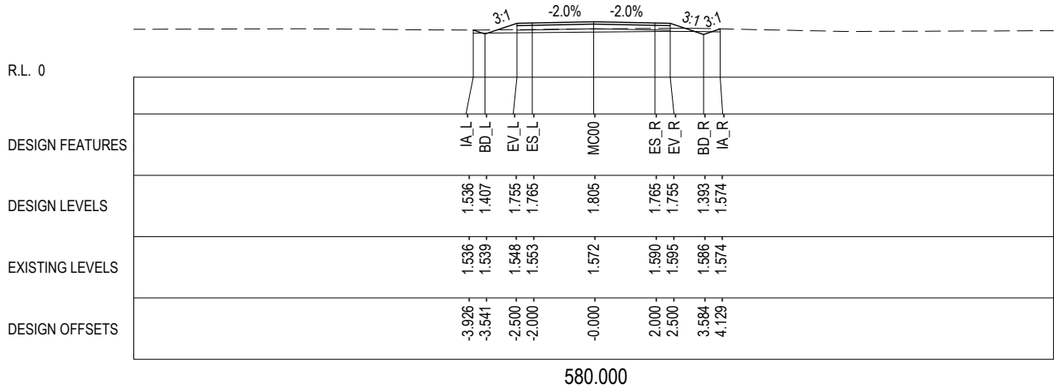
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

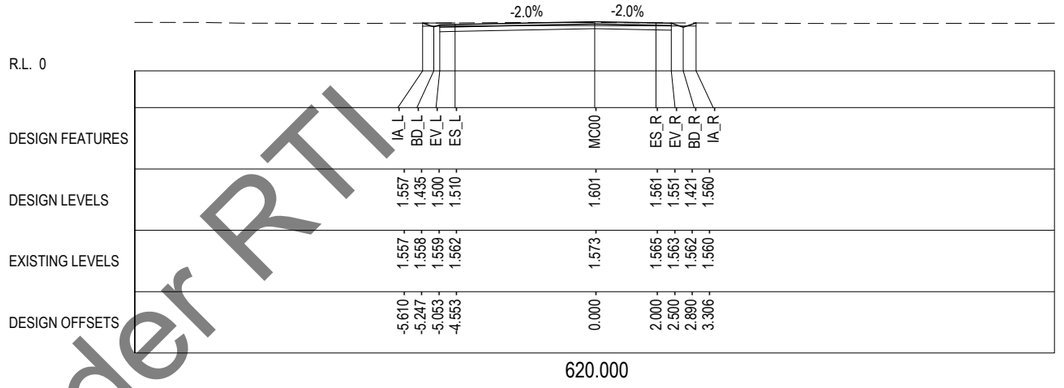
CROSS SECTIONS (MC00) - DRG 7

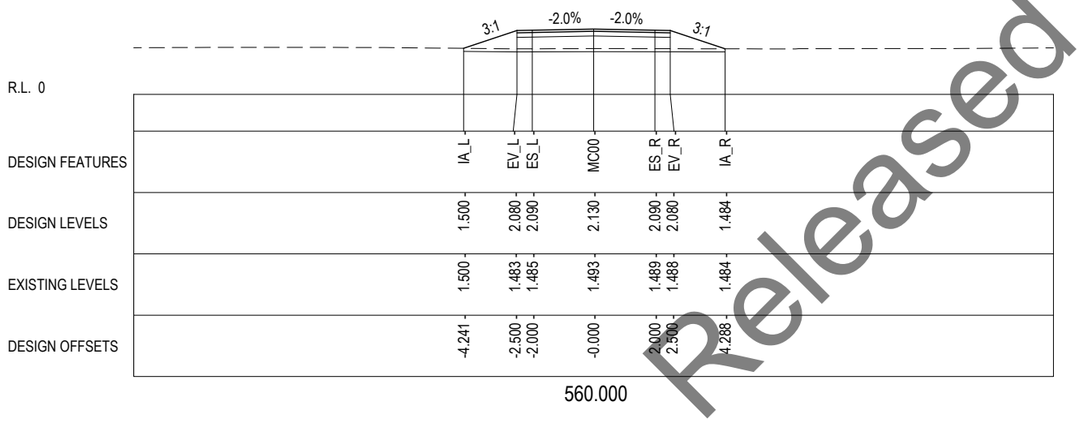
CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2807	01-Nov-22, 12:26 PM	2807

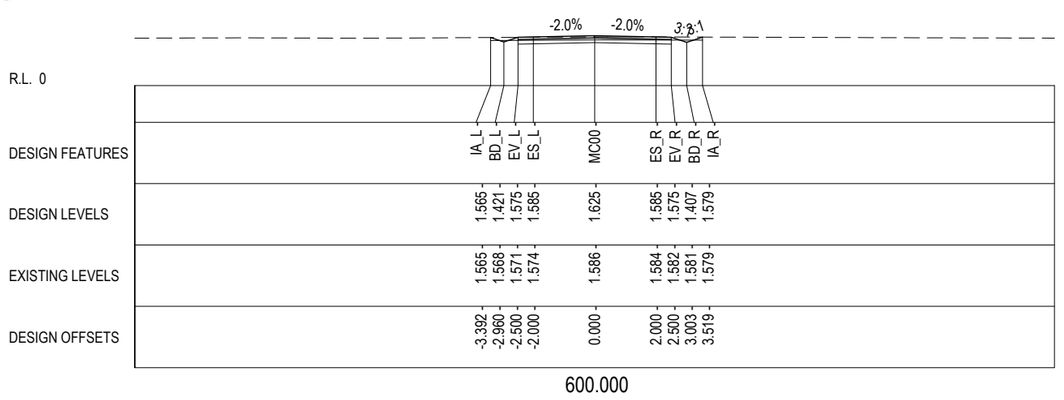
REGISTRATION NUMBER
A0113.028

REVISION A









No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

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Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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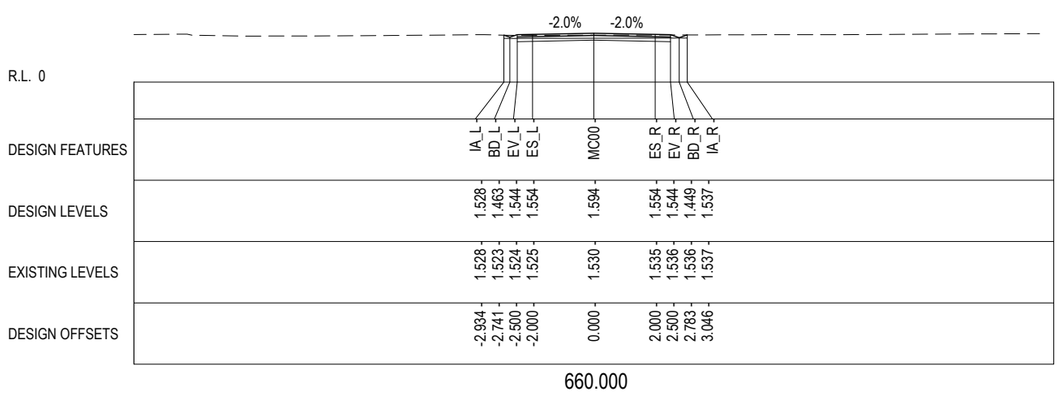
Department of State Growth
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

CROSS SECTIONS (MC00) - DRG 8

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2808	01-Nov-22, 12:26 PM	2808

REGISTRATION NUMBER
A0113.028

REVISION A



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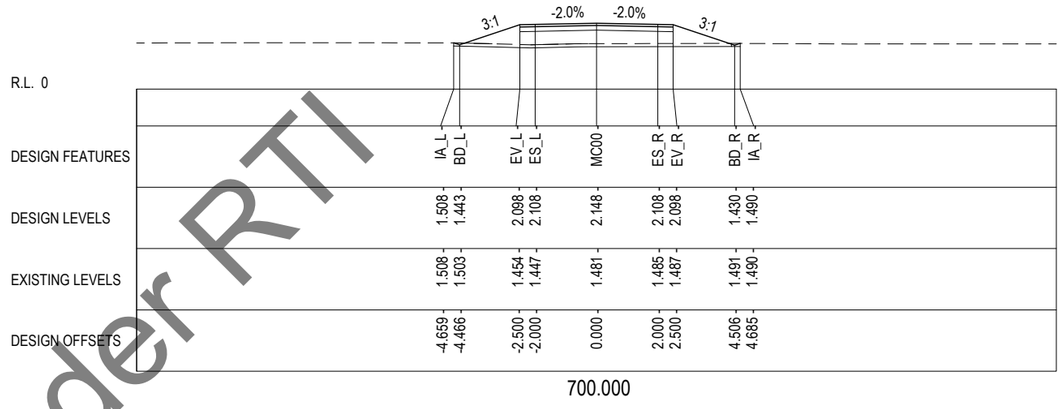

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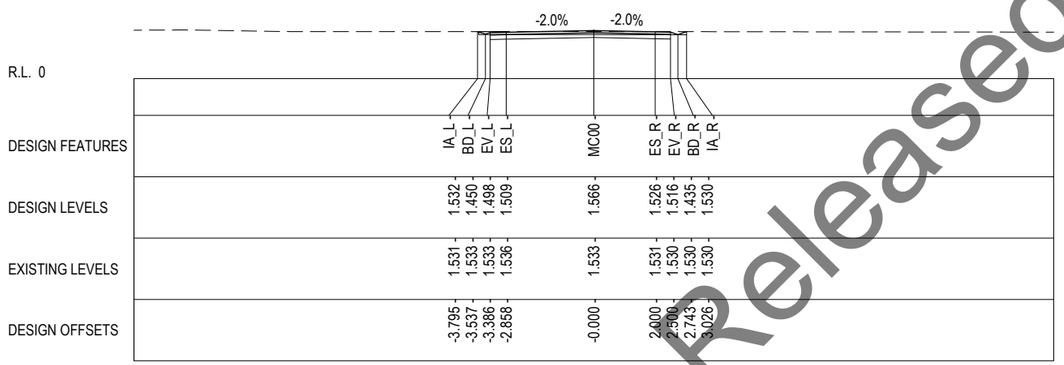

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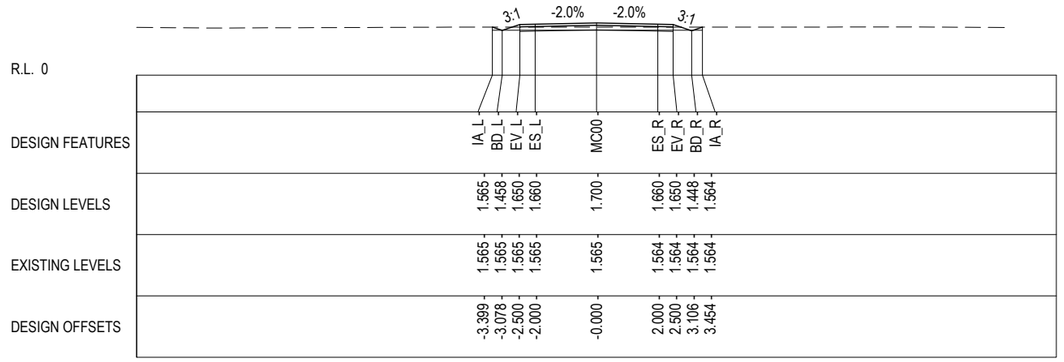

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No.	Amendment Description	Initials	Date
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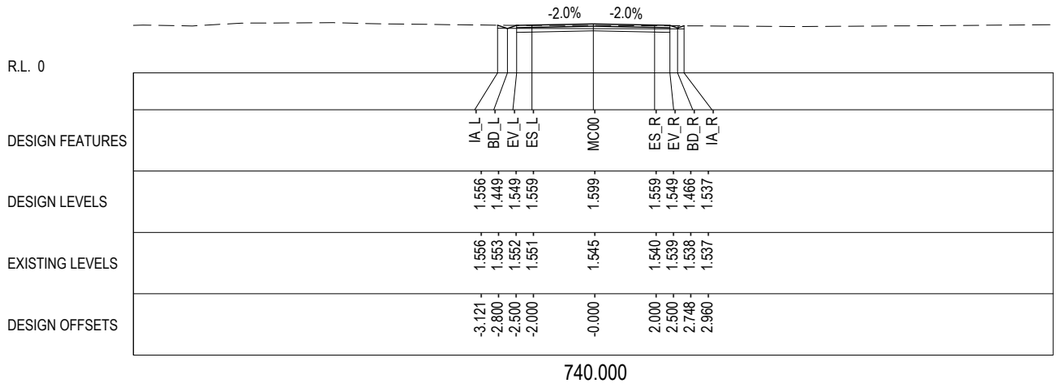
Department of State Growth
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

CROSS SECTIONS (MC00) - DRG 9

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2809	01-Nov-22, 12:26 PM	2809

REGISTRATION NUMBER
A0113.028

REVISION A



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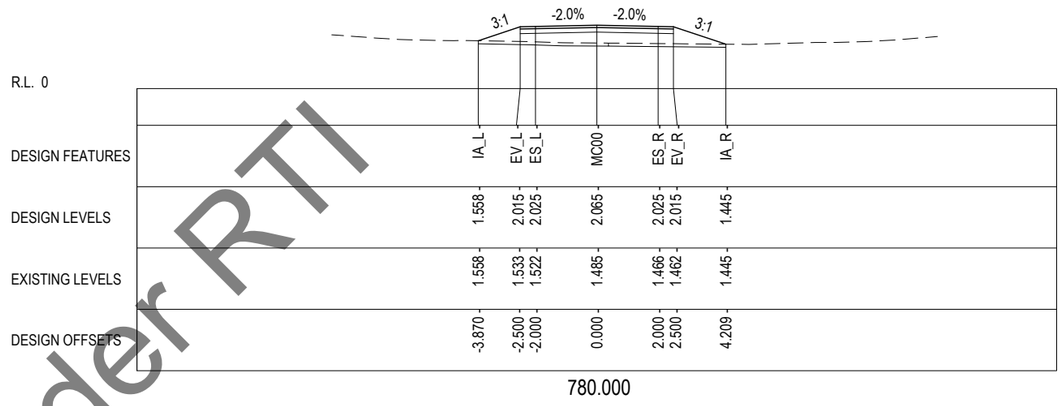

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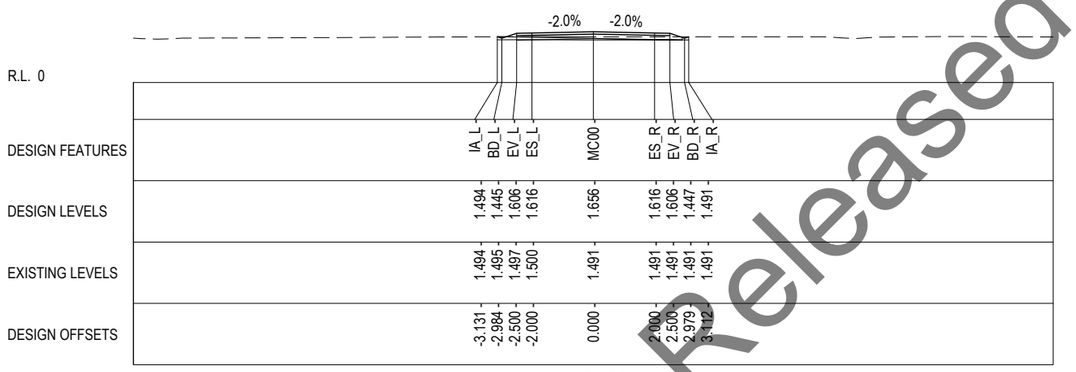

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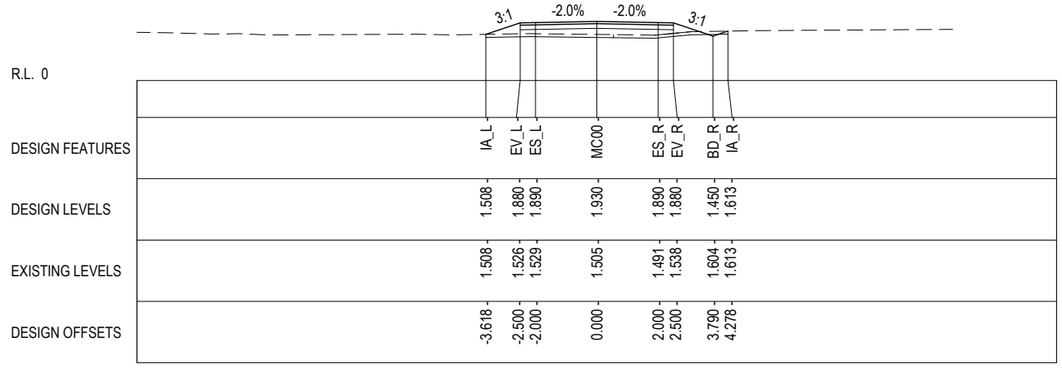

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No.	Amendment Description	Initials	Date
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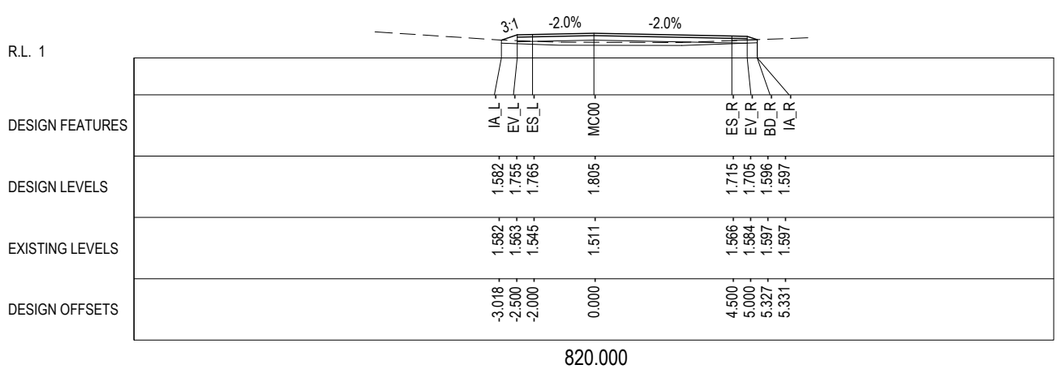
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

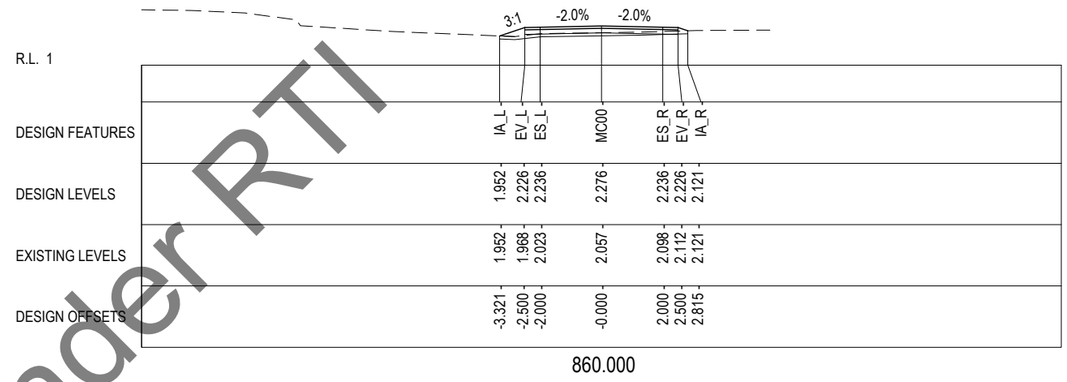
CROSS SECTIONS (MC00) - DRG 10

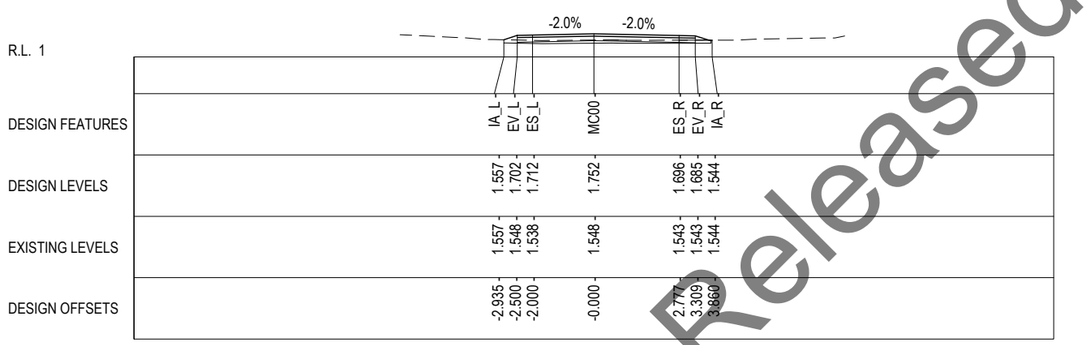
CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2810	01-Nov-22, 12:26 PM	2810

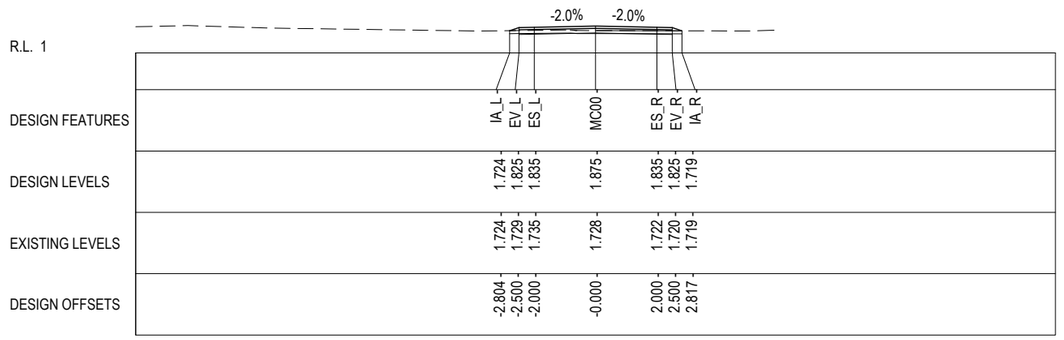
REGISTRATION NUMBER
A0113.028

REVISION A









No.	Amendment Description	Initials	Date
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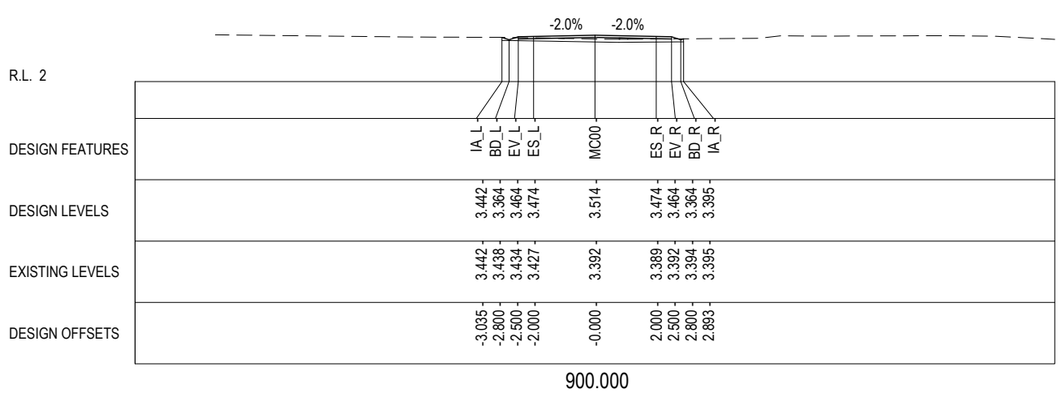
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

CROSS SECTIONS (MC00) - DRG 11

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2811	01-Nov-22, 12:26 PM	2811

REGISTRATION NUMBER
A0113.028

REVISION A



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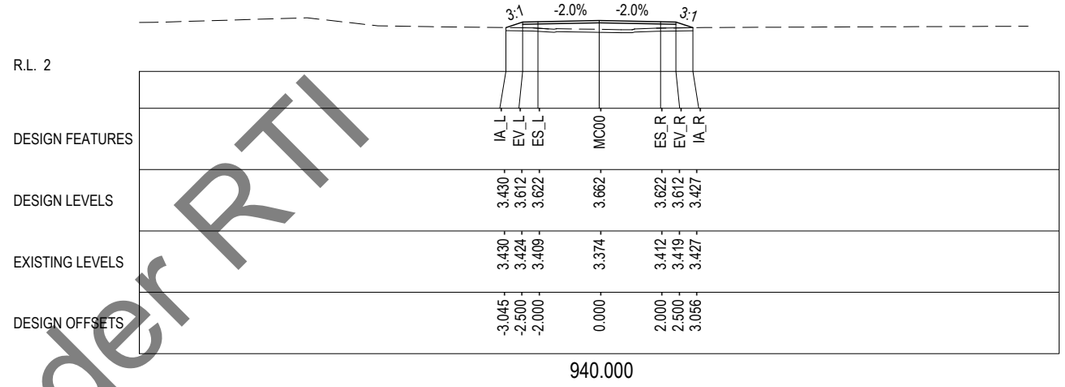

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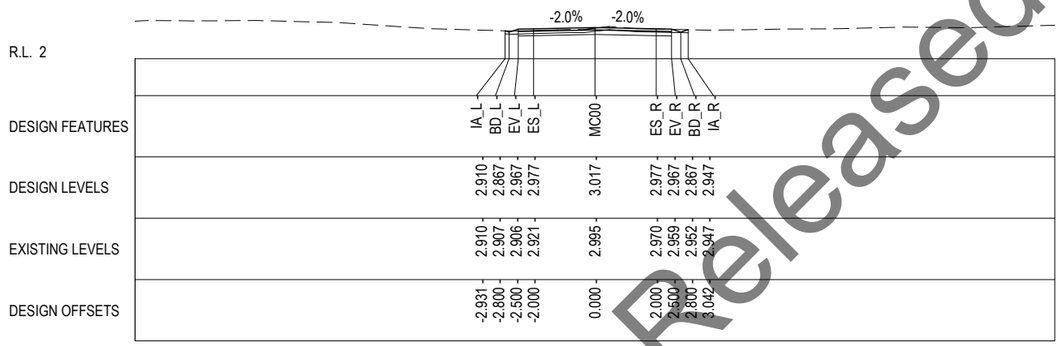

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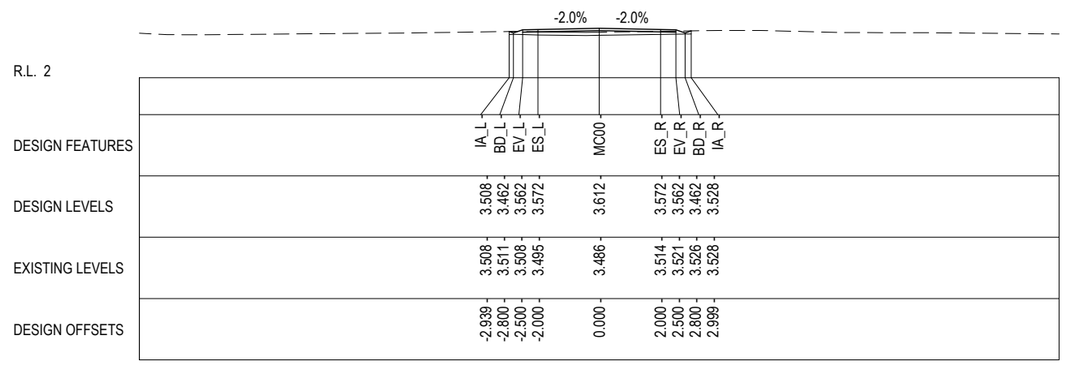

920.000

No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

A3 original | This sheet may be prepared using colour and may be incomplete if copied

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2 0 2 4 6 8
SCALE IN METRES - 1:200

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

pitt&sherry

Tasmanian Government

DESIGNED HEP
REVIEWED DJC1

Department of State Growth

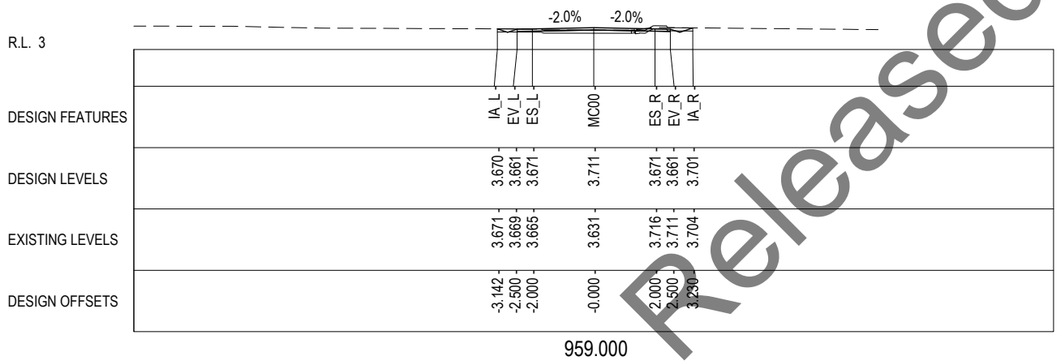
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

CROSS SECTIONS (MC00) - DRG 12

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2812	01-Nov-22, 12:27 PM	2812

REGISTRATION NUMBER
A0113.028

REVISION A



No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

A3 original | This sheet may be prepared using colour and may be incomplete if copied

SCALES
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2 0 2 4 6 8
SCALE IN METRES - 1:200

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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Tasmanian Government

DESIGNED HEP
REVIEWED DJC1

Department of State Growth

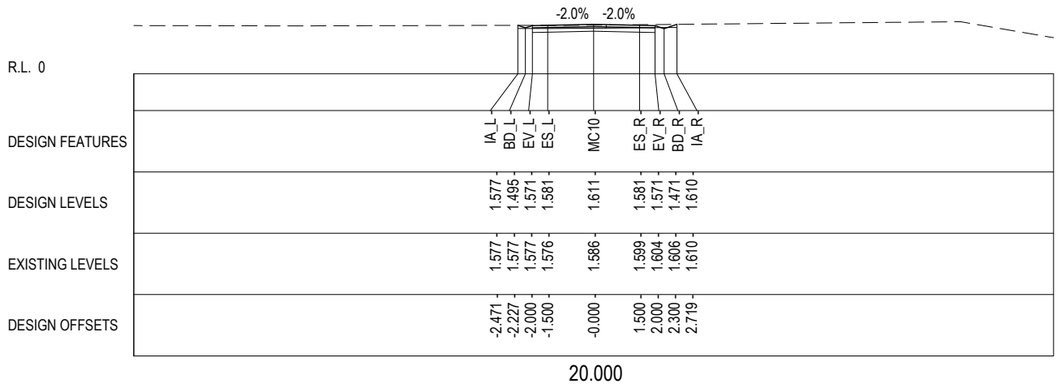
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

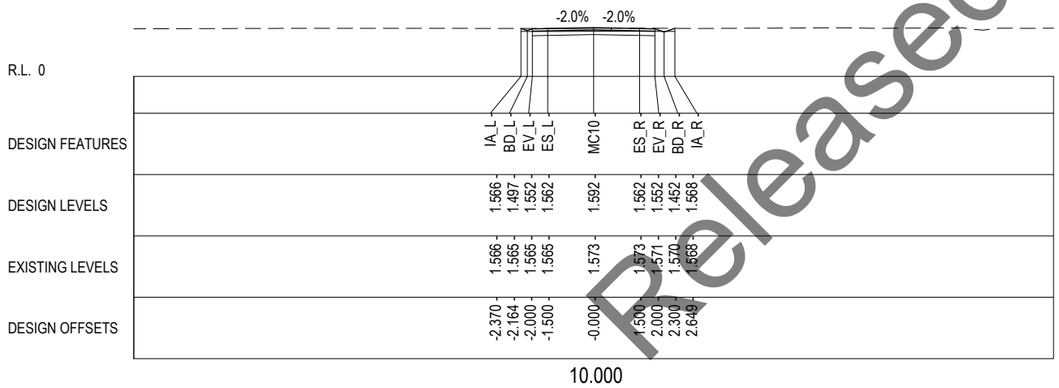
CROSS SECTIONS (MC00) - DRG 13

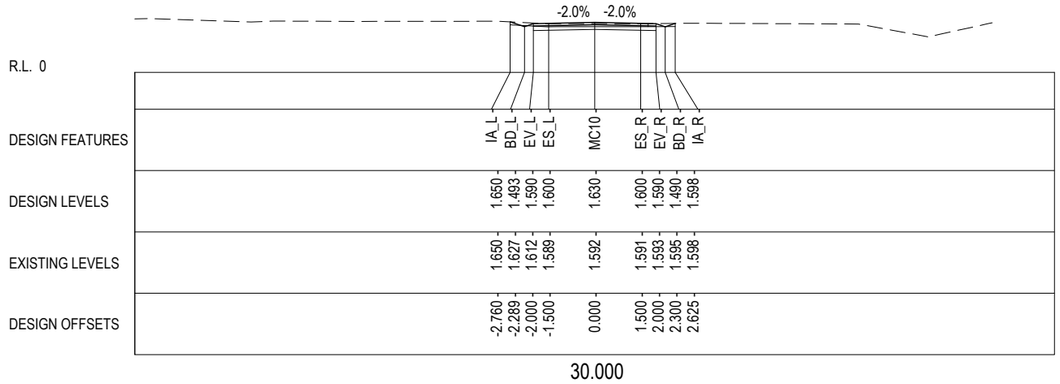
CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2813	01-Nov-22, 12:27 PM	2813

REGISTRATION NUMBER
A0113.028

REVISION A







No.	Amendment Description	Initials	Date
A	PRELIMINARY	DJC1	01/11/2022

A3 original | This sheet may be prepared using colour and may be incomplete if copied

SCALES
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SCALE IN METRES - 1:200

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

pitt&sherry

Tasmanian Government

DESIGNED HEP
REVIEWED DJC1

Department of State Growth
TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
MILFORD DRIVEWAY

CROSS SECTIONS (MC10) - DRG 1

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-C2814	01-Nov-22, 12:27 PM	2814

REGISTRATION NUMBER
A0113.028

REVISION A

Document 54

From: [redacted]
To: s 36 [redacted]
Subject: RE: Milford Access
Date: Tuesday, 15 November 2022 8:36:00 AM

Hi s 36 [redacted]

Have you sent the prelim through in another email trail, the hydraulic memo was attached the first email in the chain.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

Courage to make a difference through
TEAMWORK | INTEGRITY | RESPECT | EXCELLENCE

In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

From: s 36 [redacted]@pittsh.com.au>
Sent: Monday, 14 November 2022 9:47 PM
To: [redacted]@stategrowth.tas.gov.au>
Subject: Re: Milford Access

Hi [redacted]
What you have is the preliminary design. I need comment from s 36 [redacted] on whether the design is acceptable to her. It's a very simple piece of work. If I were able to, I would go through it with s 36 [redacted] but you will have to do that. If the design you have is acceptable to s 36 [redacted] we can run with it for the DA
Regards
s 36 [redacted]

Sent from my iPhone

> On 14 Nov 2022, at 21:40, [redacted]@stategrowth.tas.gov.au> wrote:
>
> CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.
>
> Hi s 36 [redacted]

Thank you for the update. How far off is the prelim design for the driveway? Program suggests we should be at DA by now. When you send it through please consolidate all the relevant talking points with s 36 on the driveway, including the below.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

From: s 36 [redacted] @pittsh.com.au>
Sent: Monday, 7 November 2022 6:09 PM
To: [redacted] @stategrowth.tas.gov.au>
Subject: Re: Milford Access

Hi [redacted]
Report on page 3 advises that local ponding may increase near the culverts.
There is no particular solution from a road design perspective. Water does not flow well across flat land.
Propose culverts are 225 mm dia. Smaller ones would keep the road a bit lower but would block up more easily.
The alternative would be no culverts, road all at existing level (or near to, it does need to be raised about 60 mm to form a crown) and concrete spoon drains to match the existing paddock drains.
Construction technique as you suggest would be to strip topsoil to about 150- 200 mm, place 150 class4 crushed rock and top up with 75 mm brown gravel with the polymer emulsion binder. In all cases we want to get the road a bit above the surrounding ground so it does not hold water.
If there are any areas of soft foundation after a proof roll we would strengthen with Geofabric or sub grade replacement.
Further site inspection or investigation won't solve any of these issues.
Regards
s 36 [redacted]

Sent from my iPhone

On 7 Nov 2022, at 17:14, [redacted] @stategrowth.tas.gov.au> wrote:

Hi s 36

You sent this from your person email, I'm responding to your work email.

We will need to be clear with s 36 that there is an existing ponding issue with heavy rain events and the road will not make this worse (is that correct?) She will need to be aware of the silting issue in the culverts.

What does this mean for the road design? How would the road be constructed? Top soil removed, quarry run, then built up? What size culverts are intended?

Will surveyors be attending site to investigate these issues?

Thanks,

Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
| s 36
www.stategrowth.tas.gov.au

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Please note I do not work Fridays.

From: s 36
Sent: Thursday, 3 November 2022 9:48 AM
To: @stategrowth.tas.gov.au>
Subject: Milford Access

Hi
Attached is a brief report on the drainage scenario for the access road. Might be worth discussing it with s 36 so she is well informed of the constraints and potential future impacts.
Regards
s 36

From: [redacted]
To: s 36 [redacted]
Subject: RE: [CS19-7902] 1388 Tasman Highway CAMBRIDGE TAS 7170 Revised
Date: Monday, 14 November 2022 2:35:00 PM
Attachments: image001.jpg
image002.jpg
image003.png
image004.png

Hi s 36 [redacted]

Yes we'll need to know what is required as we need to advise s36 [redacted] if we need to do clearing although that line and include it in the indirect impacts list if applicable.

Thanks,

[redacted]
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
[redacted] | s 36 [redacted]
www.stategrowth.tas.gov.au

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In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

From: s 36 [redacted] @pittsh.com.au>
Sent: Monday, 14 November 2022 12:01 PM
To: [redacted] @stategrowth.tas.gov.au>
Subject: RE: [CS19-7902] 1388 Tasman Highway CAMBRIDGE TAS 7170 Revised

Hi [redacted]

Despite earlier advice, Tasnetworks will require the easement to be cleared to the 6m/45^0 zone. We haven't checked the easement for this. I had a look at it the other day from the highway and I reckon that historically it has been cleared to the requirements. For completeness we should check the western side to see if there is anything significant in that zone. I don't think it's likely to be a problem as the new line only goes 49 metres into the property from the new boundary (approx. 52 m from existing fence).

Regards

Regards

s 36 [redacted]

Principal Engineer

s 36 [redacted] | [redacted] | [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street

PO Box 94 Hobart Tasmania 7001 | Phone s 36

pittsh.com.au

From: @stategrowth.tas.gov.au>
Sent: Monday, 14 November 2022 10:22 AM
To: s 36 @pittsh.com.au>
Subject: RE: [CS19-7902] 1388 Tasman Highway CAMBRIDGE TAS 7170 Revised

Hi s 36

This is great news, well done! As we not changing the easement nor will there be an easement on title, can you confirm with TN that we don't need to do the 6m clear + the 45 degree from the base of the pole? I've attached the TN clearing fact sheet to better explain what I mean.

Have we accounted for clearing, including the 45 degree, on all of our easements?

Thanks,

Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
| s 36
www.stategrowth.tas.gov.au

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In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Please note I do not work Fridays.

From: s 36 @pittsh.com.au>
Sent: Wednesday, 2 November 2022 3:18 PM
To: @stategrowth.tas.gov.au>
Subject: FW: [CS19-7902] 1388 Tasman Highway CAMBRIDGE TAS 7170 Revised

Good afternoon

Out of scope . No need for the easement. Advice to s 36 is that we have negotiated a position with Tasnetworks whereby we retain the powerline on its existing alignment, albeit with a taller pole on the highway. On this basis the existing statutory easement will continue to apply and a new easement will not be declared on the title.
Next time you are on the Milford property can you check if any additional clearing would be required under the line to achieve 6 m @ 45^0 either side of the line. I suspect that this has been the historical extent of clearing. I will also have a look from the highway next time I'm out that

way. Either way I expect that s36 wont be concerned about clearing under the power line.

Regards

s 36

Principal Engineer

s 36

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36

pittsh.com.au

Out of scope

FACT SHEET

Attachment 1

TasNetworks
Delivering your power

Vegetation clearing for new powerlines on private property

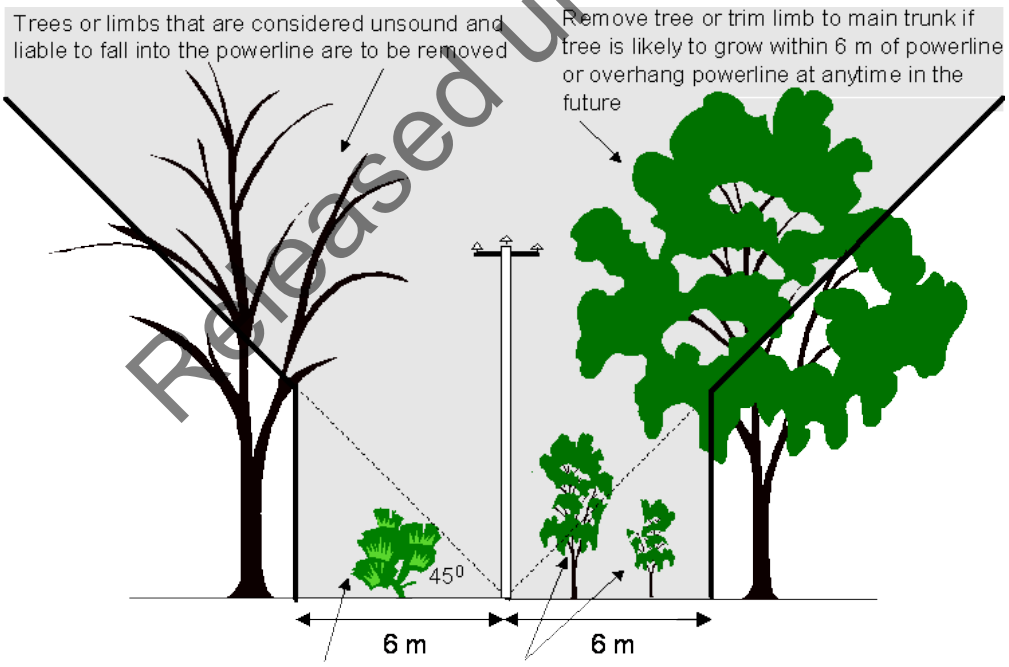
Vegetation contacting or blowing onto powerlines can cause bushfires, supply outages to large areas and pose a public safety risk. TasNetworks allocates considerable resources to keep vegetation from encroaching onto powerlines.

Removing vegetation growing in the vicinity of a powerline before the powerline is built is the most effective way of reducing these risks. Achieving the clearances shown below will help to do this.

Vegetation clearing on private property is your responsibility. Should vegetation need to be cleared on your neighbour's property, then the negotiation, clearing and acquisition of any easement is also your responsibility.

If achieving the clearances is not possible, we would be pleased to discuss other supply alternatives such as underground cables, aerial bundled conductor, transformer location, alternative line route, etc. Each supply option has its own merits and associated customer cost and it is important that the best option is adopted.

Please be mindful that tree removal and clearance distances need to be in place at the start of construction and all fallen trees and branches should be removed or placed outside the 6m clearance area.



Species with a maximum mature growth height of less than 3 m need not be cut

Species with a maximum mature growth height of greater than 3 m are to be removed at ground level and the stump poisoned

How to contact us

TasNetworks Pty Ltd
Customer Supply Team
PO Box 419, Launceston Tas 7250
Phone: 1300 137 008

TasNetworks
Delivering your power

From: [redacted]
To: [redacted]
Subject: Offset
Date: Monday, 7 November 2022 5:04:25 PM
Attachments: image001.png
offsets-policy_2.pdf

Hi [redacted]

I don't find an offset strategy mentioned in this document. If there is another reference to it please let me know.

Regards

[redacted]

s 36 [redacted]

Principal Engineer

s 36 [redacted]

Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone s 36 [redacted]

pittsh.com.au

Attachment 1

Australian Government

Department of Sustainability, Environment, Water, Population and Communities






Environment Protection and Biodiversity Conservation Act 1999
Environmental Offsets Policy

October 2012

Disclaimer

The contents of this document have been compiled using a range of source materials and are valid as at October 2012. The Australian Government is not liable for any loss or damage that may be occasioned directly or indirectly through the use of reliance on the contents of the document.

1. EPBC ACT ENVIRONMENTAL OFFSETS POLICY

Introduction

This policy outlines the Australian Government's approach to the use of environmental offsets ('offsets') under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). It replaces the draft policy statement *Use of environmental offsets under the EPBC Act (2007).*

Offsets are defined as measures that compensate for the residual adverse impacts of an action on the environment. Where appropriate, offsets are considered during the assessment phase of an environmental impact assessment under the EPBC Act, as outlined in Section 5 of this document. This policy provides transparency around how the suitability of offsets is determined. The suitability of a proposed offset is considered as part of the decision as to whether or not to approve a proposed action under the EPBC Act.

There are different ways to achieve good environmental outcomes. This policy provides flexibility in delivering those outcomes. For example, the enduring protection and management of a threatened species' habitat can be achieved through a variety of methods, including through conservation land management by rural landholders, or in partnerships with Indigenous communities. The policy is intended to provide a transparent framework to give greater certainty for businesses and others considering actions that may potentially be subject to an offset requirement, while also promoting consistency and providing robust, positive environmental outcomes.

The *Offsets assessment guide*, which accompanies this policy, has been developed in order to give effect to the requirements of this policy, utilising a balance sheet approach to measure impacts and offsets. It applies where the impacted protected matter is a threatened species or ecological community. The *Offsets assessment guide* is a tool that has been developed for expert users in the department to assess the suitability of offset proposals. The guide is also available to proponents to assist with planning for future development proposals and estimating future offset requirements.

A technical review of the policy and guide will be undertaken one year after they come into effect. Subsequent reviews will be undertaken every five years. The use of offsets is a developing policy area, and this policy incorporates current international best practice.

This policy was finalised on 20 September 2012, and applies to any new referrals and variations to approval conditions from 2 October 2012. It also applies to any projects currently under assessment for which a proposed decision has not yet been made.

2. SCOPE OF THIS POLICY

The EPBC Act is the Australian Government's principal piece of environmental legislation. It is designed to protect national environmental assets, known as matters of national environmental significance, and other protected matters. If a proposed development or other action ('proposed action') is likely to have a significant impact upon a protected matter then it must be referred for assessment under the EPBC Act. Proposed actions may range from a housing development, an offshore gas project, a mining project, to the construction of a road. Further information on the EPBC Act can be found at **www.environment.gov.au/epbc/index.html**.

This policy relates to all matters protected under the EPBC Act ('protected matters'). These are:

- world heritage properties
- national heritage places
- wetlands of international importance (listed under the Ramsar Convention)
- listed threatened species and ecological communities
- migratory species protected under international agreements
- Commonwealth marine areas
- the Great Barrier Reef Marine Park
- the environment, where nuclear actions are involved;
- the environment, where actions proposed are on, or will affect Commonwealth land and the environment,
- the environment, where Commonwealth agencies are proposing to take an action.

The policy applies to offsetting requirements in terrestrial and aquatic (including marine) environments.

The policy applies to both project-by-project assessments and approvals under Parts 8 and 9 of the EPBC Act and to strategic assessments under Part 10 of the EPBC Act. Proposed new strategic assessments may consider alternative metrics other than the *Offset assessment guide* (e.g. if a jurisdiction has developed a metric tailored to their needs) provided the principles of this policy are met. This will be considered on a case by case basis.

2.1 Application of the policy to heritage values

The use of offsets to compensate for adverse impacts to heritage values is appropriate in some circumstances. In cases where offsetting of adverse impacts on heritage values is considered possible and appropriate, the principles of this policy apply with regard to determining what constitutes a suitable offset. Offsets for impacts on heritage values should improve the integrity and resilience of the heritage values of the property involved. This may include offsets in areas adjacent to the property. For further information, please contact the department (contact details are at section 10).

3. AIMS OF THE POLICY AND OVERARCHING OFFSET REQUIREMENTS

The *EPBC Act environmental offsets policy* has five key aims, to:

1. ensure the efficient, effective, timely, transparent, proportionate, scientifically robust and reasonable use of offsets under the EPBC Act
2. provide proponents, the community and other stakeholders with greater certainty and guidance on how offsets are determined and when they may be considered under the EPBC Act
3. deliver improved environmental outcomes by consistently applying the policy
4. outline the appropriate nature and scale of offsets and how they are determined
5. provide guidance on acceptable delivery mechanisms for offsets.

Box 1 provides the overarching principles that are applied in determining the suitability of offsets.

Box 1: Offset Principles
Suitable offsets must:

1. deliver an overall conservation outcome that improves or maintains the viability of the aspect of the environment that is protected by national environment law and affected by the proposed action
2. be built around direct offsets but may include other compensatory measures
3. be in proportion to the level of statutory protection that applies to the protected matter
4. be of a size and scale proportionate to the residual impacts on the protected matter
5. effectively account for and manage the risks of the offset not succeeding
6. be additional to what is already required, determined by law or planning regulations or agreed to under other schemes or programs (this does not preclude the recognition of state or territory offsets that may be suitable as offsets under the EPBC Act for the same action, see section 7.6)
7. be efficient, effective, timely, transparent, scientifically robust and reasonable
8. have transparent governance arrangements including being able to be readily measured, monitored, audited and enforced.

In assessing the suitability of an offset, government decision-making will be:

9. informed by scientifically robust information and incorporate the precautionary principle in the absence of scientific certainty
10. conducted in a consistent and transparent manner.

4. WHAT ARE ENVIRONMENTAL OFFSETS?

The term 'environmental offsets' refers to measures that compensate for the residual adverse impacts of an action on the environment. Offsets provide environmental benefits to counterbalance the impacts that remain after avoidance and mitigation measures. These remaining, unavoidable impacts are termed 'residual impacts'. For assessments under the EPBC Act, offsets are only required if residual impacts are significant.[1]

Offsets can help to achieve long-term environmental outcomes for matters protected under the EPBC Act, while providing flexibility for proponents seeking to undertake an action that will have residual impacts on those protected matters.

Offsets do not mean proposals with unacceptable impacts will be approved. They simply provide an additional tool that can be used during the environmental impact assessment process.

[1] As defined in Significant impact guidelines 1.1 – matters of national environmental significance and Significant impact guidelines 1.2 – actions on, or impacting upon, Commonwealth land and actions by Commonwealth agencies, available at **www.environment.gov.au/epbc/guidelines-policies.html**.

4.1 How are offsets different to avoidance and mitigation measures?

Avoidance and mitigation measures are the primary strategies for managing the potential significant impact of a proposed action. They directly reduce the scale and intensity of the potential impacts of a proposed action. Offsets do not reduce the likely impacts of a proposed action, but instead compensate for any residual significant impact.

Avoidance of impacts on protected matters may be achieved through comprehensive planning and suitable site selection, for example by changing the route of an access road to avoid an endangered ecological community.

After all reasonable avoidance measures have been put in place, mitigation of any remaining significant impact must be undertaken, for example putting in place measures to reduce sediment runoff from a development site that may otherwise affect a threatened fish species.

Avoidance and mitigation measures can reduce and, in some cases, remove the need for offsets if the residual impact is not significant. Offsets will not be considered until all reasonable avoidance and mitigation measures are considered, or acceptable reasons are provided as to why avoidance or mitigation of impacts is not reasonably achievable.

In proposing avoidance, mitigation and offset measures, the proponent must provide clear information about the scale and intensity of impacts of the proposed action and the on-ground benefits to be gained through each of these measures.

4.2 Types of offsets

An offsets package is a suite of actions that a proponent undertakes in order to compensate for the residual significant impact of a project. It can comprise a combination of *direct offsets* and *other compensatory measures*. Offsets should align with conservation priorities for the impacted protected matter and be tailored specifically to the attribute of the protected matter that is impacted in order to deliver a conservation gain. For instance, if the proposed action is likely to have impacts on foraging habitat for a particular protected matter, then the offset should create, improve, protect and/or manage foraging habitat.

Offsets should compensate for an impact for the full duration of the impact. Offsets that deliver an outcome prior to the impact commencing are encouraged, as they minimise effects on the protected matter resulting from offset time delays (see section 4.2.3 Advanced offsets).

Offsets that deliver social, economic and/or environmental co-benefits are encouraged (See Box 2).

4.2.1 Direct offsets

Direct offsets are those actions that provide a measurable conservation gain for an impacted protected matter.

Direct offsets are an essential component of a suitable offsets package. A minimum of 90 per cent of the offset requirements for any given impact must be met through direct offsets.

Deviation from the 90 per cent direct offset requirement will only be considered where:

- it can be demonstrated that a greater benefit to the protected matter is likely to be achieved through increasing the proportion of other compensatory measures in an offsets package or;
- scientific uncertainty is so high that it isn't possible to determine a direct offset that is likely to benefit the protected matter. For example, this can be the case in some poorly understood ecosystems in the Commonwealth marine environment

Conservation gain is the benefit that a direct offset delivers to the protected matter, which maintains or increases its viability or reduces any threats of damage, destruction or extinction. A conservation gain may be achieved by:

- improving existing habitat for the protected matter
- creating new habitat for the protected matter
- reducing threats to the protected matter
- increasing the values of a heritage place, and/or
- averting the loss of a protected matter or its habitat that is under threat.

Conservation gain in the marine environment may include improving protection of important protected species habitat, such as sea grass, or by addressing pressures on the protected matter or its habitat, such as removing derelict fishing nets and other marine debris.

Averting the loss of a protected matter or its habitat is considered to deliver a conservation gain where there is an immediate threat of destruction or degradation, and the risk of loss of that particular site is averted by securing its future for conservation purposes (for example through a conservation covenant on the title of the land). In the *Offsets assessment guide,* considering future risks to a specific site in order to quantify averted loss is undertaken over either a 20 year time-frame or for the duration of the offset, whichever is the shorter period.

4.2.2 Other compensatory measures

Other compensatory measures are those actions that do not directly offset the impacts on the protected matter, but are anticipated to lead to benefits for the impacted protected matter, for example funding for research or educational programs. Requirements for other compensatory measures are outlined at Appendix A.

Other compensatory measures should relate to the impacted aspect of the protected matter. For example, research into effective re-vegetation techniques for a particular ecological community may be an appropriate component of an offsets package for an action that involves clearing of that ecological community.

4.2.3 Advanced offsets

Advanced environmental offsets are a supply of offsets for potential future use, transfer or sale. An example of an advanced offset is protection or improvement of habitat for the conservation of a protected matter before an impact is undertaken. Advanced offsets are encouraged where practical, given that they provide a means to better manage the risks associated with the time delay in realising the conservation gain for a protected matter. The *Offsets assessment guide* places higher value on offsets that deliver a conservation gain in a shorter time period. This can reduce overall offset requirements.

Proponents or offset providers looking to establish advanced offsets should discuss these with the department at the earliest possible opportunity. Proponents should monitor and record baseline data associated with the establishment of the offset and improvements over time.

The department will consider advanced offsets that deliver a conservation gain after the commencement of the EPBC Act, on 16 July 2000.

Advanced offsets must satisfy all requirements in this policy, including those relating to offsets being additional to other legislation and schemes, as outlined in section 7.6. It is important to note that advanced offsets do not in any way prejudice the outcome of any future assessment of an action. That is, while planning advanced offsets may result in lower overall offset requirements, it does not influence whether or not an action referred under the EPBC Act will be determined as acceptable.

Box 2: Delivering social, economic and/or environmental co-benefits

While the primary consideration in determining suitable offsets is delivering a conservation gain for the impacted protected matter, the delivery of offsets that establish positive social or economic co-benefits is encouraged.

Social and economic or environmental co-benefits may be delivered where an offset aligns with broader strategic environmental objectives such as those outlined in the National Wildlife Corridors Plan, the Indigenous health strategy Closing the gap, or policies that enhance the environment of regional Australia. For example:

- an offset contributing to an area recognised as important to increasing landscape connectivity, above and beyond what is required by the impacted protected matter
- an offset that employs local Indigenous rangers to undertake management actions
- an offset delivered by paying rural landholders to protect and manage land for conservation purposes.

5. THE ROLE OF OFFSETS IN ENVIRONMENTAL IMPACT ASSESSMENT UNDER THE EPBC ACT

Figure 1 shows the role of offsets within the broader environmental impact assessment process under the EPBC Act.

5.1 Referral stage

The referral stage, under Part 7 of the EPBC Act, is the initial screening stage of the environmental impact assessment process. Referrals are used to determine whether significant adverse impacts on protected matters are likely to occur and to make a formal decision on whether a proposed action requires full assessment under the EPBC Act. If the Minister or the Minister's delegate (the decision maker) decides the proposed action is a 'Controlled Action', it requires full assessment under Part 9 of the EPBC Act. If significant impacts on protected matters are determined to be unlikely then the action may be declared 'Not a Controlled Action' and can proceed. The offsets policy does not apply to actions that have been declared as 'Not a Controlled Action'.

The EPBC Act does not allow for any beneficial impacts, such as offsets, to be considered at the referral stage.

5.2 Assessment stage

In order to determine if an offset is necessary, the impacts of a proposed action need to be fully understood. At the assessment stage the decision maker considers the following issues in detail:

- **What is the nature of the likely impacts on protected matters?** – which protected matters are likely to be impacted by the action? What is the scale and size of impacts? What are the risks to the viability of protected matters arising from the action? Will impacts on protected matters be permanent or temporary?
- **Can impacts on protected matters be avoided?** – can the proposed action be redesigned to avoid impacting protected matters? What alternatives have been considered? Have environmental considerations been factored into the project's design?
- **Can impacts on protected matters be mitigated?** – what actions can take place that will reduce the impacts arising from the proposed action? For example, developing environmental management plans, implementing erosion control measures, fencing off environmentally sensitive areas etc.

- **Are the residual impacts likely to be significant?** – what are the residual impacts on protected matters that are still likely to occur after the proposed activities to avoid and mitigate all impacts are taken into account? E.g. will the proposed action only slightly disturb an area of potential habitat for a threatened species or will it destroy an area of habitat known to be used by a threatened species?
- **Are offsets a suitable approach?** – are offsets needed to help compensate for residual impacts on the protected matter and are they feasible?

It is important to note that offsets are not required for all approvals under the EPBC Act. Offsets are not required where the impacts of a proposed action are not thought to be significant or could reasonably be avoided or mitigated.

If an offset is appropriate, then the proponent should discuss offset options with the department and submit an offsets proposal. This proposal should describe the offset and demonstrate how it will provide an appropriate benefit to compensate for any residual impact on the protected matter. The department will then assess this proposal against the policy and – where the impacted protected matter is a threatened species or ecological community – the *Offsets assessment guide*. If the proposed offset is not considered to be suitable, the department will discuss this finding with the proponent and provide them with an opportunity to submit a revised proposal.

5.3 Decision stage

Following assessment, the decision maker considers the offset proposal in deciding whether the proposed action should be approved. In some cases, a suitable offset may not be proposed or available and a decision on the overall acceptability of the project will need to be made.

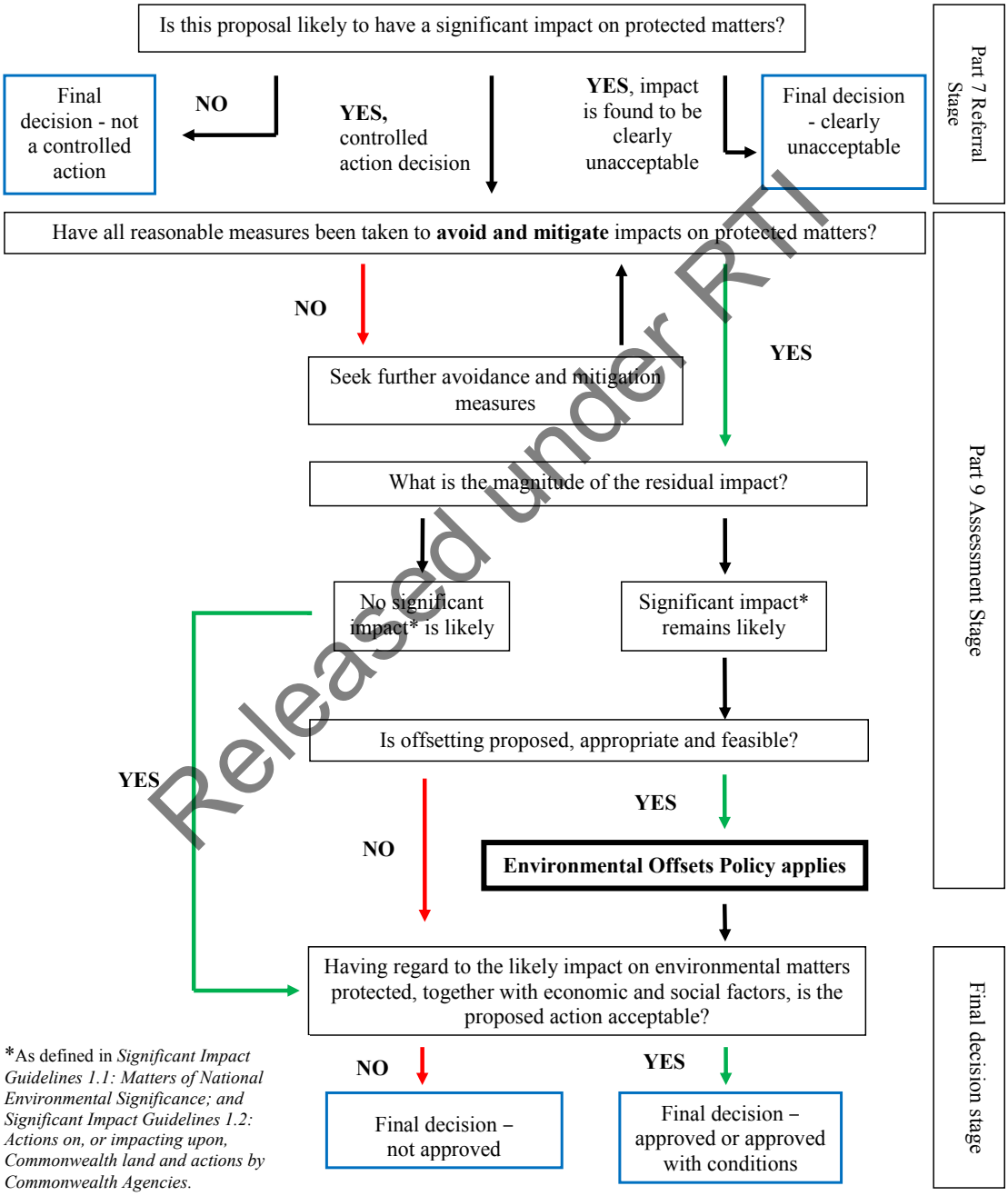
The offset proposal is one of many considerations that are weighed at the decision stage in determining the overall acceptability of the proposed action, including economic and social matters. These considerations are outlined in the EPBC Act in Sections 136–140A.

Offset requirements are included as a condition of approval under section 134 of the EPBC Act.

5.4 Post-approval stage

If an approval has been granted that incorporates offsets into the conditions of approval, the proponent is responsible for ensuring that the offsets are delivered in accordance with the approved conditions. The department has an active monitoring and audit program to ensure that conditions of approval are implemented. Where a proponent becomes aware that they may not be able to fulfil a condition of approval, they should approach the department in the first instance to discuss the matter and see what options are available to remedy the situation. Breaches of approval conditions, including those relating to offsets, can incur significant penalties. Further information on the department's *EPBC Act Compliance and Enforcement Policy* is available at **www.environment.gov.au/epbc/publications/index.html**.

Figure 1 – The role of offsets within the broader environmental impact assessment process.



6. PLANNING AN OFFSET PROPOSAL

An appropriate offsets package should be developed by proponents in consultation with the department. There are two key types of information utilised in planning an offset proposal – determining what types of activities would be appropriate as offsets for a given impact, and determining the specific size and scope of an offsets package.

In determining the appropriateness of the offset activities proposed, the department will consult the relevant Commonwealth approved recovery plan, threat abatement plan, conservation advice, ecological character description, management plan and/or listing document. Where Commonwealth approved guidance documents are not available or are insufficient in detail, the department will review additional information sources such as state and territory management plans or peer-reviewed scientific literature to inform priority offset activities.

If the department is satisfied that the offset activities are suitable, the department will consider whether appropriateness of the magnitude and composition of the proposed offset package in detail on a case-by-case basis. There are a range of considerations taken into account at both the impact site and the proposed offset site as discussed in sections 7 and 8. Proponents should include detailed information pertaining to these considerations in their offsets proposal. The *Offsets assessment guide* will be used by the department at this stage if the impacted protected matter is a threatened species or ecological community.

Matters to be considered at the impact site include the:

- presence and conservation status of protected matters likely to be impacted by the proposed action
- specific attributes of the protected matter being impacted at a site, for example: the type of threatened species or ecological community habitat, the quality of habitat, population attributes such as recruitment or mortality, landscape attributes such as habitat connectivity, or heritage values
- scale and nature of the impacts of the proposed action – including direct and indirect impacts
- duration of the impact (not of the action).

Matters to be considered at the offset site include the:

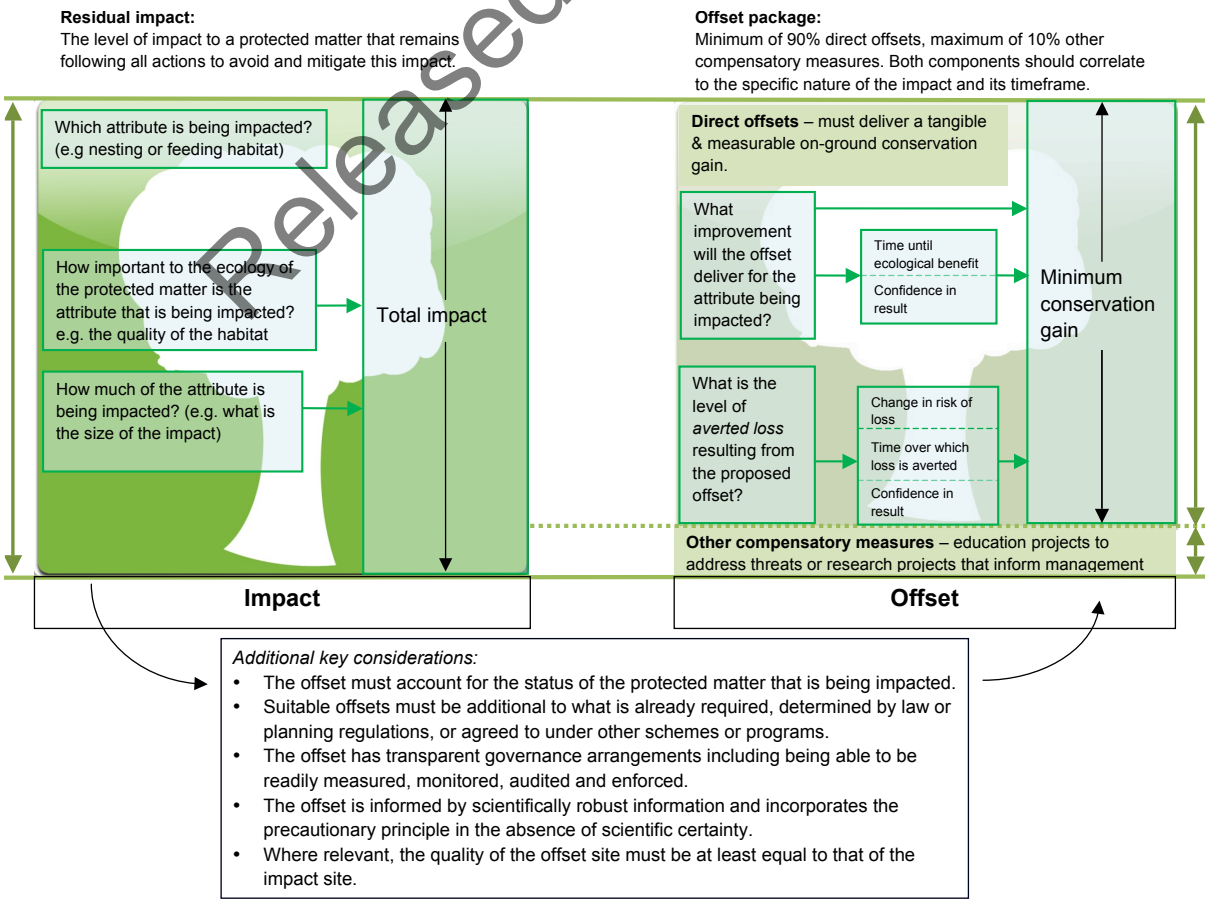
- extent to which the proposed offset actions correlate to, and adequately compensate for, the impacts on the attributes for the protected matter
- conservation gain to be achieved by the offset. This may be through positive management activities that improve the viability of the protected matter or averting the future loss, degradation or damage of the protected matter
- current land tenure of the offset and the proposed method of securing and managing the offset for the life of the impact
- time it will take to achieve the proposed conservation gain
- level of certainty that the proposed offset will be successful. In the case of uncertainty, such as using a previously untested conservation technique, a greater variety and/or quantity of offsets may be required to minimise risk
- suitability of the location of the offset site. In most cases this will be as close to the impact site as possible. However, if it can be shown that a greater conservation benefit for the impacted protected matter can be achieved by providing an offset further away, then this will be considered.

7. OFFSET REQUIREMENTS

Suitable offsets are determined by applying the requirements outlined in Box 1, and as illustrated by Figure 2.

The *Offsets assessment guide* gives effect to these requirements and provides a decision-making framework for the department to consider the appropriateness and adequacy of proposed offsets for listed threatened species and ecological communities.

Figure 2 – Determining suitable offsets under the EPBC Act



7.1 Suitable offsets must deliver an overall conservation outcome that improves or maintains the viability of the protected matter

Offsets must directly contribute to the ongoing viability of the protected matter impacted by the proposed action, and deliver an overall conservation outcome that *improves or maintains* the viability of the protected matter as compared to what is likely to have occurred under the status quo, that is if neither the action nor the offset had taken place.

Offsets should be tailored specifically to the attribute of the protected matter that is impacted in order to deliver a conservation gain. For example, if the impact is the removal of foraging habitat for a listed threatened bird species, then an appropriate offset would be creating new similar habitat through re-vegetation works, improving the quality of existing foraging habitat for the species, and/or protecting existing foraging habitat though putting a conservation covenant on the title of the land. If an impact decreases the nesting success of a listed threatened turtle species due to light pollution, then an appropriate offset may be increasing the birth rate of that same species in a nearby location through threat abatement activities such as reducing feral pig predation on turtle nests.

In some circumstances it may be possible to demonstrate that a better conservation outcome can be achieved for the protected matter by deviating from this rule. If this is the case then the decision-maker may consider this. For instance, in the first example above, if the limiting attribute to the viability of the protected matter in a particular area is not foraging habitat, but nesting habitat, then an offset that produces more nesting habitat may be considered satisfactory for an impact on foraging habitat.

For heritage values, offsetting for the same or similar values in the same property or adjacent to it may be suitable where it can be demonstrated that such an activity will improve the overall integrity and resilience of the property.

In no instances will trading offsets across different protected matters be considered as a suitable offset. That is, where an action impacts on a specific threatened or migratory species, ecological community, Ramsar wetland or heritage property, any offset must relate to that same specific matter which is impacted.

When the protected matter is the whole of the environment (nuclear actions, proposals involving the Commonwealth, actions that affect Commonwealth areas and the Great Barrier Reef Marine Park), offsets must be targeted to the aspect of the environment that is being impacted so as to directly compensate for the impact. For example, where an action has a residual impact that involves the clearing of native vegetation or the degradation of water quality, an offset proposal would need to adequately compensate for these specific residual impacts.

For impacts on habitat for threatened species, migratory species and threatened ecological communities, any direct offset must meet, as a minimum, the quality of the habitat at the impact site. Where a proposed offset site has a lower habitat quality than that of the impact site, the offset must be managed and resourced over a defined period of time so that its habitat quality is improved to meet the quality of habitat originally impacted. Supporting and/or recreating non-endemic vegetation or ecosystems would not be considered a suitable offset.

7.2 Suitable offsets must be built around direct offsets but may include other compensatory measures

Offsets must be built around direct offsets, which should form a minimum of 90 per cent of the total offset requirement. Most proponents will be able to provide a direct offset that will satisfy 100 per cent of the offset requirement. However, other compensatory measures may satisfy up to a maximum of 10 per cent of the total offset requirement.

The circumstances in which deviation from the 90 per cent direct offset requirement may be considered are outlined in section 4.2.1.

Where possible, an offset should address key priority actions outlined for the impacted protected matter in any approved recovery plans, threat abatement plan, conservation advice, ecological character description or approved Commonwealth management plan. Higher priority actions are preferred to lower priority actions. Appendix A outlines what other compensatory measures are considered suitable.

7.2.1 Tenure for direct offsets

For direct offsets, the securing of existing unprotected habitat as an offset only provides a conservation gain if that habitat was under some level of threat of being destroyed or degraded, and as a result of offsetting will instead be protected in an enduring way and actively managed to maintain or improve the viability of the protected matter. In these cases, the tenure of the offset should be secured for at least the same duration as the impact on the protected matter arising from the action, not necessarily the action itself.

As a general guide, the best legal mechanisms for protecting land are intended to be permanent (lasting forever) and are secure (that is, they are difficult to change or alter). These two elements are important because they mean that land set aside as an offset will continue to provide a secure benefit to the impacted protected matter.

Legal mechanisms, such as conservation covenants, exist in each state and territory to enable the protection of land that is set aside for environmental purposes on a permanent or long-term basis. Suitable mechanisms for a particular offset must be built around the principles outlined in Box 3.

In addition to state and territory legal mechanisms for securing offsets, there is also provision under Part 14 of the EPBC Act for the Minister to enter into a conservation agreement with a third party for the conservation of a protected matter. An EPBC Act conservation agreement is a flexible instrument that can be used for implementing a range of management activities to benefit a protected matter, such as fencing off important habitat areas, undertaking weed and feral animal control or the establishment of compensatory habitat. They can also require a landholder to refrain from, control or refuse to permit, activities that may adversely affect the species, ecological communities, habitats or potential habitats covered by the agreement.

Marine areas are predominantly managed by state, territory and/or Commonwealth government agencies. In determining appropriate offset packages in marine environments, proponents should engage with the relevant governing jurisdiction to identify suitable areas of habitat that may be protected and/or improved to achieve a conservation gain. This could include removing pressures, such as dredging, on habitat for a protected matter.

Box 3: Suitable Offset Mechanisms

Offsets on public lands

- should be legally secured for conservation purposes for at least the duration of the impact
- should be statutorily defined and resourced
- any change in management status should require Ministerial or statutory approval.

Offsets on private lands

- should be legally secured for conservation purposes for at least the duration of the impact
- the securing scheme should actively monitor for compliance, with covenant requirements enforced
- any change in legal status should require Ministerial or statutory approval.

Offsets on Indigenous owned lands

- should have customary law protection with Traditional Owners holding a non-transferable interest in the land with a commitment to its long-term protective management
- should include a commitment from Traditional Owners to accept and manage the offset.

Offsets in the marine environment

- should be implemented for the duration of the impact
- should be developed in consultation with governing jurisdiction(s).

In some situations there may be difficulties in permanently securing a site for conservation purposes due to the existing tenure of the land. Such situations will be considered by the department on a case-by-case basis. However, where the security of an offset is diminished, the risk to any protected matters, and subsequently the magnitude of offsets required, will increase. Further discussion of the relationship between risk to the protected matter and the scale of a suitable offset is at section 7.5.

7.2.2 Impacting on existing EPBC Act offsets

Where a proposed action is likely to impact on an existing EPBC Act offset, the person proposing to take the action should refer it to the department to determine whether or not it will require further assessment under the EPBC Act. There is an increased likelihood of significant impacts arising from actions on an existing offset site due to the nature of such sites containing and/or supporting protected matters. Where such actions are determined to be controlled actions, irrespective of the ownership or tenure of the impacted offset, the person proposing to take the action must develop an offsets package to compensate for both the impact of the proposed action, as well as the original action for which the offset was a condition of approval. The subsequent offset conditions would not amount to a variation of the original conditions of approval or excuse non-compliance with those conditions.

7.3 Suitable offsets must be in proportion to the level of statutory protection that applies to the protected matter

Due to the higher risk involved with protected matters of greater conservation status, the offsets required for those protected matters with higher conservation status must be greater than those with a lower status. For listed threatened species and ecological communities, this is calculated in the *Offsets assessment guide* by using International Union for Conservation of Nature data on the probability of annual extinction for different categories of threatened species.

Information regarding the conservation status of threatened species and ecological communities is held in the department's Species Profile and Threats Database which can be found at **www.environment.gov.au/cgi-bin/sprat/public/sprat.pl**.

Further information on other matters protected by the EPBC Act can be found at **www.environment.gov.au/epbc/protect/index.html**.

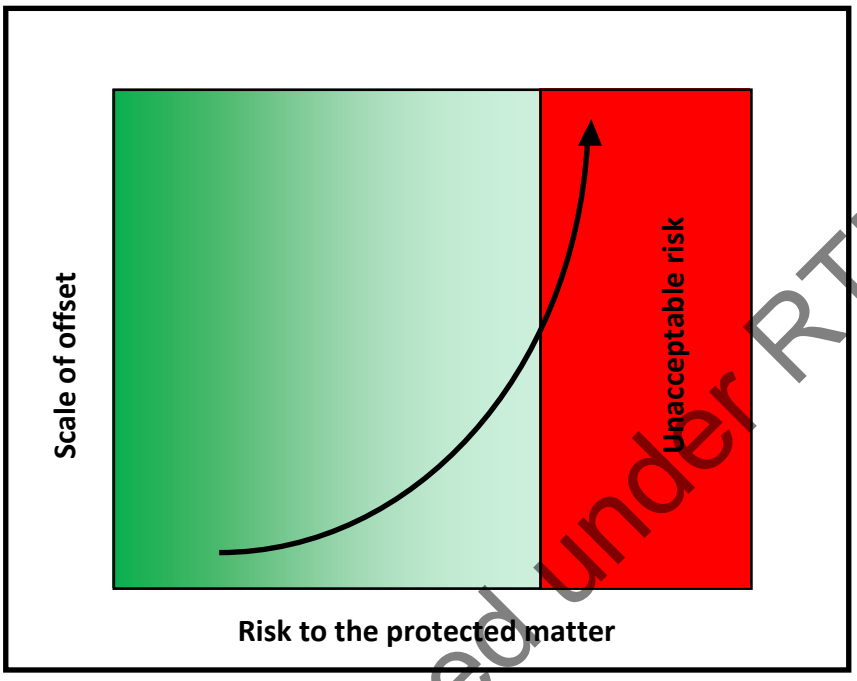
7.4 Suitable offsets must be of a size and scale proportionate to the residual impacts on the protected matter

Offsets must be proportionate to the size and scale of the residual impacts arising from the action so as to deliver a conservation gain that adequately compensates for the impacted matter. The size and scale of an offset required for each impact is determined by taking account of a number of different considerations that are discussed in this policy, including the:

- level of statutory protection that applies to the protected matter
- specific attributes of the protected matter, or its habitat, being impacted
- quality or importance of the attributes being impacted with regard to the protected matter's ongoing viability
- permanent or temporary nature of the residual impacts
- level of threat (risk of loss) that a proposed offset site is under
- time it will take an offset to yield a conservation gain for the protected matter
- risk of the conservation gain not being realised.

As the time it takes for an offset to deliver an ecological benefit increases, so do the risks to the protected matter. The relationship between risk and scale is represented in Figure 3.

Figure 3 – Relationship between scale of offset requirements and risk



7.5 Suitable offsets must effectively account for and manage the risks of the offset not succeeding

The use of offsets as a compensatory measure through the assessment and approval process involves two levels of risk. The first, and highest, level of risk is that the impact on the protected matter will be too great and that an offset will not be able to compensate for the impact. This risk is addressed through the assessment process.

The second level of risk relates to whether individual offsets are likely to be successful in compensating for the residual impacts of a particular action over a period of time. It is this risk that is considered in determining a suitable offset and has direct bearing on the scale of the offset required. The magnitude of a suitable offset will increase proportionately to the risk posed to the protected matter by the proposed action. The relationship between risk and the scale of offset required is demonstrated in Figure 3 above.

In general terms, direct offsets present a lower risk than other compensatory measures, as they are more likely to result in a conservation gain for a protected matter. The advanced delivery of offsets (that is, those that are in place before the proposed action takes place) also reduce the risk profile of an offset through providing a conservation gain at an earlier point in time (see section 4.2.3 relating to advanced offsets).

Because of these uncertainties, a risk based approach incorporating the precautionary principle is taken when determining whether offsets are a suitable option and whether they can compensate for the residual impacts on a case by case basis. Specifically, risk is taken into account when considering:

- What is the residual impact?
- What type of offset should be provided?
- What size should the proposed offset be?
- Where should the proposed offset be located?

There is also the risk that offsets may result in perverse outcomes, either for the environment as a whole or for other aspects of the community, for instance social and economic factors. To avoid these outcomes, analysis of the possible perverse outcomes will form part of the decision making process in deciding the suitability of an offset package.

7.6 Suitable offsets must be additional to what is already required, determined by law or planning regulations, or agreed to under other schemes or programs

Offsets must deliver a conservation gain for the impacted protected matter, and that conservation gain must be new, or additional to what is already required by a duty of care or to any environmental planning laws at any level of government. It is important to note however that this does not preclude the recognition of state or territory offsets that may be suitable as offsets under the EPBC Act for the same action (see section 7.6.1).

This requirement would, however, generally prohibit using a piece of land already set aside in the conservation estate or using a site that is already unable to be built upon due to zoning laws (a foreshore reserve for instance) as an offset for a proposed action.

Environmental offsets must also be additional to what has been paid for under other schemes or programs on a *pro rata* basis. For instance, if a landholder is receiving stewardship funding from a program such as *Caring for our Country*, then the conservation gain achieved through fulfilling the program's contract is not eligible to be used as an offset. Similarly, the conservation gain achieved while participating in another scheme (such as the *Carbon Farming Initiative*), would also not be eligible for use as an offset.

However, if the proposed offset is for further activities that achieve additional conservation gain on the same piece of land, then those additional activities may be eligible for use as offsets. For example, if a piece of land is being used as an offset to preserve and manage that land for the protected matter, then it may be permissible to use that piece of land to offset another proposed action where:

- there are no perverse outcomes e.g. there is no conflict between the management of the two offsets, such as the need for conflicting fire regimes; and
- synergies are produced e.g. releasing and actively managing captive bred animals (offset 2) into an already protected and managed area for the same species (offset 1) may increase the survival rate of the released animals and increase the viability of the existing population.

Whether or not an offset is considered to be additional will be assessed on a case by case basis. Where a proponent or offset provider seeks to secure an advanced offset, it must sufficiently document the establishment of that offset, including relevant baseline data, to demonstrate to the department that it is additional.

7.6.1 Links with state and territory approval processes

All of the states and territories have laws that protect the environment. The majority of proposed actions that need approval under the EPBC Act also require environmental approval from the relevant state or territory government before they can proceed.

It is important to note that while there are many similarities between the environmental laws of the states and territories and the EPBC Act, they also differ in a fundamental way. The EPBC Act focuses on protecting matters of national environmental significance and only protects the broader environment in certain circumstances. State and territory laws on the other hand usually protect the environment as a whole (for example air quality, noise pollution, water quality, biodiversity, and heritage values). These differing legislative objectives result in different assessment processes and can result in different offset requirements.

As a consequence, some proponents may need to provide offsets under both state or territory laws and the EPBC Act for the same action. A state or territory offset will count toward an offset under the EPBC Act to the extent that it compensates for the residual impact to the protected matter identified under the EPBC Act.

Making an early referral provides an opportunity to align the impact assessment processes of the relevant state or territory with the EPBC Act to the extent that this is possible.

7.7 Suitable offsets must be efficient, effective, timely, transparent, scientifically robust and reasonable

Efficient and effective offsets are those that maintain or improve the viability of a protected matter through the sound allocation of resources. For example, where it is possible under this policy, the Australian Government will work with states and territories to align offset requirements. This alignment will deliver efficient and streamlined assessment processes for project proponents and effective environmental outcomes.

Offsets must also be timely. That is, an offset should be implemented either before, or at the same point in time as, the impact arising from the action. This timing is distinct from the time it will take an offset to yield a conservation gain for the protected matter, which may be a point in the future.

Offsets must be based on both scientifically robust and transparent information that sufficiently analyses and documents the benefit to a protected matter's ecological function or values. This includes undertaking desktop modelling of offset benefits and conducting relevant field work as appropriate.

7.8 Suitable offsets must have transparent governance arrangements including being able to be readily measured, monitored, audited and enforced

Offsets must be delivered within appropriate and transparent governance arrangements. Proponents, or their contractors, must report on the success of the offsets so that conditions of approval can be varied if the offsets are not delivering the desired outcome.

Offset proposals will need to include clearly articulated measures of success that are linked to the purpose of the offsets and provide clear benchmarks about their success or failure. Annual reports will be required by the department and, where possible, will be made publicly available.

Performance of offsets will be reviewed as part of the monitoring, compliance and audit program for all proposals considered under the EPBC Act. All offsets will be registered and details, such as spatial information (for example GPS data), information on the relevant protected matters and the ongoing management actions required will be recorded. This information will be made publicly available on the department's website where it is appropriate to do so. This registration process will ensure that land that is proposed as an offset is available and suitable for use as an offset in each particular case, allow strategic planning, and streamline processes with state and territory requirements and schemes.

Establishment costs of offsets required as a condition of approval under the EPBC Act must be borne by the proponent and the offset must be designed in a way that is able to be measured, monitored, audited and enforced. The department will not be responsible for the costs of establishing an offset, or any costs associated with the ongoing management of an offset.

Where a proponent elects to have a third party manage or establish an offset area or program, the proponent must make contractual arrangements with the third party to deliver the offset in accordance with their approval conditions.

In determining the success of an offset, proponents will be required to report data that allows for the performance of an offset to be evaluated. Obtaining such data is part of the ongoing management of an offset and the cost therefore lies with the proponent. Conditions will require that data be made readily available to the department and in a format that can be easily integrated into a departmental database.

8. GOVERNMENT DECISION-MAKING RELATING TO OFFSETS

8.1 Decisions will be informed by scientifically robust information

In keeping with the broader environmental impact assessment process under the EPBC Act, the determination of offsets is based on the best available scientific data and evidence. Key sources for determining offset priorities include the relevant Commonwealth approved recovery plan, threat abatement plan, conservation advice, ecological character description, management plan or listing document. Where Commonwealth approved guidance documents are not available or are insufficient in detail, the department will review additional information sources such as state and territory management plans or peer reviewed scientific literature to inform priority offset activities. Data that informs the specific nature and scale of a particular offsets package may include consulting scientists, scientific literature, and data collected by both the department and proponents.

8.2 Conducted in a consistent and transparent manner

The *Offsets assessment guide* (the guide) was designed for the department's use to assist in the determination of suitable offsets for threatened species and ecological communities, based on the nature and extent of the impacts likely to occur at the proposed impact site. The guide helps ensure that the process of determining suitable offsets is consistent across industries and geographical locations. It will increase the transparency of the process because the impacts and offsets are explicitly detailed and calculated.

Although specifically designed for the use of the department, the guide is a public document and as such can be used by proponents to consider offset requirements early in their project planning. It is at the decision maker's discretion to determine how a proposed action and offset proposal is evaluated and how the figures and scores are assigned. The guide provides flexibility to ensure that the most efficient offsets can be determined, while ensuring that offsets improve or maintain the viability of the impacted protected matter. Although informed by the policy, it is important to note that the guide is within the broader context of the policy. Potential offsets generated by the guide may be modified to better conform to the policy. Further, the policy sits beneath, and must conform to, the EPBC Act.

For protected matters not covered by the guide, the department will determine the suitability of any offset proposals based on the principles outlined within this policy and in consultation with project proponents.

9. OFFSET DELIVERY OPTIONS

Offsets can be delivered by a range of mechanisms, including market-based mechanisms and contracting third party providers. Regardless of the offset delivery mechanism, project proponents remain responsible for ensuring that their conditions of approval are met.

9.1 Use of market-based mechanisms to deliver offsets

A well-functioning market for biodiversity offsets creates a clear system through which offsets can be traded by specifying the boundaries and conditions of the market and bringing together potential buyers and sellers. It is anticipated that the financial incentives that are subsequently attained will lead to a greater availability of offsets at any given time by encouraging private sector investment in the protection and restoration of biodiversity. For example, rural landholders may wish to diversify their income streams by investing in conservation activities that benefit specific threatened species with a view to providing these as offsets. Further discussion of the provision of offsets by third parties is at section 9.2.

There are various market-based tools that can be utilised for the delivery of offsets, from land brokering services through to biodiversity banking schemes, whereby credits are generated through conservation activities on a property and subsequently traded within a market framework.

Use of market-based mechanisms for delivering offsets is supported as a means of determining the conservation value of both the proposed action site and the proposed offset, where such mechanisms are based on reproducible and scientifically robust information.

In utilising biodiversity banking schemes, proponents should discuss their plans with the department in order to ensure that the offset delivered through such a scheme will satisfy the requirements of this policy and, in the case of threatened species and ecological communities, the *Offsets assessment guide*.

Two state governments have developed biodiversity banking schemes, BushBroker in Victoria and BioBanking in NSW. Proponents should engage with the department early in the assessment process where they wish to utilise state and territory schemes to allow for streamlining of processes between the different jurisdictions.

9.2 Use of third parties to deliver offsets

Suitable third parties can be used to deliver offsets. In many cases, enhanced environmental, social and economic outcomes can be achieved through the use of third party offset providers such as rural landholders, private conservation organisations, and Indigenous corporations. Contracts with third parties to manage an offset may be through a biodiversity banking scheme, however the use of a third party to deliver an offset must be approved by the decision maker. In all cases, the decision maker must be satisfied that appropriate mechanisms are in place to ensure the successful delivery of the offset and that the offset will meet the compliance requirements of any conditions of approval.

10. FURTHER INFORMATION

EPBC Act policy statements are the department's public policy documents which provide guidance on the practical application of EPBC Act. The policy statements include:

- significant impact guidelines
- EPBC Act practices and procedures
- industry guidelines
- information on listed ecological communities
- significant impact or referral guidelines for nationally listed species
- regional guidelines
- survey guidelines for nationally threatened species.

These are available on the department's website at: **http://www.environment.gov.au/epbc/guidelines-policies.html**

Conservation advices and recovery plans are available at: **http://www.environment.gov.au/cgi-bin/sprat/public/conservationadvice.pl?proc=main**

For further general information about the EPBC Act, including information about the referral, assessment and approval processes, please contact the Department of Sustainability, Environment, Water, Populations and Communities Community Information Unit on 1800 803 772, or access the EPBC Act website at: **www.environment.gov.au/epbc**

Appendix A: Criteria for research and educational programs

A suitable research or education program must:

1. endeavour to improve the viability of the impacted protected matter, for example
   – signage in key areas to educate the public regarding the risks to a threatened animal, or
   – research into effective re-vegetation techniques for a threatened ecological community

2. be targeted toward key research/education activities as identified in the relevant Commonwealth approved recovery plan, threat abatement plan, conservation advice, ecological character description, management plan or listing document. Where Commonwealth approved guidance documents are not available or are insufficient in detail, the department will consider additional information sources such as state and territory management plans or peer reviewed scientific literature to inform priority offset activities

3. be undertaken in a transparent, scientifically robust and timely manner

4. be undertaken by a suitably qualified individual or organisation in a manner approved by the department

5. consider best practice research approaches.

The proponent is required to:

1. select an institutional or individual host (for the purpose of executing the program) through an internationally available open tender process or provide evidence that the program can be successfully undertaken in-house. The department will not be responsible for processing tenders. Where appropriate, the tender should complement an existing research institution's (e.g. National Environmental Research Program Hub) work program as it relates to the matter of national environmental significance. This will be the responsibility of the proponent; however, the department will require that proponents follow the department's guidelines

2. provide updates on progress and key findings to the department through periodic reporting

3. ensure that funds are managed appropriately and that auditable financial records are kept and maintained

4. apply a 'no-surprises' policy to the publication, whereby research publications and outputs are provided to the department at least 5 working days before release.

Research programs:

1. will be tailored to at least a postgraduate education level; however, there will be scope to engage other educational levels in educational programs (see below)
2. will present findings that can be peer-reviewed
3. will publish findings in an internationally recognised peer-reviewed scientific journal or be of a standard that would be acceptable for publication in such a journal. Publications should be submitted to free open access journals. Data and information collected should have creative commons licensing and be free and accessible
4. research outputs should inform future management decisions on the protected matter and, where possible, be readily applicable to other similar matters (species groupings etc).

Educational programs:

1. will be likely to vary in scope, mode of delivery and duration according to the target audience and the protected matter, (for instance, school or community programs, signage or printed materials)
2. should seek to attain measurable outcomes. Note that it may be difficult to ascertain the scope of influence of educational programs as it can be difficult to link education activities to behavioural change and subsequent improvement in the viability of the protected matter
3. should be targeted toward behavioural change and subsequent improvement in the viability of the protected matter.

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BACK COVER IMAGES (left to right, top to bottom)

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2 Anchor from the Marie Gabrielle (1869) on Wreck Beach, Apollo Bay, VIC. Copyright – John Baker
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4 Ground cover of Native Seablite under Casuarinas, Swansea, NSW. Copyright – John Baker
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