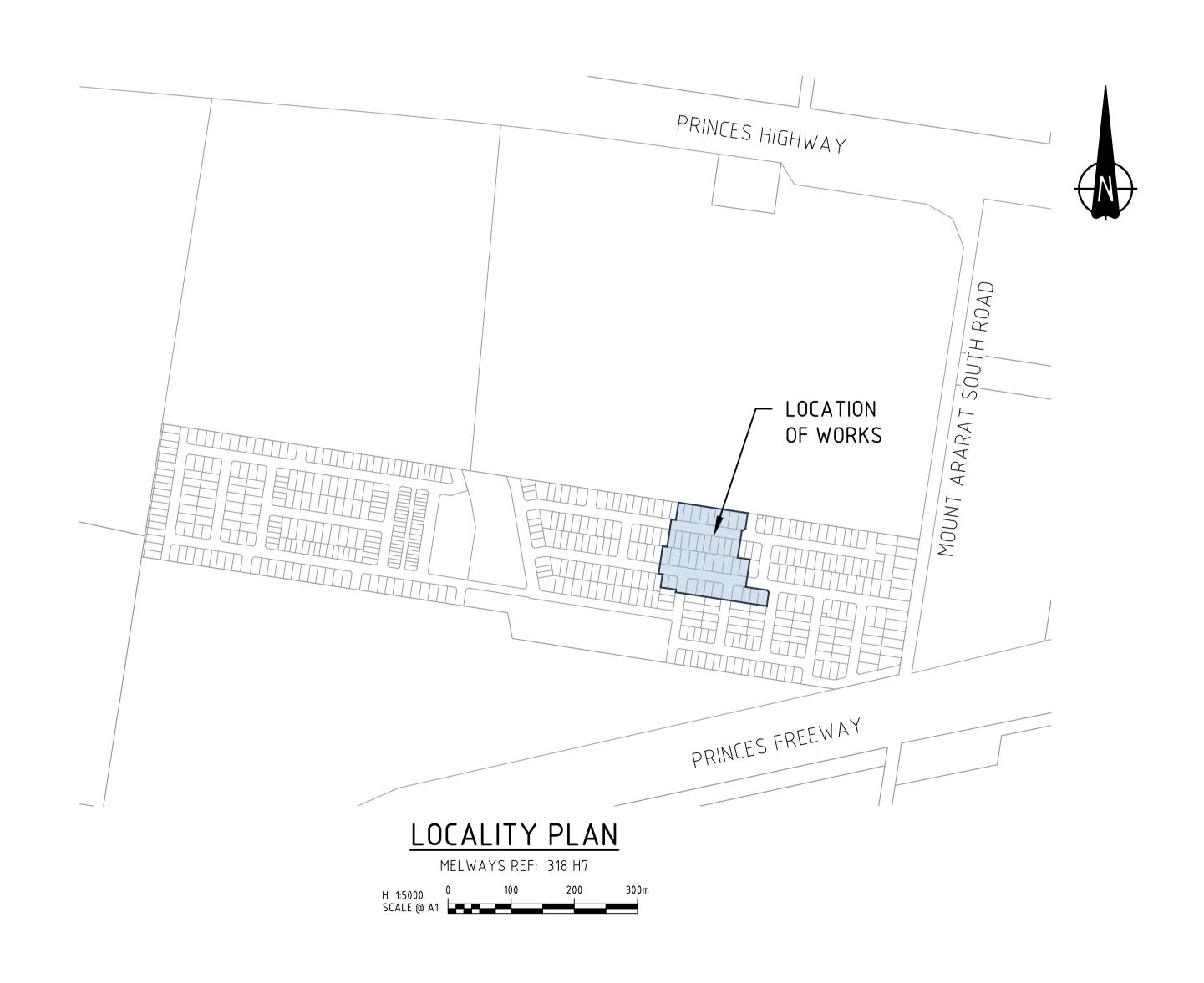
CARDINIA SHIRE COUNCIL

Ref No.: S25-006, T220227
Sheet: 1 of 22
Approved by: Vithu Vijeyakumar

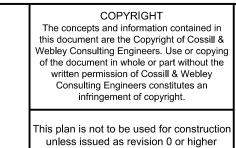
# KALA ESTATE STAGE 02 SUBDIVISIONAL WORKS

FOR SIG GROUP



| SHEET LIST TABLE |   |  |  |  |  |
|------------------|---|--|--|--|--|
| SHEET NUMBER     | DESCRIPTION                                   |  |  |  |  |
| 3086-02-001      | COVER SHEET                                   |  |  |  |  |
| 3086-02-010      | GENERAL NOTES AND PAVEMENT DETAILS            |  |  |  |  |
| 3086-02-011      | GENERAL DETAILS                               |  |  |  |  |
| 3086-02-020      | TYPICAL CROSS SECTIONS                        |  |  |  |  |
| 3086-02-100      | LAYOUT PLAN                                   |  |  |  |  |
| 3086-02-101      | OUTLET SWALE SETOUT                           |  |  |  |  |
| 3086-02-150      | EARTHWORKS PLAN                               |  |  |  |  |
| 3086-02-200      | ROAD LONGITUDINAL SECTIONS (SHEET 1 OF 3)     |  |  |  |  |
| 3086-02-201      | ROAD LONGITUDINAL SECTIONS (SHEET 2 OF 3)     |  |  |  |  |
| 3086-02-202      | ROAD LONGITUDINAL SECTIONS (SHEET 3 OF 3)     |  |  |  |  |
| 3086-02-250      | ROAD CROSS SECTIONS (SHEET 1 OF 3)            |  |  |  |  |
| 3086-02-251      | ROAD CROSS SECTIONS (SHEET 2 OF 3)            |  |  |  |  |
| 3086-02-252      | ROAD CROSS SECTIONS (SHEET 3 OF 3)            |  |  |  |  |
| 3086-02-300      | INTERSECTION DETAILS                          |  |  |  |  |
| 3086-02-350      | SIGNAGE AND LINEMARKING PLAN                  |  |  |  |  |
| 3086-02-400      | DRAINAGE LONGITUDINAL SECTIONS (SHEET 1 OF 2) |  |  |  |  |
| 3086-02-401      | DRAINAGE LONGITUDINAL SECTIONS (SHEET 2 OF 2) |  |  |  |  |
| 3086-02-420      | DRAINAGE PIT SCHEDULE                         |  |  |  |  |

| _204\  | В   | 06.02.25 | АТ  | Alasinci. | Lon         | ISSUED FOR COUNCIL SUBMISSION |
|--------|-----|----------|-----|-----------|-------------|-------------------------------|
| 6-02   | Α   | 14.11.24 | NT  | MA        | K. LORRIMAR | INITIAL ISSUE                 |
| 3\3086 |     |          |     |           |             |                               |
| a\FS0  |     |          |     |           |             |                               |
| dS\dat |     |          |     |           |             |                               |
| C:\12d | REV | DATE     | DRN | CKD       | APP         | AMENDMENT                     |





E Melbourne.Reception@cosweb.com.au

| CLIENT              | PROJECT           | KALA ESTATE - S | STAGE 02         |             |             | T             |                 |
|---------------------|-------------------|-----------------|------------------|-------------|-------------|---------------|-----------------|
| SIG                 | TITLE             | COVER SHEE      | T                |             |             | <b></b>       |                 |
| APPROVED PE 0005927 | DESIGNED M. ALI   | MUNICIPALITY    | CARDINIA SHIRE C | OUNCIL      |             |               | RIGINAL<br>SIZE |
| KLov                | SCALE<br>AS SHOWN | PP No.          | 20227            | DRAWING No. | 3086-02-001 | REVISION<br>R | ٥               |

- 1. ALL LEVELS SHOWN ARE TO AUSTRALIAN HEIGHT DATUM (A.H.D.) AND ALL CO-ORDINATES ARE TO MAP GRID AUSTRALIA (MGA) ZONE 55.
- 2. THE PLAN OF SUBDIVISION PREPARED BY MNG WILL BE PEGGED BY THE SURVEYOR. FOR SPECIFIC LOT DIMENSIONS REFER TO PLAN OF SUBDIVISION NO: PS 923755W LATEST VERSION.
- 3. ALL ROAD AND DRAINAGE WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH AS2124-1992, THE ROAD & DRAINAGE SPECIFICATION, STANDARD DRAWINGS AND TO THE SATISFACTION OF COUNCIL.
- 4. THE CONTRACTOR IS TO CHECK BENCH MARKS PRIOR TO THE COMMENCEMENT OF WORKS AND IMMEDIATELY REPORT ANY DISCREPANCIES. TBM's TO BE RE-ESTABLISHED BY THE LICENSED SURVEYOR IF FOUND TO BE MISSING AT THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR CARE AND MAINTENANCE OF TBM's THEREAFTER.
- 5. FILL AREAS TO BE STRIPPED OF TOPSOIL, FILLED TO WITHIN 100mm OF REQUIRED LEVEL AND TOPSOIL REPLACED TO OBTAIN FINAL FILL LEVELS AS SHOWN ON PLANS. FILLING UNDER LEVEL 1 SUPERVISION TO BE CLEAN CLAY COMPACTED TO A DRY DENSITY NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY VALUE DETERMINED BY THE STANDARD COMPACTION TEST IN ACCORDANCE WITH AUSTRALIAN STANDARD AS1289.5.1.1–1993. TESTING TO COMPLY WITH AS1289.0-2000.
- 6. EXISTING DAMS ARE TO BE BREACHED, DRAINED, DE-SLUDGED AND SHALL BE EXCAVATED TO A CLEAN FIRM BASE. THE SURFACE SHALL BE INSPECTED APPROVED AND LEVELLED BY THE ENGINEER PRIOR TO COMMENCEMENT OF FILLING. FILL IS TO BE PLACED AND COMPACTED AS SPECIFIED AND TO LEVEL 1 SUPERVISION. THE FILL SHALL BE APPROVED SELECTED ON SITE MATERIAL OR APPROVED IMPORTED MATERIAL. THE FILL SHALL BE PLACED UNDER CONTROLLED MOISTURE CONDITIONS OF BETWEEN 85% AND 125% OF OPTIMUM AND APPROPRIATE TO THE TYPE OF COMPACTION EQUIPMENT USED. THE FILL SHALL BE UNIFORMLY COMPACTED IN LAYERS NOT EXCEEDING 300mm DEPTH TO A MINIMUM OF 95% STANDARD DRY DENSITY.
- 7. BEFORE COMMENCING WORK ON TRENCHES IN EXCESS OF 1.5M DEEP, NOTICE OF SUCH PROPOSAL IS TO BE SENT TO THE CHIEF MINING INSPECTOR OCCUPATIONAL HEALTH & SAFETY AUTHORITY IN ACCORDANCE WITH THE WORK SAFE REGULATIONS – "SAFETY PRECAUTIONS IN TRENCHING OPERATIONS" CODE OF PRACTICE No.8 1988. A FOREMAN QUALIFIED AS A MINES MANAGER MUST BE IN ATTENDANCE AT ALL TIMES DURING SUCH EXCAVATIONS.
- 8. THE CONTRACTOR SHALL COMPLY WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT 2004 AND ASSOCIATED CODE OF PRACTICE.
- 9. PRIOR TO WORKS BEING PLACED ON MAINTENANCE ALL AREAS OF THE SUBDIVISION EXPOSED BY DE-VEGETATION INCLUDING NATURE STRIPS, LOTS AND RESERVES ARE TO BE HYDRO-SEEDED UNLESS OTHERWISE SPECIFIED.
- 10. ALL CONCRETE TO BE 32MPa FOR PITS AND 25 MPa IN OTHER APPLICATIONS UNLESS SPECIFIED OTHERWISE. ALL CONCRETE OVER 125mm THICK TO BE VIBRATED USING MECHANICAL VIBRATORS.
- 11. FOR CONCRETE ROAD PAVEMENTS, CONCRETE JOINTING DETAILS ARE TO BE PROVIDED IN ACCORDANCE WITH "CONCRETE PAVEMENT DESIGN FOR RESIDENTIAL STREETS" (1997-CCAA).
- 12. ALL CHAINAGES REFER TO ROAD RESERVE CENTRELINES EXCEPT, IN COURT HEADS, DRAINAGE OUTFALLS AND KERB RETURNS CHAINAGES REFER TO LIP OF KERB.
- 13. THE CONTRACTOR IS REQUIRED TO CONFINE CONSTRUCTION VEHICLES TO THE ROAD RESERVE AND EASEMENTS. ANY DAMAGE CAUSED TO ALLOTMENTS MUST BE MADE GOOD TO A STANDARD ACCEPTABLE BY THE
- 14. ANY BUILDINGS, TROUGHS, FENCES, DEBRIS AND OTHER STRUCTURES ON SITE ARE TO BE REMOVED AS DIRECTED BY THE ENGINEER OR UNLESS OTHERWISE SPECIFIED. THE COST OF REMOVAL IS TO BE INCLUDED IN THE OVERALL EARTHWORKS FIGURE UNLESS A SPECIFIC ITEM FOR REMOVAL IS DENOTED IN THE SCHEDULE
- 15. NO TOPSOIL IS TO BE REMOVED FROM SITE WITHOUT THE CONSENT OF THE SUPERINTENDENT
- 16. FOR PAVEMENT RECOMMENDATIONS AND SOIL CONDITIONS REFER TO GEOTECH REPORT
- 17. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN SITE GRADING AND DRAINAGE AND TO PROTECT AND MAINTAIN SUBGRADES IN A SUITABLE CONDITION IN ORDER TO ACHIEVE THE COMPACTIONS SPECIFIED. SHOULD SUBGRADES BECOME SATURATED ANY UNSUITABLE MATERIAL IS TO BE REMOVED AND MADE GOOD WITH TYPE B GENERAL FILL AT THE CONTRACTORS COST.
- 18. IN NEW LANDSCAPE AREAS ALL REDUNDANT PAVEMENT MATERIAL SHALL BE REMOVED & REINSTATED WITH CLEAN FILL TO FINISHED SURFACE LEVEL. UNLESS NOTED OTHERWISE ON THE LANDSCAPE PLANS REINSTATEMENT OF A MINIMUM 150mm OF CLEAN TOPSOIL SHALL BE PROVIDED TO ALL NATURE STRIP, LOT AND RESERVE
- 19. ALL EXISTING TREES IN THE VICINITY OF THE TRAFFICABLE AREAS THAT ARE TO BE RETAINED SHALL BE PRUNED. ROOTS CUT AND SEALED WHERE THEY EXTEND BENEATH NEW WORKS, BY APPROPRIATELY QUALIFIED PERSONNEL. TREES TO BE REMOVED SHALL HAVE ALL ROOTS GRUBBED OUT AND BE MADE GOOD WITH COMPACTED FILL.
- 20. PRIOR TO COMPLETION, THE CONTRACTOR SHALL ENSURE THE SITE OF WORKS IS TIDIED AND OBTAIN A CLEARANCE FROM THE SUPERINTENDENT.
- 21. CONDITION OF EXISTING PAVEMENT SURROUNDING THE DEVELOPMENT TO BE RECORDED. ANY DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES TO BE REPAIRED TO COUNCIL'S SATISFACTION.
- 22. PRIOR TO PC, PROVIDE ALLOCATED STREET NUMBER ON THE KERB IN FRONT OF EACH LOT. THE KERBSIDE NUMBERS MUST BE 100mm WHITE LETTERING ON A BLACK BACKGROUND LOCATED ON THE FRONT OF KERB AT THE PROPERTY FRONTAGE TO COUNCIL SATISFACTION.
- 23. UPON COMPLETION OF CIVIL WORKS, CONTRACTOR SHALL PROVIDE AS CONSTRUCTED PLANS IN AutoCAD, D-SPEC AND R-SPEC IN DIGITAL FORMAT TO COUNCIL'S REQUIREMENT AND TO THE SATISFACTION OF ALL PARTIES.

# ROADWORKS

AS1289.0-2000.

- 24. FILL BATTERS SHALL GENERALLY BE 1 IN 6 AND CUT BATTERS 1 IN 6 MAXIMUM CUT BATTERS ARE TO BE STABILISED TO THE SATISFACTION OF THE ENGINEER.ALL NATURE STRIPS AND BATTERS SHALL BE COVERED WITH 100mm MIN. DEPTH TOPSOIL AND SEEDED WITH AN APPROVED SEED AND FERTILIZER MIXTURE AS PER EDCM GUIDELINES.
- 25. FOOTPATH EXPANSION JOINTS SHALL BE PLACED ON EITHER SIDE OF DRIVEWAY CROSSINGS. EACH JOINT IS TO BE DOWELLED WITH 3x10mm DIAMETER DOWELS WHICH ARE TO HAVE A GREASED SLEEVE OVER ONE END TO PERMIT SLIP. JOINTS ARE TO BE FILLED WITH AN APPROVED COMPOSITE MATERIAL OR PLASTIC FILLER.
- 26. ALL LINE MARKING IS TO BE APPLIED USING LONG LIFE THERMOPLASTIC PAINT, IN ACCORDANCE WITH AUSTRALIAN STANDARD AS 1742-1 AND AS 1742-2 AND COUNCIL REQUIREMENTS UNLESS OTHERWISE SPECIFIED. RRPM'S ARE TO BE INSTALLED IN ACCORDANCE WITH VICROADS AND/OR COUNCIL SPECIFICATIONS.
- 27. ALL TEMPORARY WARNING SIGNS DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH AS1742-3.
- 28. CONTRACTOR TO CONFIRM STREET NAME WITH COUNCIL/SUPERINTENDENT PRIOR TO MANUFACTURE OF STREET
- 29. ANY WORKS WITHIN ROADWAYS SHALL SATISFY COUNCILS REQUIREMENTS FOR OCCUPANCY OF ROAD RESERVES.
- 30. WHERE PAVEMENT (INCLUDING FOOTPATHS AND VEHICLE CROSSINGS) IS CONSTRUCTED ON FILLING, FILL MATERIAL IS TO BE APPROVED BY THE SUPERINTENDENT AND COUNCIL; AND CONSTRUCTED IN ACCORDANCE WITH
- 31. WHEN PAVEMENT EXCAVATION IS IN ROCK ALL LOOSE MATERIAL (INCLUDING ROCKS AND CLAY) MUST BE REMOVED. THE SUBGRADE MUST THEN BE REGULATED WITH COUNCIL APPROVED MATERIAL.
- 32. WHEN WORKS ARE ON AN EXISTING ROAD THE CONTRACTOR SHALL OBTAIN ALL NECESSARY ROAD OPENING PERMITS AND AUTHORITY APPROVALS PRIOR TO COMMENCING WORKS.

#### DRAINAGE 33. DRAINAGE PITS ARE TO BE SET OUT FROM OFFSETS AND CO-ORDINATES.

34. PITS AT TANGENT POINTS OF KERB RADIALS ARE TO BE LOCATED IMMEDIATELY ADJACENT TO T.P.

- 35. ALL DRAINS WITHIN ROAD RESERVE SHALL BE BACKFILLED WITH 20mm FCR CLASS 3. DRAINS UNDER ROAD PAVEMENT TO BE BACKFILLED WITH 20mm FCR CLASS 2 AS SHOWN ON THE DRAWINGS. COMPACTION SHALL BE IN ACCORDANCE WITH SPECIFICATION.
- 36. ALL DRAINAGE PIPE CLASSES ARE TO BE AS PER THE DRAINAGE LONGITUDINAL SECTIONS.
- 37. ALL PIPES ARE TO BE RUBBER RING JOINTED REINFORCED CONCRETE UNLESS OTHERWISE NOTED.
- 38. 100mm DIAMETER CORRUGATED AGRICULTURAL PIPE DRAINS (AG's) ARE TO BE PLACED BEHIND ALL KERB AND CHANNEL, EDGE STRIP AND OTHER LOCATIONS WHERE SHOWN AND/OR DIRECTED BY THE ENGINEER.
- 39. PROPERTY INLETS WITHIN DRAINAGE EASEMENT ARE TO BE PLACED 1.00m FROM LOW CORNERS OF ALLOTMENTS UNLESS OTHERWISE SPECIFIED.
- 40.100mm DIA HOUSE DRAINS IN ROADS TO BE PLACED 5.5m FROM LOW CORNER OF ALLOTMENT UNLESS OTHERWISE SPECIFIED. HOUSE DRAINS MARKED "H" STENCILLED ON FACE OF KERB.
- 41. HOUSE DRAINS PASSING UNDERNEATH OR ADJACENT TO RETAINING WALLS SHALL BE CONSTRUCTED TO ACCOMMODATE INSPECTION OPENINGS AT APPROPRIATE INTERVALS, ENSURING EASY ACCESS FOR INSPECTION AND MAINTENANCE PURPOSES. CONTRACTOR SHALL ENSURE THAT THE INSPECTION OPENINGS UNDERNEATH RETAINING WALLS REMAIN ACCESSIBLE AND UNOBSTRUCTED.
- 42. PIPES LAID AT MINIMUM DEPTH ARE TO BE PROTECTED DURING CONSTRUCTION USING ADDITIONAL COVER OR A HIGHER CLASS PIPE IS TO BE INSTALLED.

# ENVIRONMENTAL CONTROL MEASURES

- 43. NO NATIVE VEGETATION SHALL BE DESTROYED, FELLED, LOPPED RING BARKED OR UPROOTED WITHOUT THE CONSENT OF THE RESPONSIBLE AUTHORITY.
- 44.ALL TREES ARE TO BE PROTECTED WITH APPROPRIATE EXCLUSION FENCING PRIOR TO COMMENCEMENT OF ANY WORKS UNLESS OTHERWISE SPECIFIED.
- 45. PERMISSION IN WRITING IS REQUIRED FROM THE SUPERINTENDENT PRIOR TO THE REMOVAL OF ANY TREE EVEN IF MARKED FOR REMOVAL ON PLANS.
- 46. PRIOR TO REMOVAL. TREES ARE TO BE MARKED BY CONTRACTOR AND APPROVED BY COUNCIL OR SUPERINTENDENT
- 47. CONTRACTOR TO PROVIDE ADEQUATE PROTECTION AGAINST SILT RUNOFF FROM THE SITE AS PART OF THE ENVIRONMENTAL MANAGEMENT PLAN (EMP).
- 48. NO POLLUTED AND/OR SEDIMENT LADEN RUNOFF IS TO BE DISCHARGED, DIRECTLY OR INDIRECTLY, INTO COUNCIL OR MELBOURNE WATER DRAINS OR WATERCOURSES.

#### SERVICES

49. WATER CONDUITS ARE TO BE INSPECTED BY THE SUPERVISING ENGINEER PRIOR TO BACKFILLING. CONDUITS TO EXTEND ON BOTH SIDES WHERE APPLICABLE TO 500mm BEYOND THE BUILDING LINE. ALL TRENCHES SHALL BE BACKFILLED WITH 20mm CLASS "2" FCR. WATER CONDUITS ARE TO BE LOCATED 1.4m FROM THE TITLE BOUNDARY OPPOSITE THE CROSSOVER OR 5.0m FROM THE TITLE BOUNDARY ADJACENT TO THE CROSSOVER, UNLESS OTHERWISE NOTED.

#### 50. ELECTRICAL AND TELECOMMUNICATIONS CONDUITS TO EXTEND 500mm BEYOND BOTH SIDES OF KERB.

- 51. CONDUITS FOR TELECOMMUNICATIONS, GAS AND WATER SERVICES ARE TO BE POSITIONED TO AN APPROVED LOCATION UNLESS OTHERWISE NOTED AND ARE TO BE PLACED AT RIGHT ANGLES TO THE KERB AND SERVICE ALIGNMENT. TELECOMMUNICATIONS, GAS AND WATER CONDUITS ARE TO BE 50mm DIA PVC PIPES, CLASS 12. CONDUITS UNDER FOOTPATHS TO BE REFERENCED ON BACK OF PATH.
- 52. SERVICE TRENCHES NEAR FOOTPATH SHALL BE BACKFILLED WITH APPROVED GRANULAR MATERIAL
- 53. ALL EXCAVATION FOR SERVICES MUST BE CONTAINED WITHIN EASEMENTS OR ROAD RESERVES. ANY EXCAVATION OUTSIDE THESE LIMITS MUST BE BACKFILLED WITH CLASS 3 OR CLASS 2 FCR AT 95% MODIFIED COMPACTION UNLESS NOTED OTHERWISE.
- 54. BACKFILL MATERIAL FOR CONDUITS UNDER ROADS SHALL BE CLASS 3 OR CLASS 2 FCR (20 MM NOMINAL SIZE) UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- 55. ALL SERVICE TRENCHES UNDER ROADS, DRIVEWAYS, FOOTPATHS AND PARKING BAYS TO BE BACKFILLED WITH COMPACTED CLASS 3 OR CLASS 2 CRUSHED ROCK. SERVICE TRENCHES LESS THAN 750mm BEHIND K&CH AND PARKING BAYS ARE ALSO TO BE BACKFILLED WITH COMPACTED CLASS 2 CRUSHED ROCK.
- 56. EXISTING SERVICE LOCATIONS SHOWN HAVE BEEN OBTAINED FROM DIAL BEFORE YOU DIG RECORDS AND/OR SITE PLANS. EXISTING SERVICES SHOWN ON THESE DRAWINGS ARE OFFERED AS A GUIDE ONLY AND ARE NOT GUARANTEED AS CORRECT. PRIOR TO THE COMMENCEMENT OF WORKS, THE CONTRACTOR IS TO LOCATE ALL EXISTING SERVICES IN THE VICINITY OF PROPOSED WORKS AND UNDERTAKE ANY ON SITE INSPECTION WITH SERVICE AUTHORITIES AS NECESSARY. ANY DAMAGE CAUSED TO SERVICE AUTHORITIES ASSETS WHETHER SHOWN ON CONSTRUCTION PLANS OR NOT IS TO BE THE <u>RESPONSIBILITY OF THE CONTRACTOR</u>.
- 57. ALL EXISTING PITS AND SERVICE FITTINGS THAT ARE TO REMAIN WITHIN THE PAVEMENT AREAS SHALL BE REBUILT TO MATCH PROPOSED LEVELS AND WHERE APPLICABLE FITTED WITHIN AN APPROPRIATE HEAVY DUTY. AUTHORITY APPROVED COVER. ELSEWHERE EXISTING SERVICES SHALL BE ADJUSTED TO SUIT NEW ADJACENT LEVELS. THE RELEVANT AUTHORITY IS TO BE NOTIFIED PRIOR TO ANY WORKS ON THEIR ASSETS AND SERVICES ARE TO BE ADJUSTED TO THE RELEVANT AUTHORITY REQUIREMENTS.

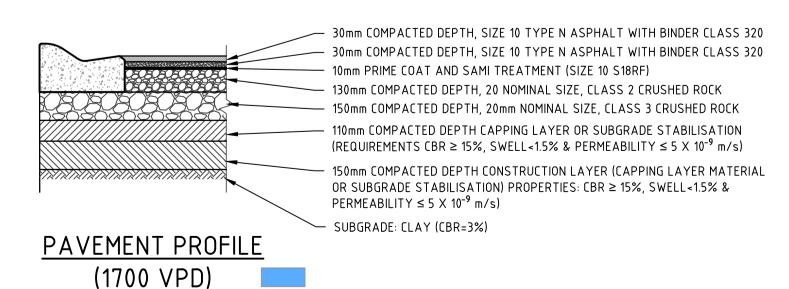
# CONSTRUCTION MANAGEMENT

- 58. CONTRACTOR SHALL BE REQUIRED PRIOR TO COMMENCING WORKS TO SUBMIT THE FOLLOWING DOCUMENTS:
- PROJECT CONSTRUCTION PLAN ENVIRONMENTAL MANAGEMENT PLAN

KALAMATA BOULEVARD

TOTAL DEPTH = 600mm

- OH&S RISK ASSESSMENT
- SITE MANAGEMENT PLAN
- PROGRAM OF WORKS
- COMPACTION TEST PLAN FOR ALL PAVEMENTS, FILLED AREAS AND DRAINAGE WORKS
- AND ALL OTHER RELEVANT INSPECTION AND TEST PLANS



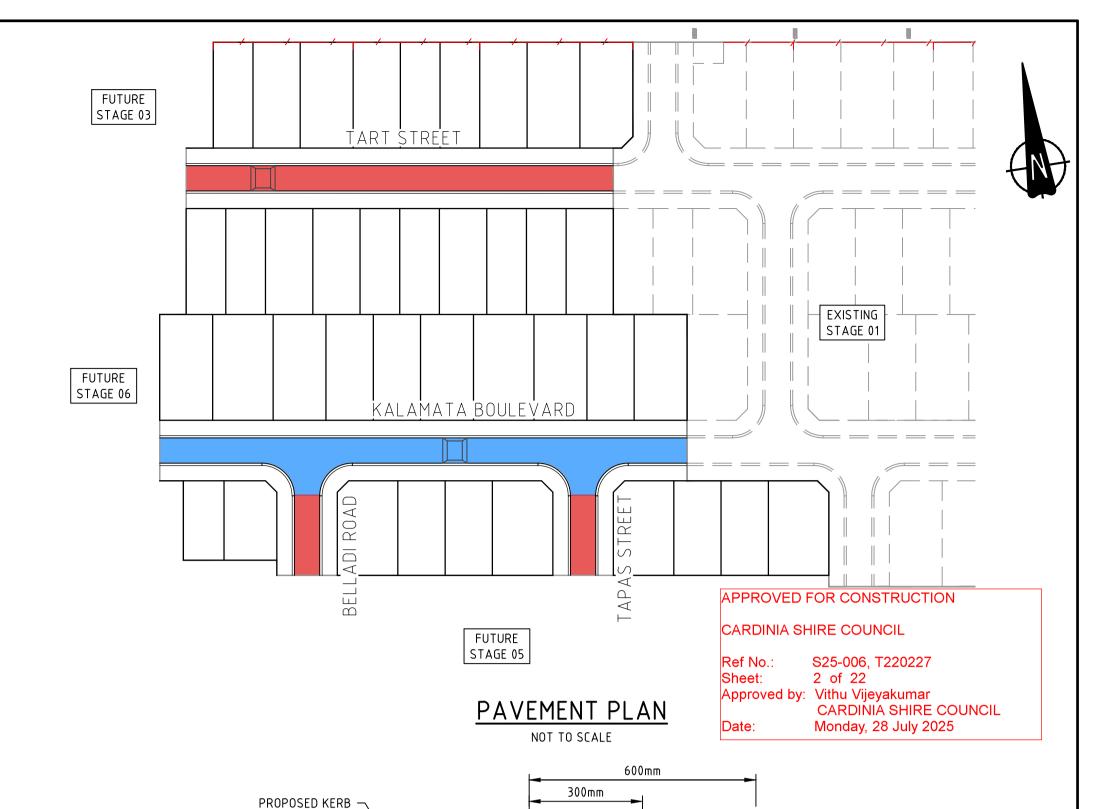
# **COUNCIL NOTES:**

COUNCIL WILL NOT ACCEPT ANY RESPONSIBILITY FOR WORKS WHERE AN INSPECTION IS NOT UNDERTAKEN WITH A COUNCIL APPOINTED REPRESENTATIVE. 24 HOURS NOTICE IS REQUIRED FOR INSPECTION AT THE FOLLOWING HOLD

- PRIOR TO COMMENCEMENT OF THE WORKS.
- INSPECTION OF THE SUBGRADE.
- INSPECTION DURING DRAINAGE WORKS
- INSPECTION PRIOR TO POURING OF PITS
- INSPECTION OF SUB SOIL DRAINAGE.
- INSPECTION OF KERB AND CHANNEL BEDDING. INSPECTION PRIOR TO ANY CONCRETE WORKS
- INSPECTION AND TESTING OF EACH PAVEMENT LAYER (BY DEVELOPER OR CONTRACTOR) PRIOR TO PLACING ANY SUBSEQUENT PAVEMENT LAYER.
- COMPACTION TEST RESULTS SHALL BE ISSUED TO COUNCIL. INSPECTION PRIOR TO SEALING AND ASPHALT WORKS. ANY OTHER INSPECTION HOLD POINTS AS PER EDCM.

#### **COUNCIL CONCRETE NOTES:**

- PRIOR TO CASTING, THE UNBOUND GRANULAR SUBBASE MUST BE DAMP TO
- ENSURE NO EARLY 'DRYING OUT' OF FRESH CONCRETE. CONCRETE MUST BE ADEQUATELY CURED — IDEALLY BY MAINTAINING WET HESSIAN OR SEALING WITH PLASTIC SHEETING.
- SAW CUTTING OF CONCRETE MUST BE CARRIED OUT AS SOON AS CONCRETE PERMITS, BUT NO LATER THAN 12 HOURS AFTER POUR.
- ALL JOINTS TO BE APPROPRIATELY SEALED TO RESIST THE INTRUSION OF SAND AND GRAVEL AND TO MINIMISE INGRESS OF WATER.



100mm TOPSOIL

✓ TYPE B FILL AS SPECIFIED

OF SERVICE CONDUITS

OR NO FINES CONCRETE

PROOF ROLL PRIOR TO PLACEMENT

- 100¢ CLASS 400 PERVIOUS PIPE WITH

SECOND STAGE GEOTEXTILE SOCK. 20mm

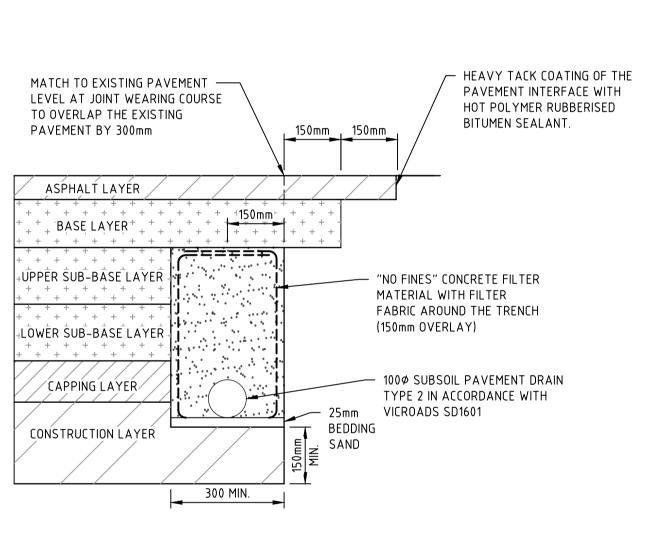
SIZED COUNCIL APPROVED SCREENINGS

ROAD BOXING CHECKED FOR FORMATION

LINE AND LEVEL (NO PROOF ROLL

REQUIRED AT SUBGRADE WHEN

CONSTRUCTION LAYER IS USED)



# PAVEMENT JOINT DETAIL (EXPANSIVE SUBGRADE) NOT TO SCALE

REFER VPA STD DWG EDCM 201

# PAVEMENT DETAILS

WORK & / OR PAVEMENT DESIGNS

- THE PAVEMENT DESIGNS SHOWN HAVE BEEN DESIGNED & PROVIDED BY GROUND SCIENCE WHO ARE RESPONSIBLE FOR THE GEOTECHNICAL WORK ON THIS PROJECT.
- COSSILL & WEBLEY IS NOT RESPONSIBLE FOR THE WORK OF GROUND SCIENCE.
- ALL PAVEMENT DESIGNS AND KEYING IN DETAILS ARE EXTRACTS FROM
- THE GROUND SCIENCE REPORT "R9782-3-R1" AND "R9782-3-THIS DOCUMENT SHOULD BE REVIEWED TO ENSURE THAT THE DESIGN HAS
- BEEN ACCURATELY REPRODUCED. COSSILL & WEBLEY DOES NOT ACCEPT ANY RESPONSIBILITY FOR THE ACCURACY, ADEQUACY OR APPROPRIATENESS OF THE GEOTECHNICAL
- ANY QUERIES SHOULD BE ADDRESSED TO GROUND SCIENCE AND SENT TO COSSILL & WEBLEY.

30mm COMPACTED DEPTH, SIZE 10 TYPE L ASPHALT WITH BINDER CLASS 320 PAVEMENT PROFILE

AS SHOWN

SUBSURFACE DRAIN

(EXPANSIVE SOILS)

NOT TO SCALE

REFER VPA STD DWG EDCM 202a

/ASPHALT/

SUBBASE COURSE

CAPPING LAYER

(150mm MIN.)

CONSTRUCTION LAYER

(150mm MIN.)

SERVICE CONDUIT

20mm CLASS 3 CRUSHED ROCK OR

COMPACTED TO 97% MODIFIED

20mm CLASS 3 CRUSHED CONCRETE

+ BASE COURSE+

30mm COMPACTED DEPTH, SIZE 10 TYPE N ASPHALT WITH BINDER CLASS 320 10mm PRIME COAT AND SAMI TREATMENT (SIZE 10 S18RF) 130mm COMPACTED DEPTH, 20 NOMINAL SIZE, CLASS 2 CRUSHED ROCK 110mm COMPACTED DEPTH, 20mm NOMINAL SIZE, CLASS 3 CRUSHED ROCK 150mm COMPACTED DEPTH CAPPING LAYER OR SUBGRADE STABILISATION (REQUIREMENTS CBR  $\geq$  15%, SWELL<1.5% & PERMEABILITY  $\leq$  5 X 10<sup>-9</sup> m/s) 150mm COMPACTED DEPTH CONSTRUCTION LAYER (CAPPING LAYER MATERIAL OR SUBGRADE STABILISATION) PROPERTIES: CBR ≥ 15%, SWELL<1.5% & PERMEABILITY  $\leq 5 \times 10^{-9} \text{ m/s}$ SUBGRADE: CLAY (CBR=3%) (0-1000 VPD) TART STREET, BELLADI ROAD & TAPAS STREET TOTAL DEPTH = 600mm

17.07.25 DN / ADDED 1700 VPD PAVEMENT DETAIL AND AREA 30.05.25 | EK | MA | K. LORRIMAR | SPEED BUMP & TURNING TURN AREA DETAILS ADDED 05.05.25 | MA | MA | K. LORRIMAR | DIVEWAYS REFERENCE NOTE AMENDED | 05.02.25 | AT | MA | K. LORRIMAR | ISSUED FOR COUNCIL SUBMISSION | 14.11.24 | NT | MA |K. LORRIMAR| INITIAL ISSUE REV DATE DRN CKD APP AMENDMENT

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his plan is not to be used for construction

unless issued as revision 0 or higher

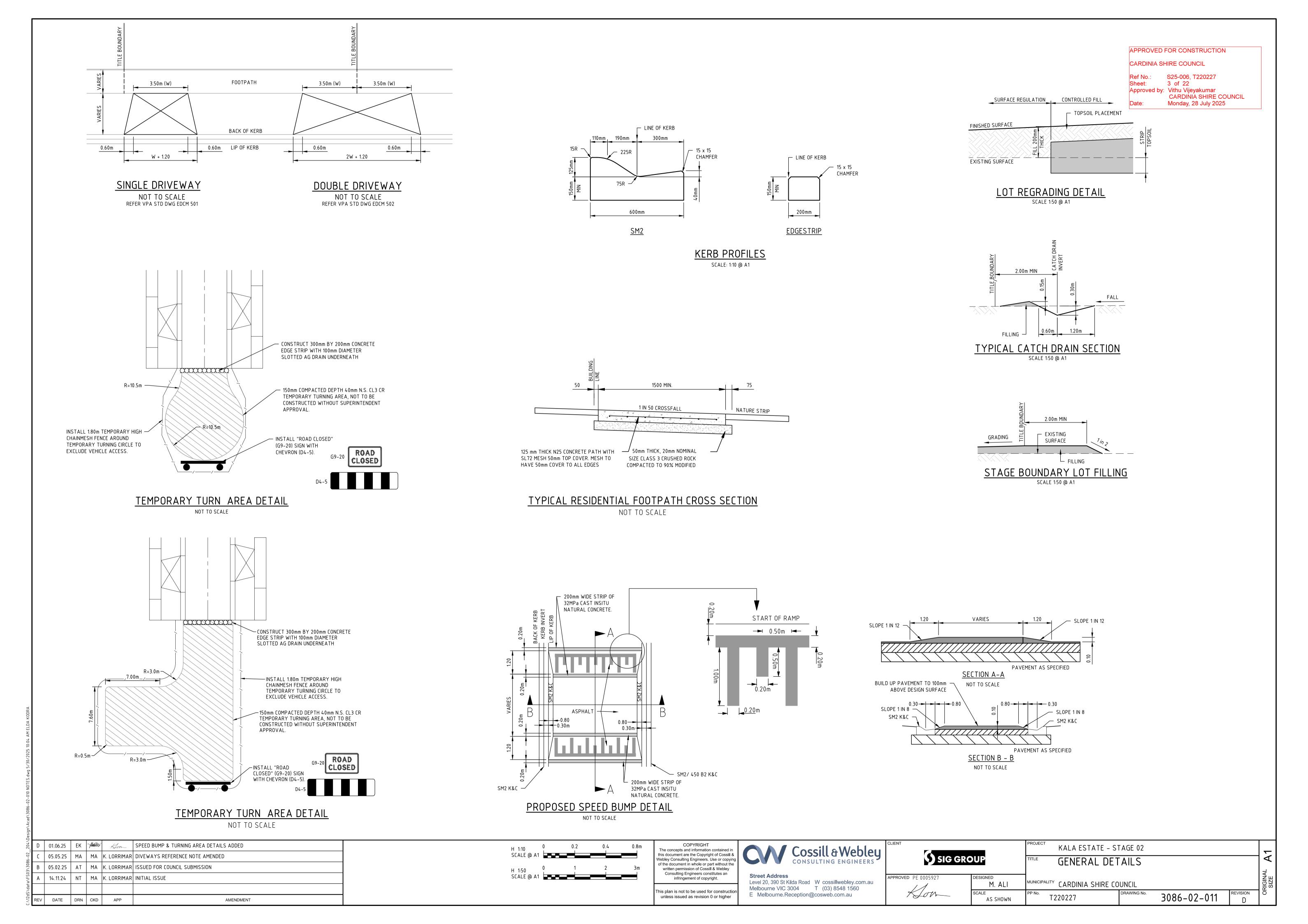
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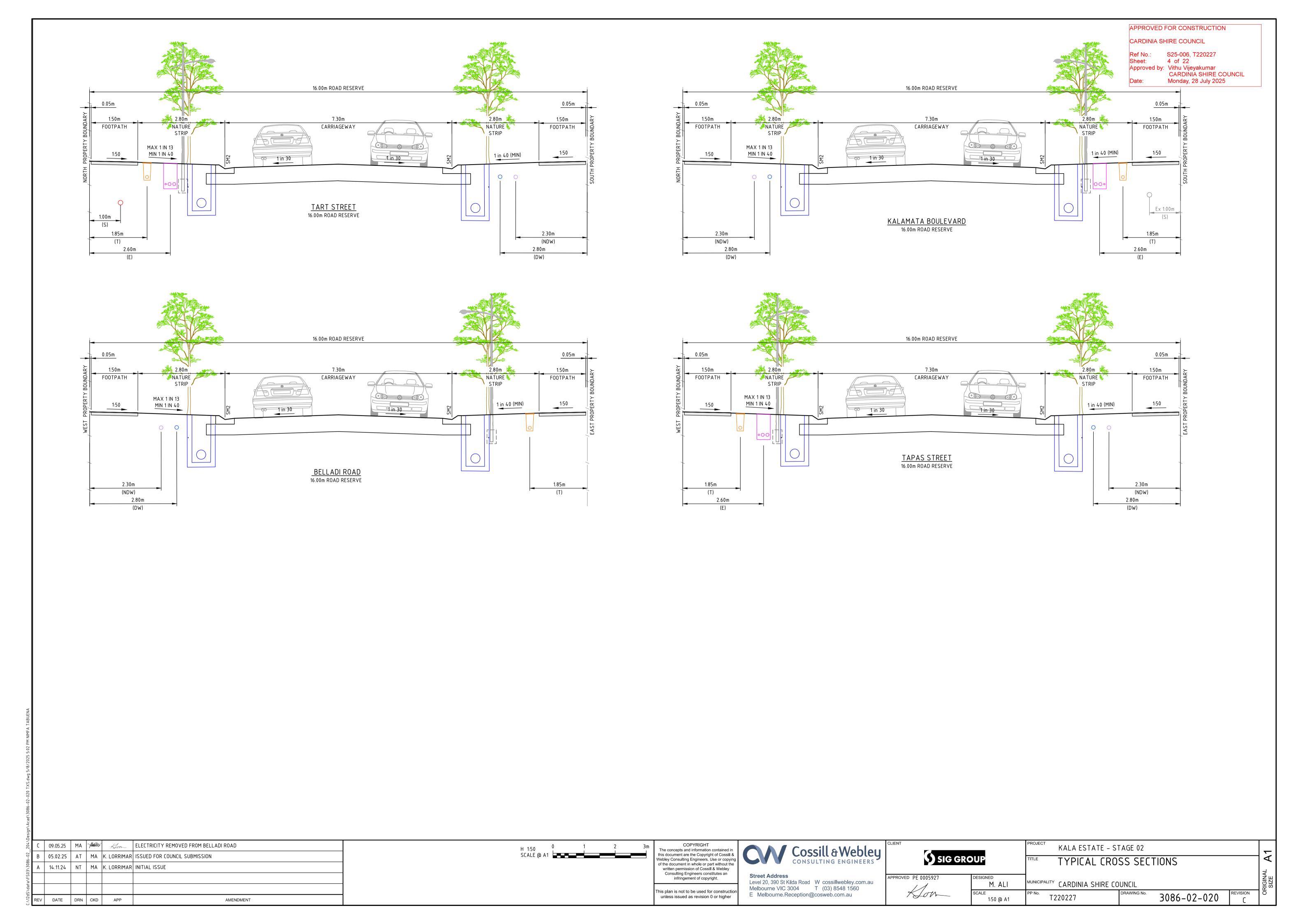
Level 20, 390 St Kilda Road W cossillwebley.com.au

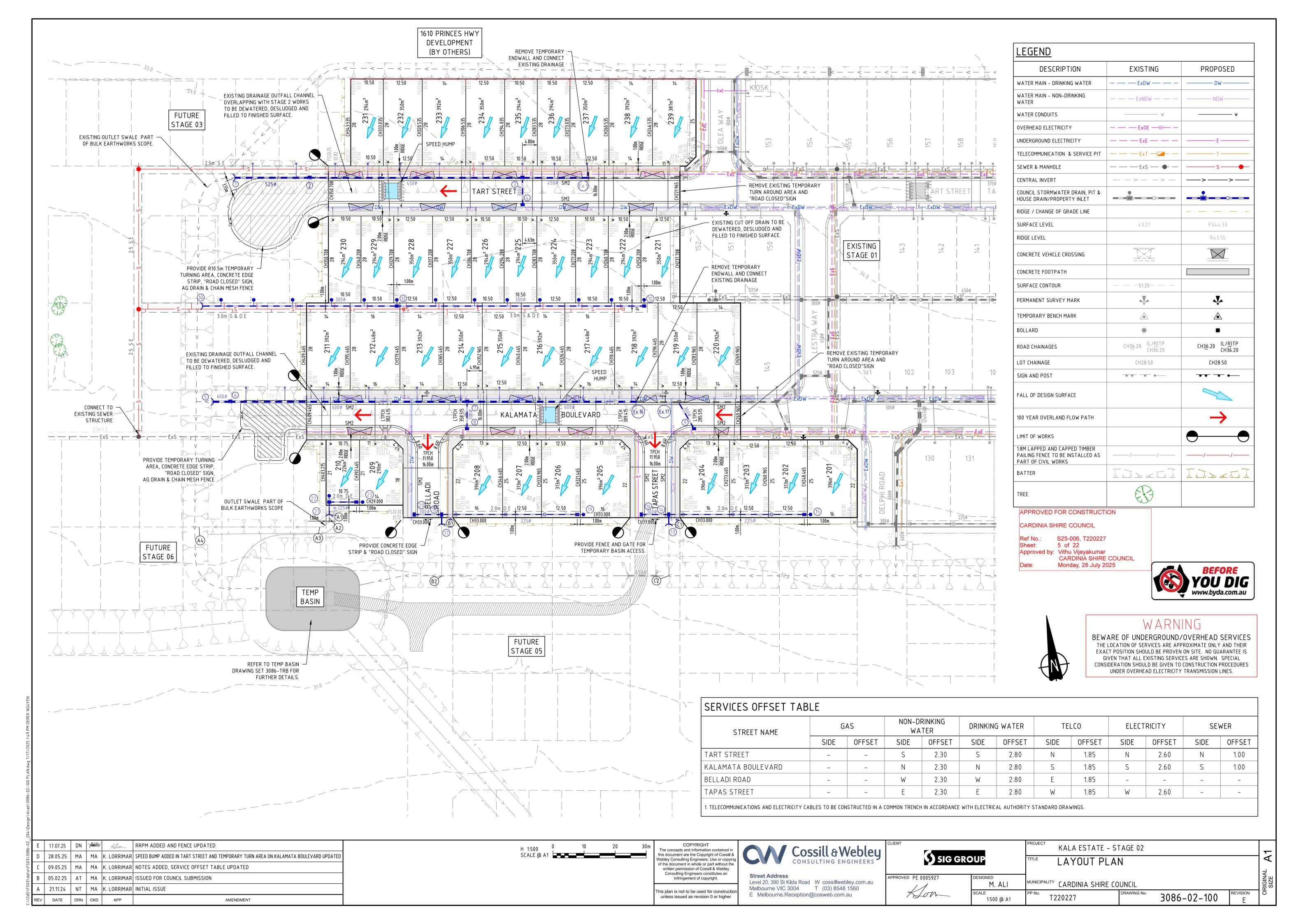
Melbourne VIC 3004 T (03) 8548 1560

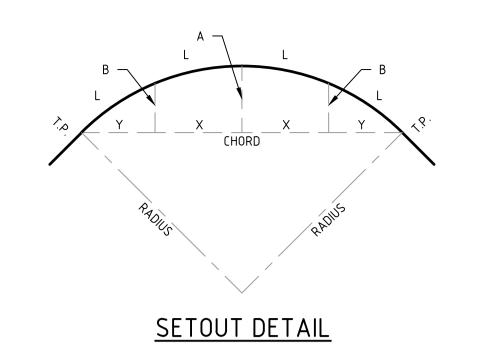
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KALA ESTATE - STAGE 02 SIG GROUP GENERAL NOTES AND PAVEMENT DETAILS PROVED PE 0005927 CARDINIA SHIRE COUNCIL M. ALI KLOV REVISION 3086-02-010 T220227





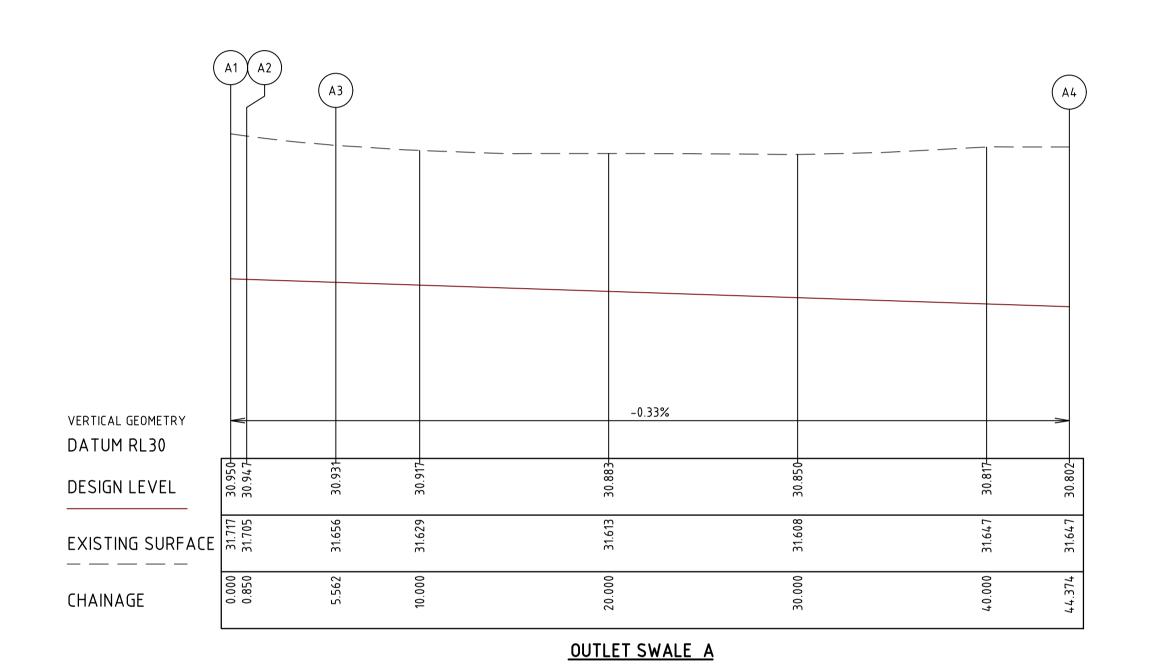




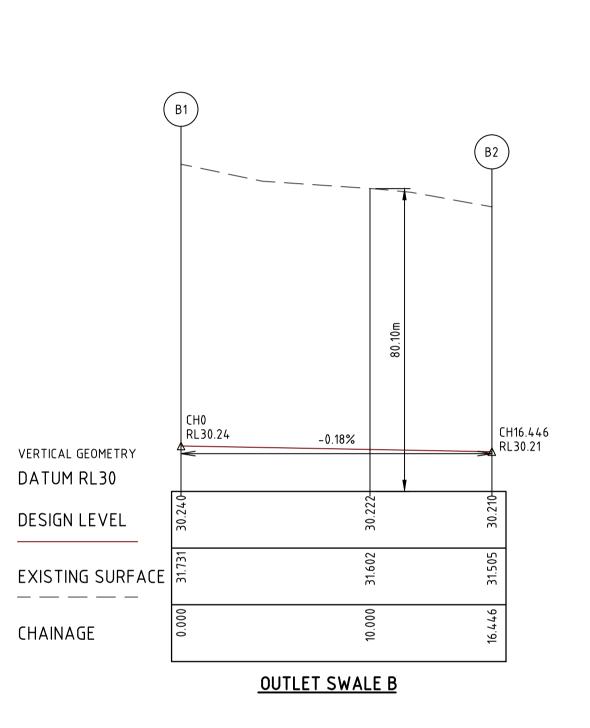


CARDINIA SHIRE COUNCIL

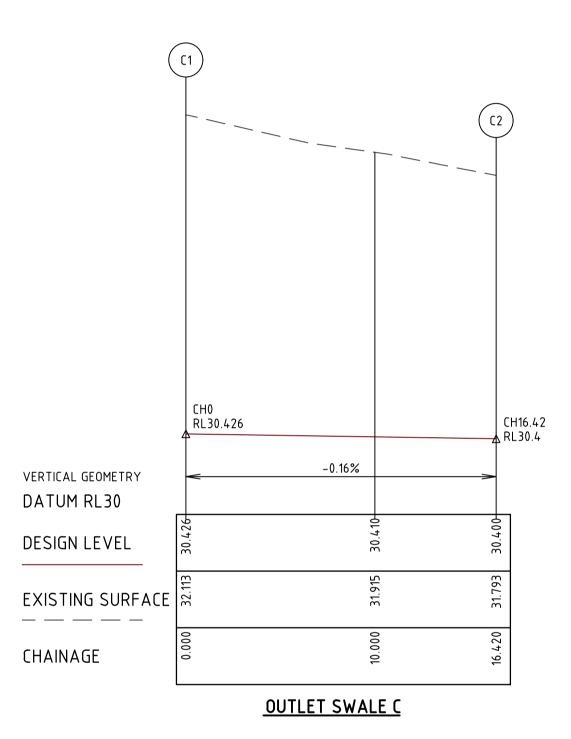
Ref No.: S25-006, T220227
Sheet: 6 of 22
Approved by: Vithu Vijeyakumar
CARDINIA SHIRE COUNCIL
Date: Monday, 28 July 2025



| <u>Alignment</u> | <u>A</u> |        |             |       |         |         |       |         |             |    |
|------------------|----------|--------|-------------|-------|---------|---------|-------|---------|-------------|----|
| Point no         | Eastin   | g      | Northing    |       | RL      |         |       |         |             |    |
| A 1              | 372000.5 | -      | 5785177.185 | 3 0   | . 950   |         |       |         |             |    |
| A 2              | 372000.4 | 0 3    | 5785176.345 | 3 0   | . 9 4 7 |         |       |         |             |    |
| A 3              | 371996.9 | 8 5    | 5785173.832 | 3 0   | . 931   |         |       |         |             |    |
| A 4              | 371958.6 | 1 8    | 5785179.686 | 3 0   | . 8 0 2 |         |       |         |             |    |
| Curve no         | I        | Radius | . Arc       | Α     | В       | X       | Υ     | l       | Mid point R | ≀L |
| A2 - A3          | 90.000   | 3.000  | 4.712       | 0.879 | 0.650   | 1 . 148 | 0.973 | 1 . 178 | 30.939      |    |

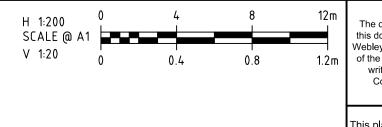


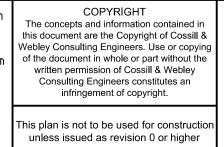
| <u>Alignment</u> | В          |             |             |
|------------------|------------|-------------|-------------|
| Point no         | Easting    | Northing    | R L         |
| B1               | 372035.829 | 5785168.672 | 3 0 . 2 4 0 |
| B2               | 372033.348 | 5785152.414 | 3 0 . 2 1 0 |

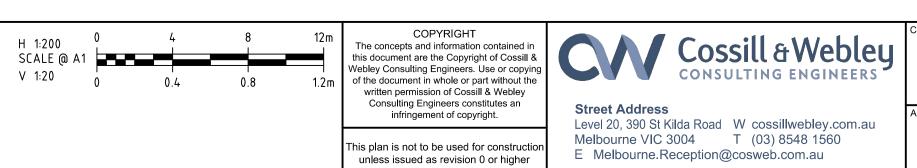


| <u>Alignmen</u> | <u>† L</u> |                |   |
|-----------------|------------|----------------|---|
| Point no        | Easting    | Northing       | RL  |
| C 1             | 372107.963 | 5785157.643    | 30.42   |
| C 2             | 372105.486 | 5785141.411    | 30.40   |
|                 |            | C 1 372107.963 | Point no Easting Northing C1 372107.963 5785157.643 |

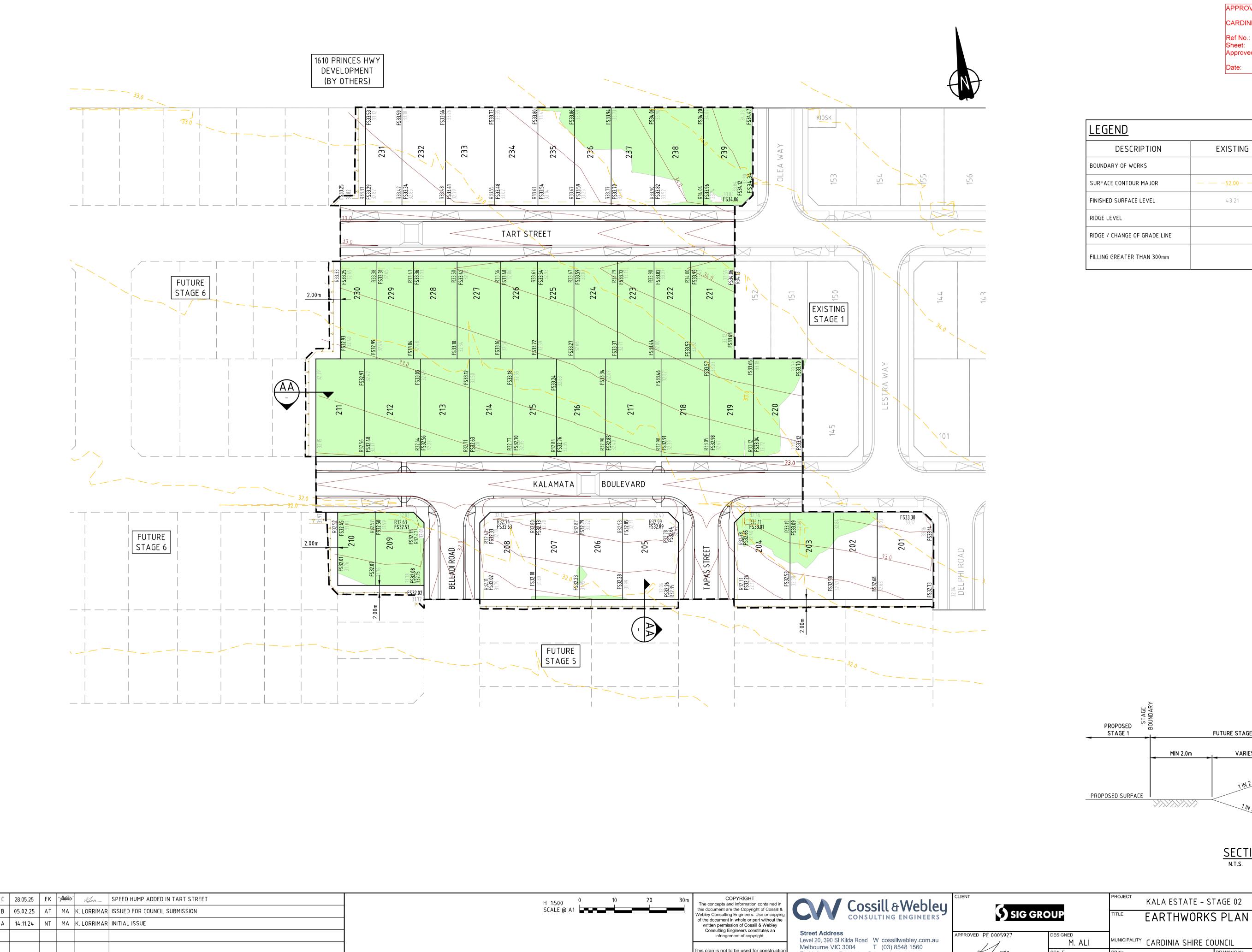
| _204\   | В   | 06.02.25 | АТ  | Marie | Lon         | ISSUED FOR COUNCIL SUBMISSION |
|---------|-----|----------|-----|-------|-------------|-------------------------------|
| 3086-02 | Α   | 14.11.24 | NT  | MA    | K. LORRIMAR | INITIAL ISSUE                 |
| $\leq$  |     |          |     |       |             |                               |
| a\FS0   |     |          |     |       |             |                               |
| √dat    |     |          |     |       |             |                               |
| \12dS`  | REV | DATE     | DRN | CKD   | APP         | AMENDMENT                     |







| CLIENT              |                     | PROJECT      | KALA ESTATE – ST  | ΓAGE 02     |             |            | T_      |
|---------------------|---------------------|--------------|-------------------|-------------|-------------|------------|---------|
| SIG GRO             | OUTLET SWALE SETOUT |              |                   |             | ] <         |            |         |
| APPROVED PE 0005927 | DESIGNED M. ALI     | MUNICIPALITY | CARDINIA SHIRE CO | IINCII      |             |            | RIGINAL |
| Lon                 |                     | PP No.       |                   | DRAWING No. | 3086-02-101 | REVISION B |         |



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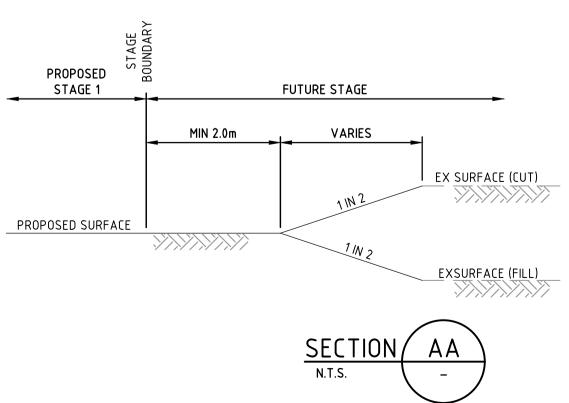
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CARDINIA SHIRE COUNCIL

Ref No.: S25-006, T220227
Sheet: 7 of 22
Approved by: Vithu Vijeyakumar
CARDINIA SHIRE COUNCIL
Date: Monday, 28 July 2025

| LEGEND                       |                                       |               |  |  |  |  |  |
|------------------------------|---------------------------------------|---------------|--|--|--|--|--|
| DESCRIPTION                  | EXISTING                              | PROPOSED      |  |  |  |  |  |
| BOUNDARY OF WORKS            |                                       |               |  |  |  |  |  |
| SURFACE CONTOUR MAJOR        | — — — — — — — — — — — — — — — — — — — | — — — — — — — |  |  |  |  |  |
| FINISHED SURFACE LEVEL       | 43.21                                 | FS44.33       |  |  |  |  |  |
| RIDGE LEVEL                  |                                       | R43.55        |  |  |  |  |  |
| RIDGE / CHANGE OF GRADE LINE |                                       |               |  |  |  |  |  |
| FILLING GREATER THAN 300mm   |                                       |               |  |  |  |  |  |



3086-02-150

MUNICIPALITY CARDINIA SHIRE COUNCIL

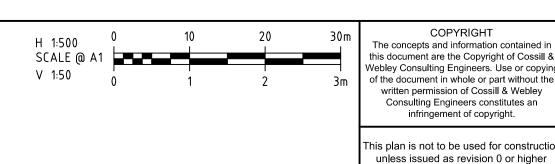
T220227

M. ALI

SCALE

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M. ALI

H 1:500 V 1:50

KALA ESTATE - STAGE 02 ROAD LONGITUDINAL SECTIONS (SHEET 1 OF 3) MUNICIPALITY CARDINIA SHIRE COUNCIL REVISION 3086-02-200 T220227

APPROVED FOR CONSTRUCTION

LINETYPE

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CARDINIA SHIRE COUNCIL

LEGEND

EXISTING SURFACE

FUTURE DESIGN LINE

RIGHT LIP OF KERB

LEFT LIP OF KERB

DESIGN LINE

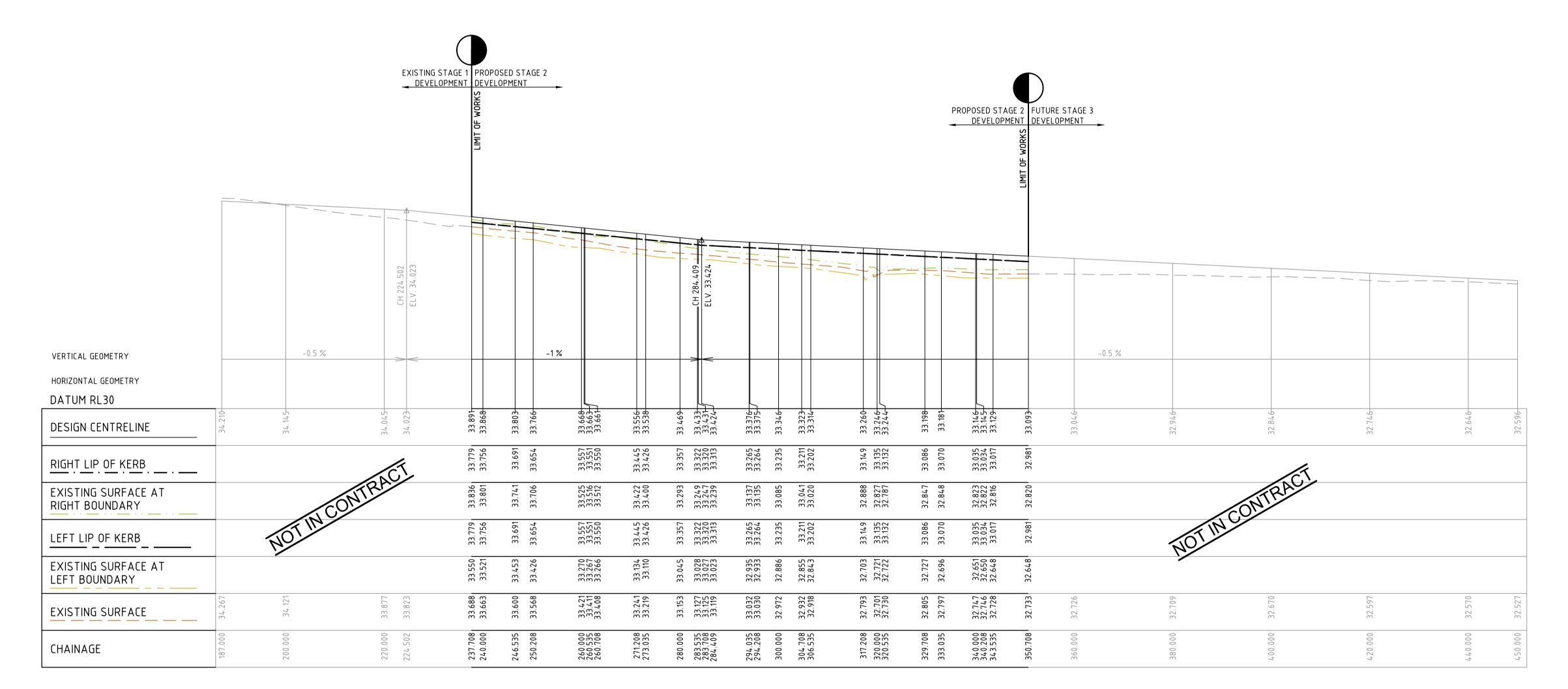
DESCRIPTION

EXISTING SURFACE AT RIGHT BOUNDARY

EXISTING SURFACE AT LEFT BOUNDARY

Ref No.: S25-006, T220227 Sheet: 8 of 22 Approved by: Vithu Vijeyakumar
CARDINIA SHIRE COUNCIL

Monday, 28 July 2025

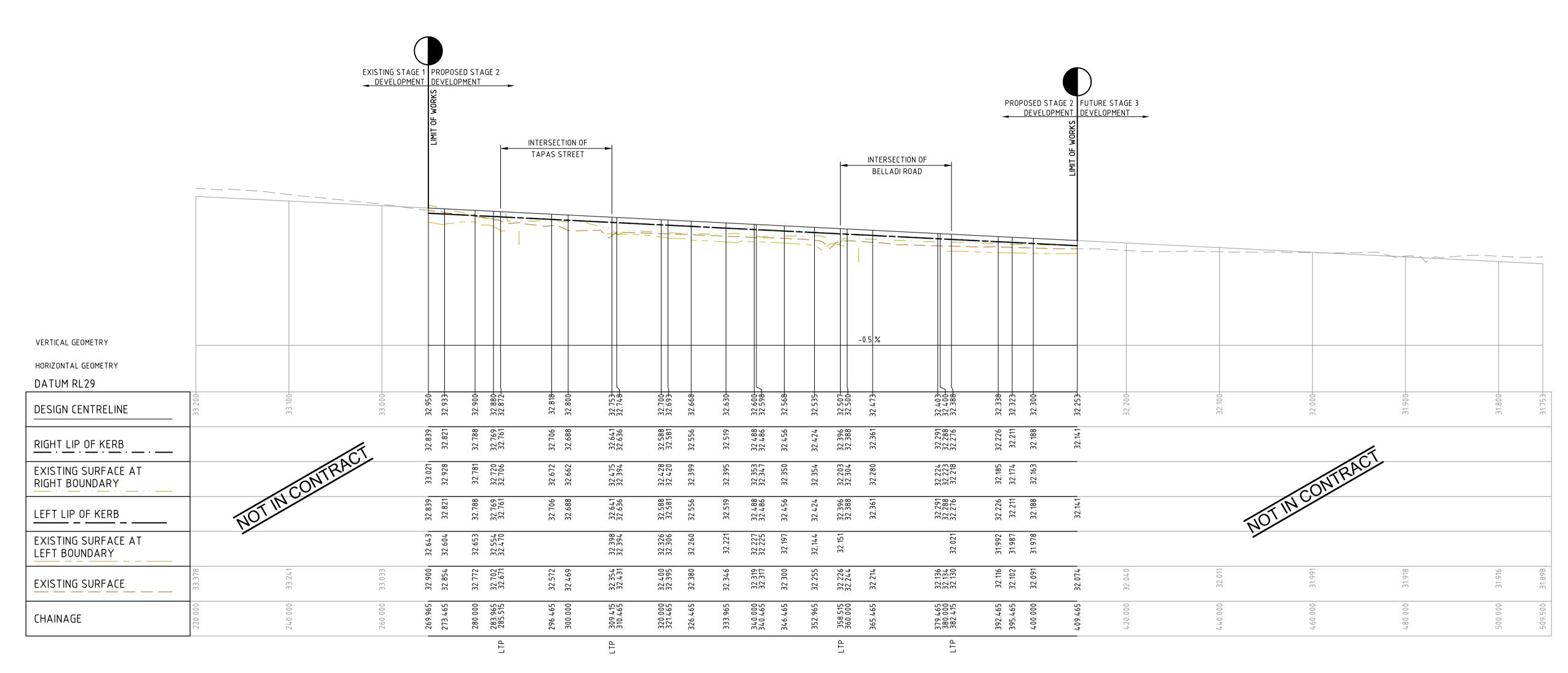


# TART STREET LONGITUDINAL SECTION

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CONSULTING ENGINEERS SIG GROUP SCALE @ A1 A | 14.11.24 | NT | MA | K. LORRIMAR INITIAL ISSUE ROAD LONGITUDINAL SECTIONS V 1:50 written permission of Cossill & Webley (SHEET 2 OF 3)

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KALAMATA BOULEVARD LONGITUDINAL SECTION



CARDINIA SHIRE COUNCIL Ref No.: S25-006, T220227 Sheet: 9 of 22

LINETYPE

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Approved by: Vithu Vijeyakumar
CARDINIA SHIRE COUNCIL Monday, 28 July 2025

APPROVED FOR CONSTRUCTION

LEGEND

EXISTING SURFACE

FUTURE DESIGN LINE

RIGHT LIP OF KERB

LEFT LIP OF KERB

DESIGN LINE

DESCRIPTION

EXISTING SURFACE AT RIGHT BOUNDARY

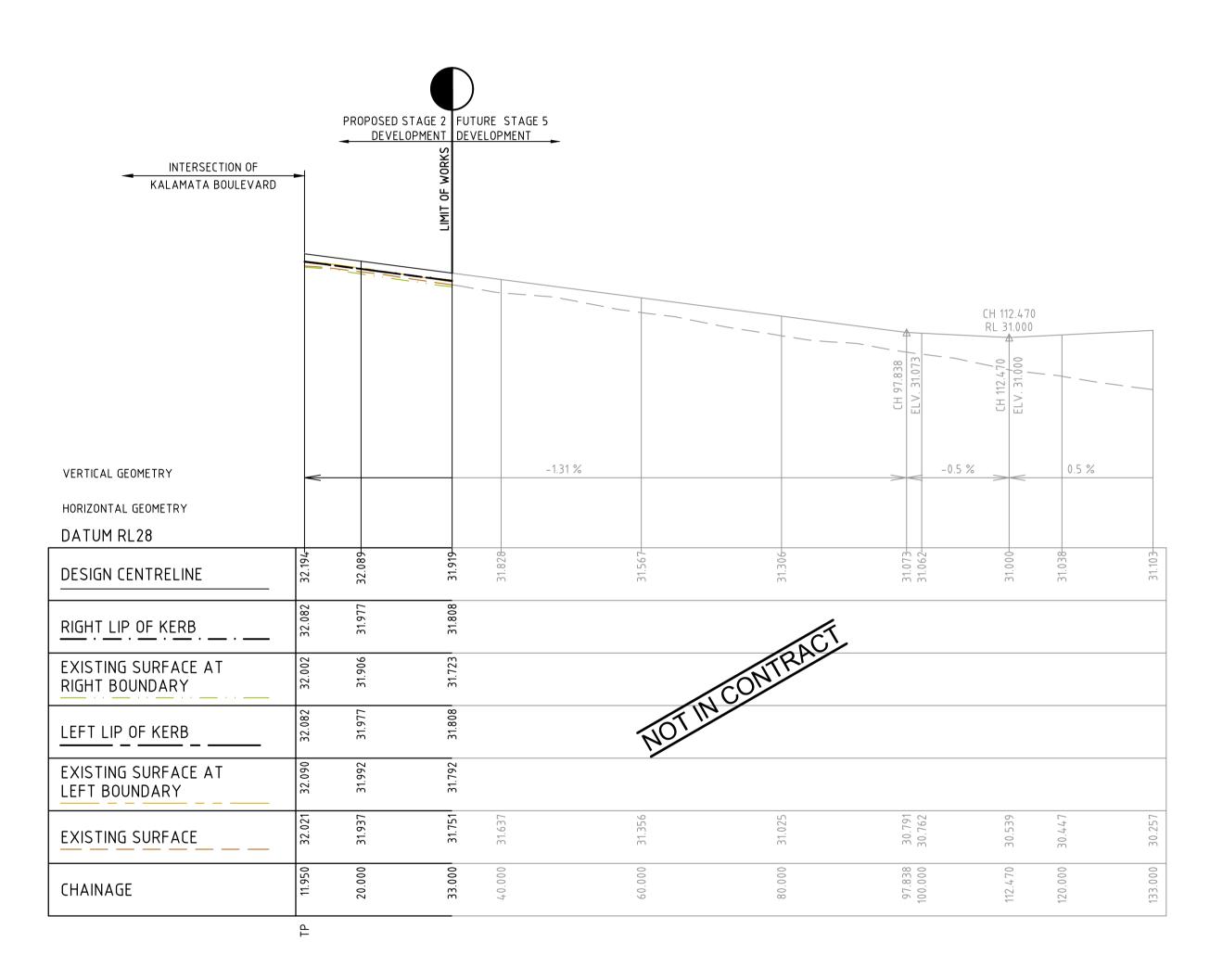
EXISTING SURFACE AT LEFT BOUNDARY

| <u>LEGEND</u>                      |          |
|------------------------------------|----------|
| DESCRIPTION                        | LINETYPE |
| EXISTING SURFACE                   |          |
| DESIGN LINE                        |          |
| FUTURE DESIGN LINE                 |          |
| EXISTING SURFACE AT RIGHT BOUNDARY |          |
| RIGHT LIP OF KERB                  |          |
| EXISTING SURFACE AT LEFT BOUNDARY  |          |
| LEFT LIP OF KERB                   |          |

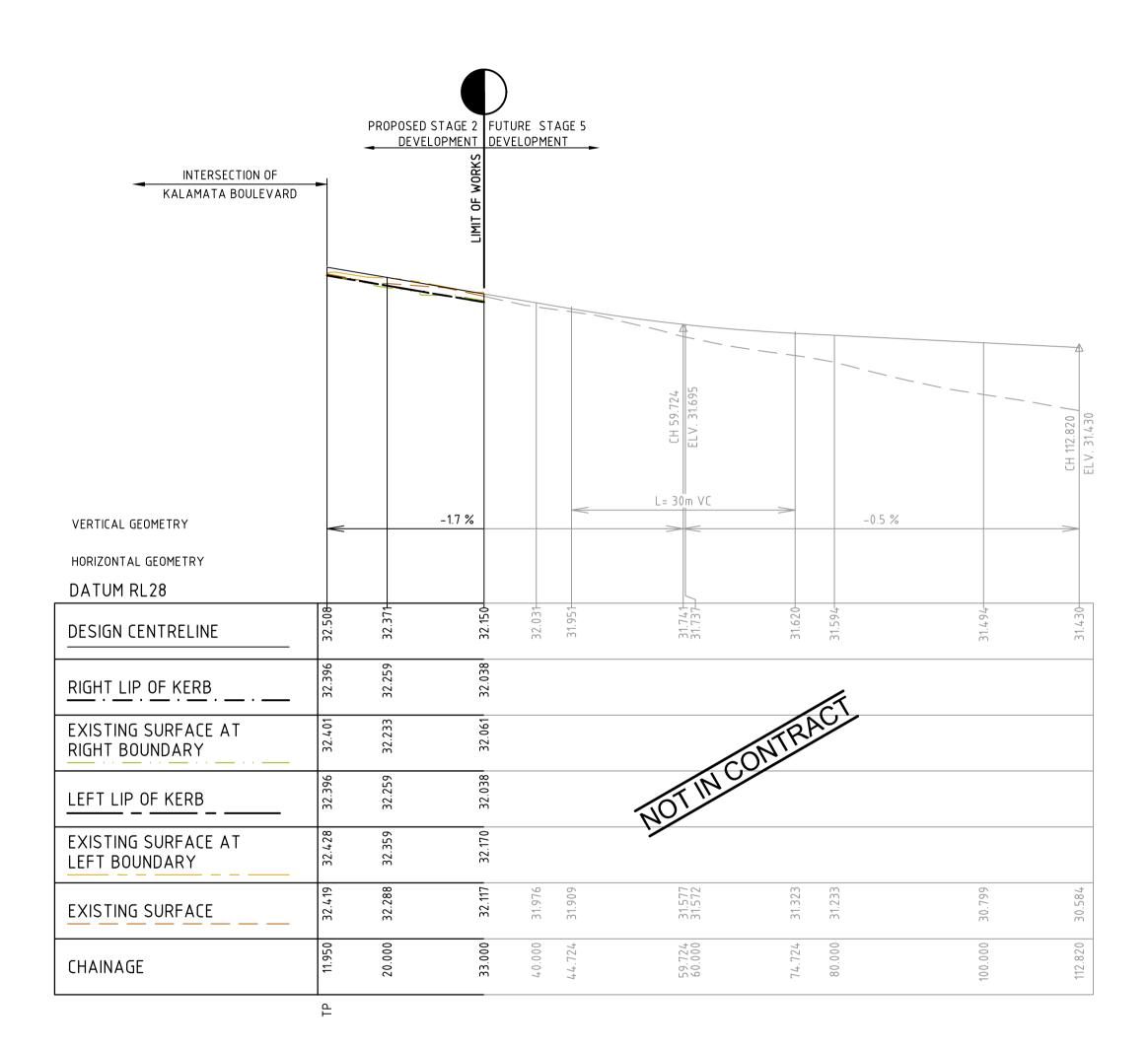
CARDINIA SHIRE COUNCIL

Ref No.: S25-006, T220227 10 of 22

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CARDINIA SHIRE COUNCIL Monday, 28 July 2025

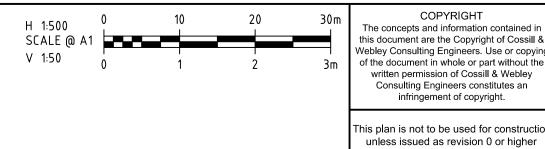


BELLADI ROAD LONGITUDINAL SECTION



TAPAS STREET LONGITUDINAL SECTION

| De      |                         |          |     |        |             |                               |
|---------|-------------------------|----------|-----|--------|-------------|-------------------------------|
| _204\   | B 06.02.25 AT Alan. Hon |          |     | Massic | Lon         | ISSUED FOR COUNCIL SUBMISSION |
| 6-02    | Α                       | 14.11.24 | NT  | MA     | K. LORRIMAR | INITIAL ISSUE                 |
| 03/3086 |                         |          |     |        |             |                               |
| a\FS0   |                         |          |     |        |             |                               |
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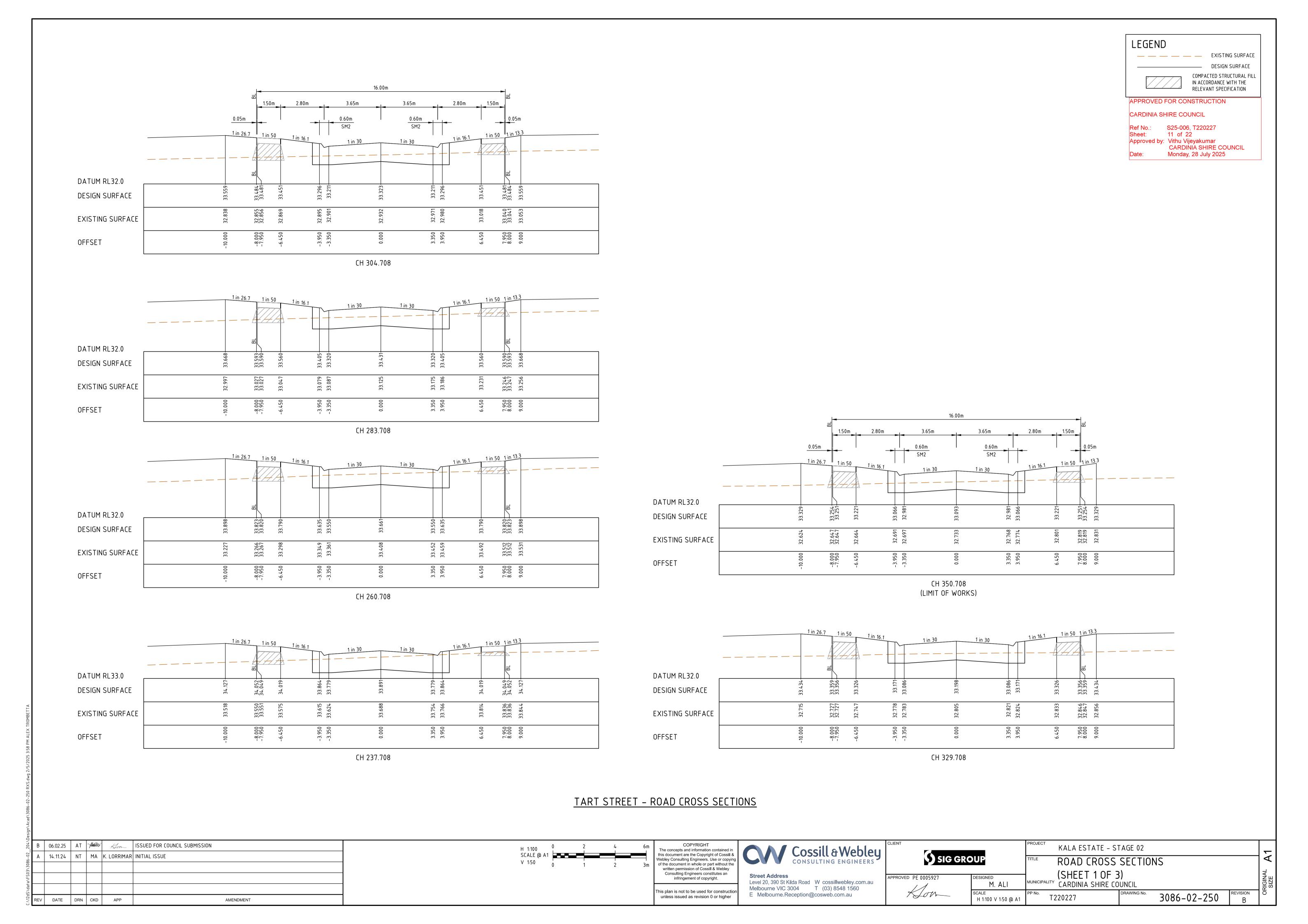


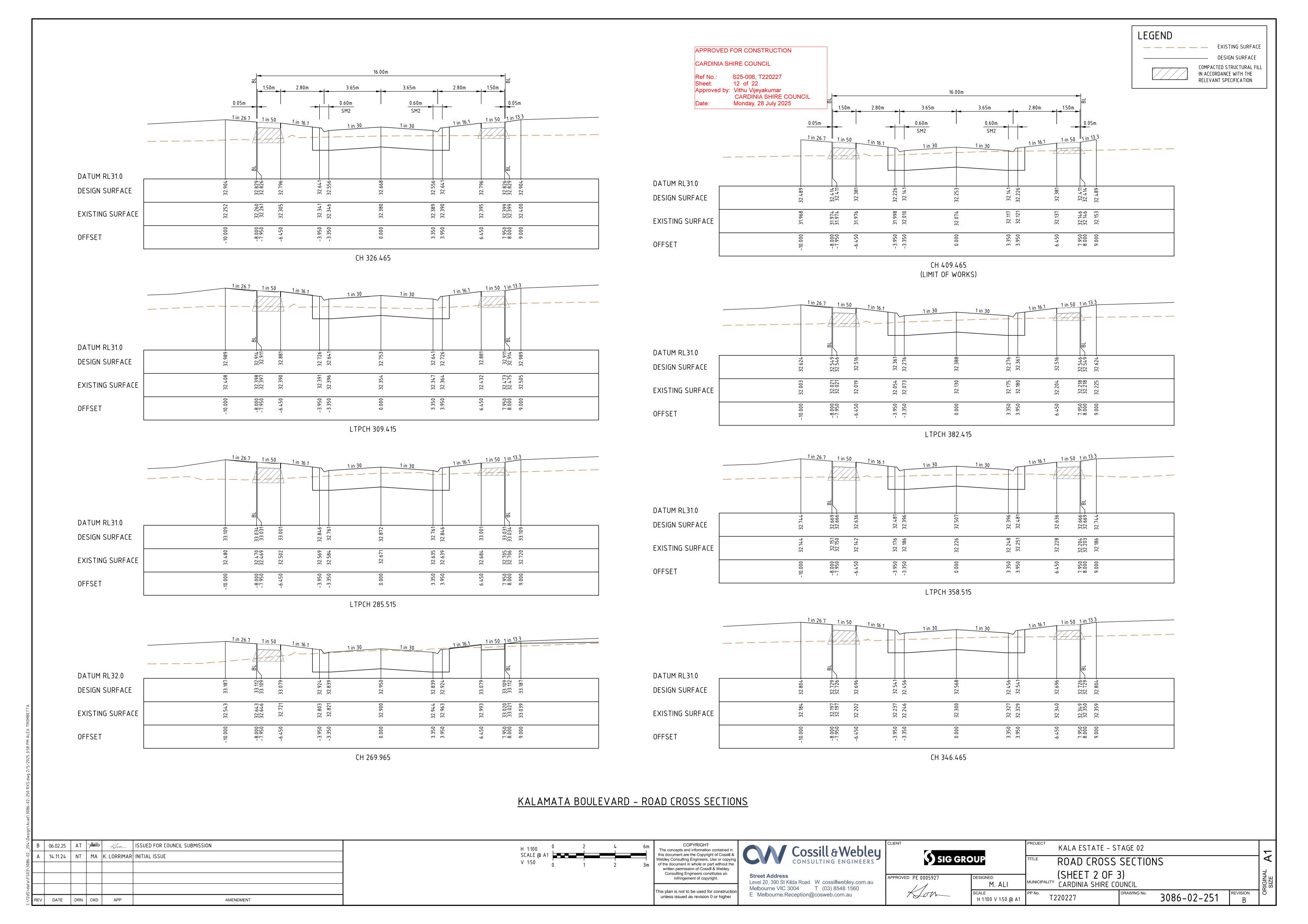
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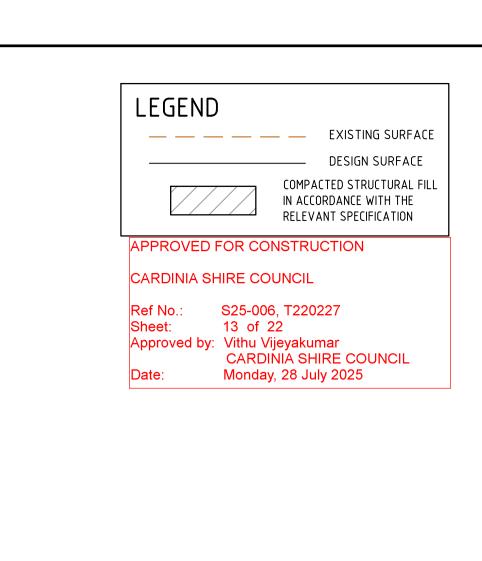
| CLIENT     |            |          |
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|            | SIG GRO    | UP       |
| APPROVED F | PE 0005927 | DESIGNED |
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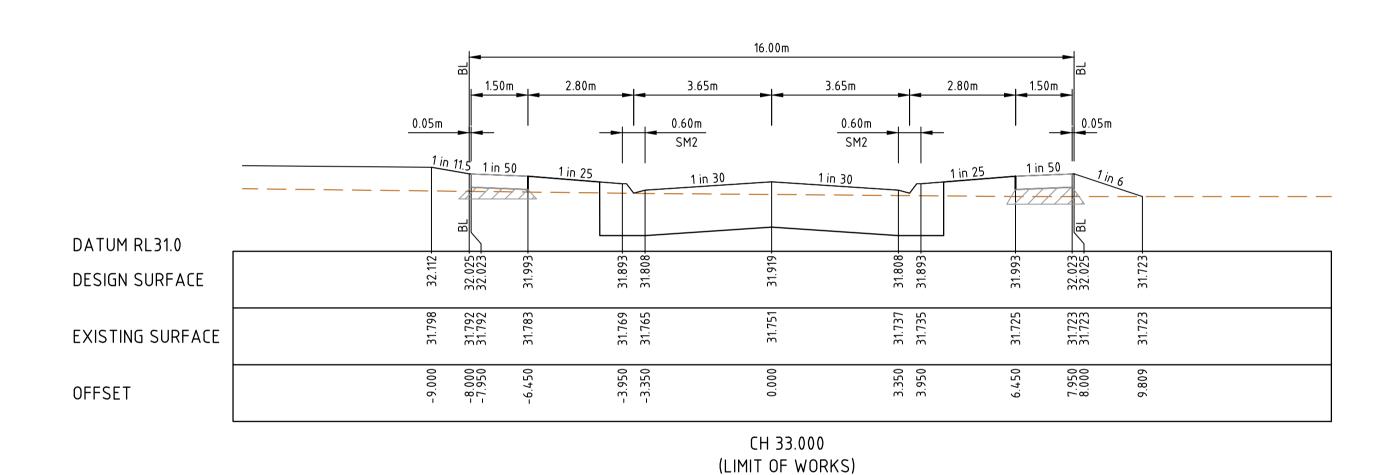
KALA ESTATE - STAGE 02 ROAD LONGITUDINAL SECTIONS (SHEET 3 OF 3)

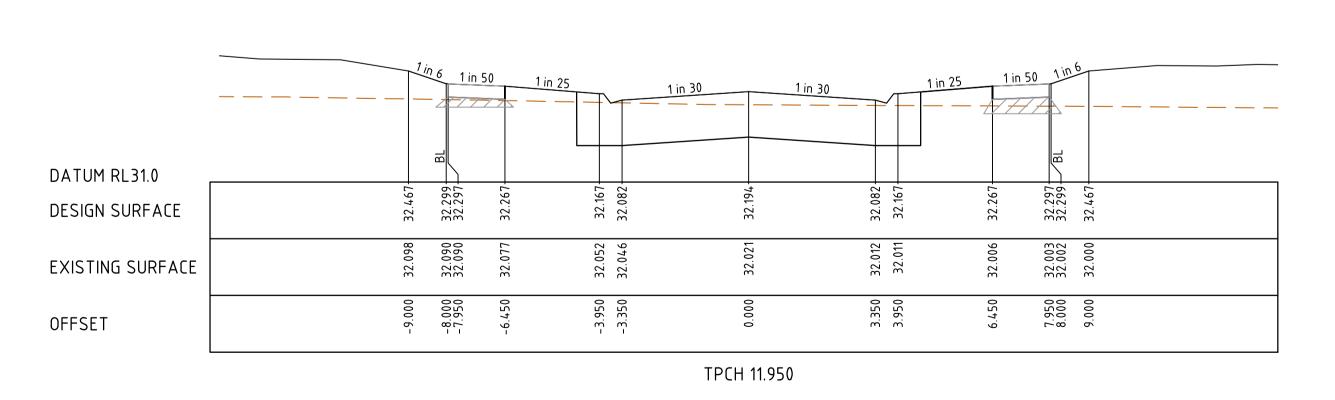
CARDINIA SHIRE COUNCIL REVISION B 3086-02-202 T220227



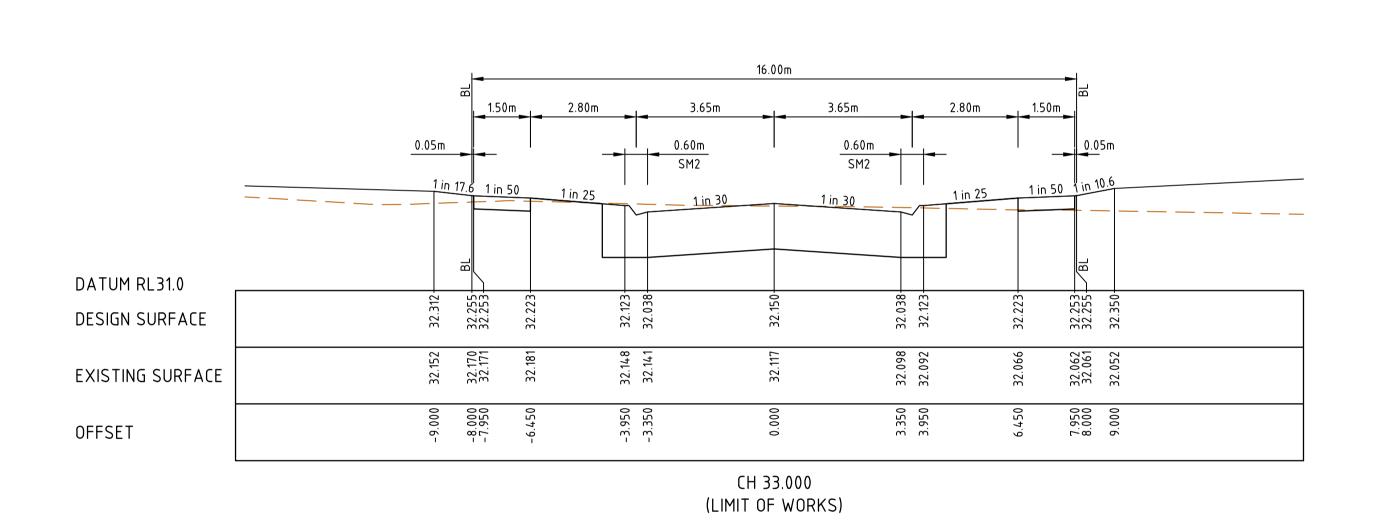


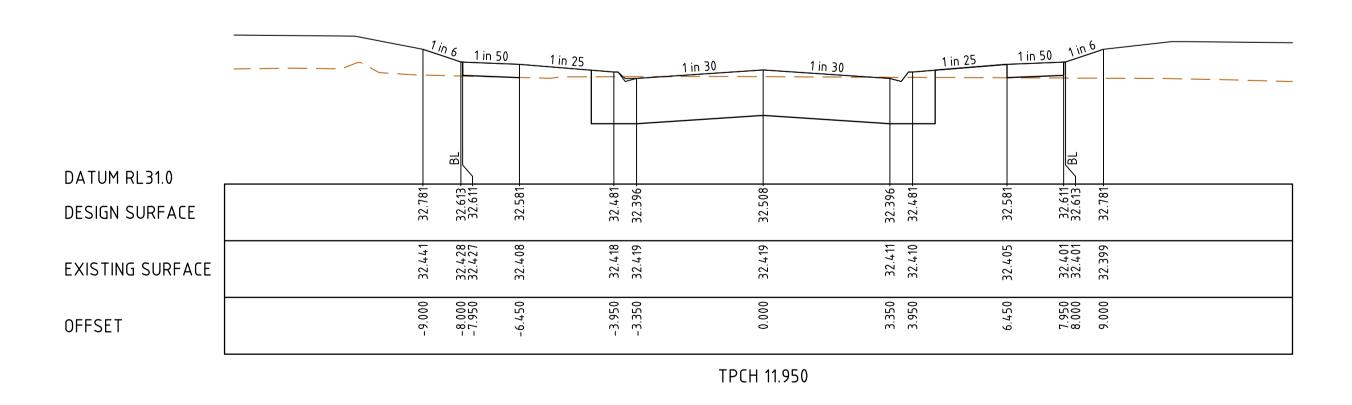






BELLADI ROAD - ROAD CROSS SECTIONS





# TAPAS STREET- ROAD CROSS SECTIONS

| Des      |     |          |     |        |             |                               |  |
|----------|-----|----------|-----|--------|-------------|-------------------------------|--|
| _204\    | В   | 06.02.25 | ΑТ  | Master | Lon         | ISSUED FOR COUNCIL SUBMISSION |  |
| 6-02     | Α   | 14.11.24 | NT  | MA     | K. LORRIMAR | INITIAL ISSUE                 |  |
| 03\3086  |     |          |     |        |             |                               |  |
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| S\dat    |     |          |     |        |             |                               |  |
| C:\12dS` | REV | DATE     | DRN | CKD    | APP         | AMENDMENT                     |  |

| H 1:100<br>SCALE @ A1<br>V 1:50 | 0 | 2 | 2 | 6m<br>3m | Th<br>this<br>Web<br>of t |
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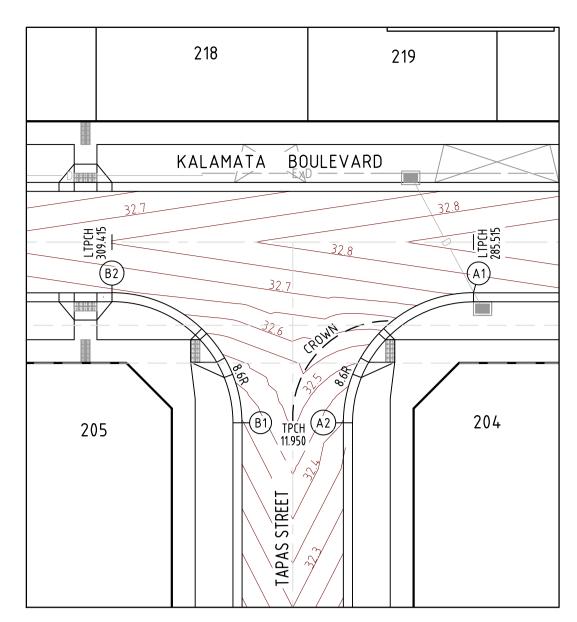
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| ion                 | Melbourne VIC 3004 T (03) 8548 1560                               |

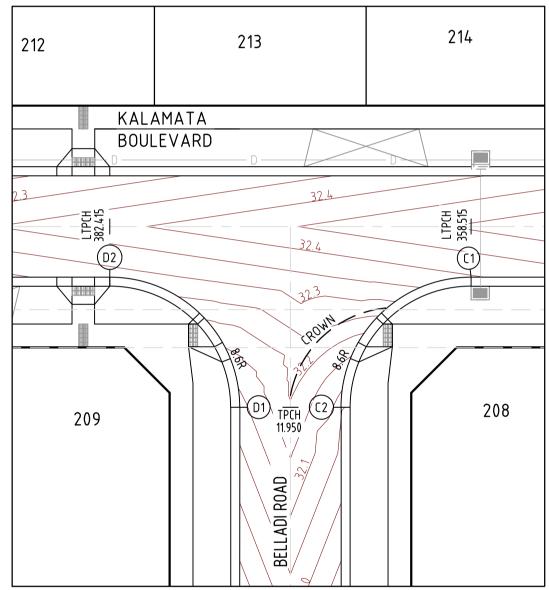
| SIG GRO             | DUP                          |
|---------------------|------------------------------|
| APPROVED PE 0005927 | DESIGNED M. ALI              |
| KLov                | SCALE<br>H 1:100 V 1:50 @ A1 |

KALA ESTATE - STAGE 02 ROAD CROSS SECTIONS (SHEET 3 OF 3)

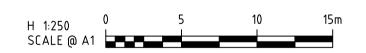
CARDINIA SHIRE COUNCIL 3086-02-252 T220227



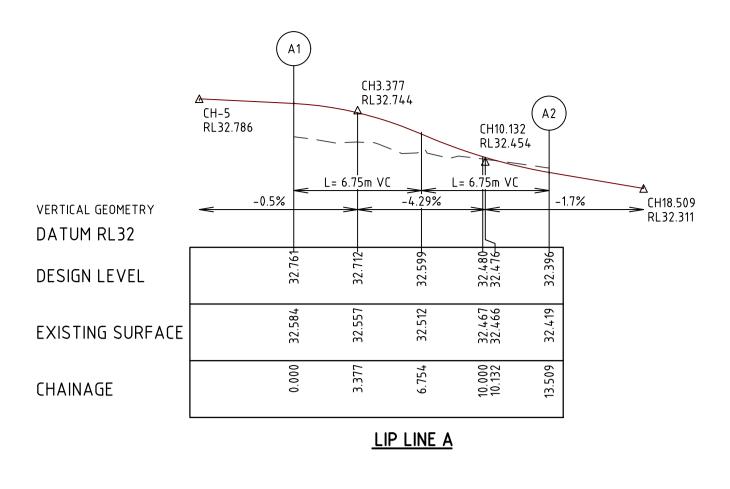
# INTERSECTION OF KALAMATA BOULEVARD & TAPAS STREET

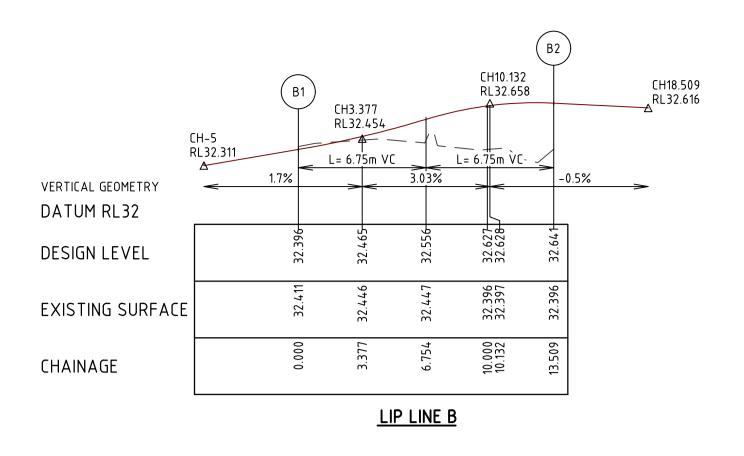


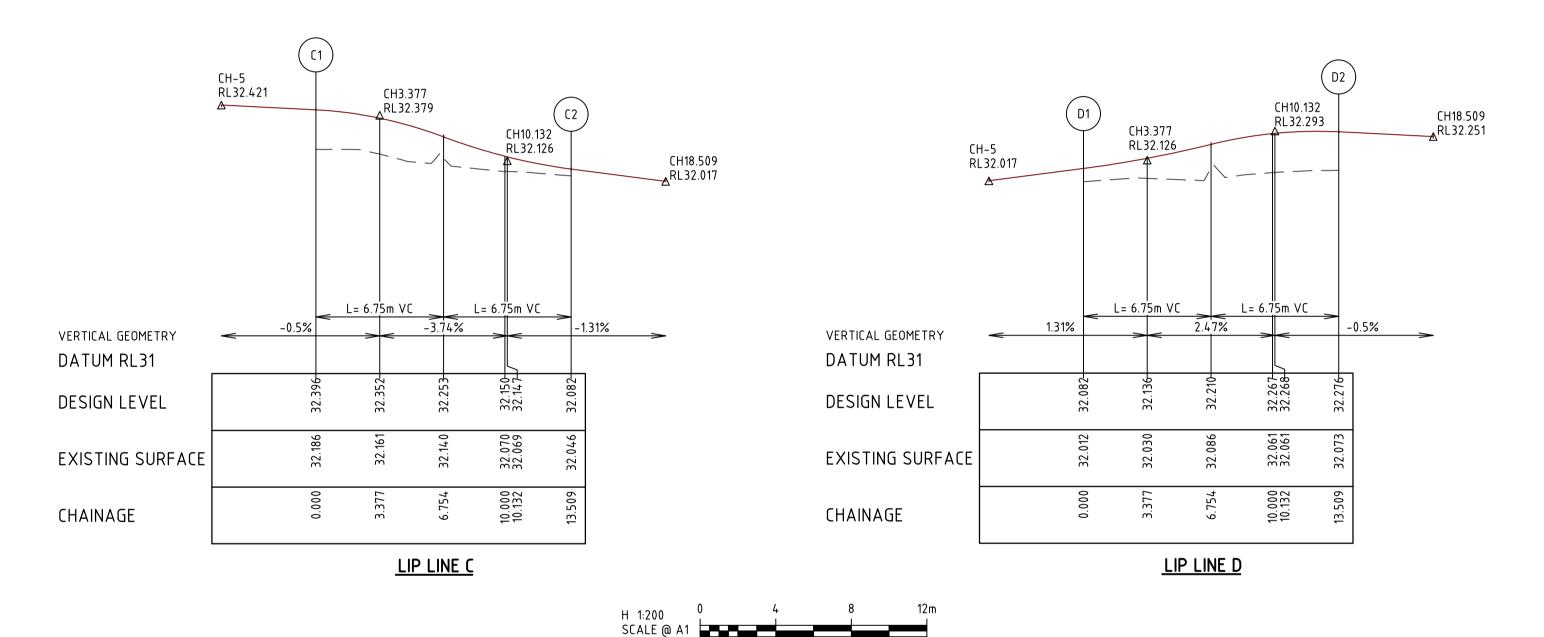
INTERSECTION OF KALAMATA BOULEVARD & BELLADI ROAD











# <u>ALIGNMENT A</u>

 Point no
 Easting
 Northing
 RL

 A1
 372120.240
 5785188.053
 32.761

 A2
 372110.442
 5785180.848
 32.396

 Curve no
 I
 Radius
 Arc
 A
 B
 X
 Y
 I
 Mid point RL

 A1 - A2
 90.000
 8.600
 13.509
 2.519
 1.864
 3.291
 2.790
 3.377
 32.599

# <u>ALIGNMENT B</u>

 Point no
 Easting
 Northing
 RL

 B1
 372103.818
 5785181.859
 32.396

 B2
 372096.614
 5785191.658
 32.641

Curve no I Radius Arc A B X Y l Mid point RL B1 - B2 90.000 8.600 13.509 2.519 1.864 3.291 2.790 3.377 32.556

# <u>ALIGNMENT C</u>

 Point no
 Easting
 Northing
 RL

 C1
 372048.076
 5785199.064
 32.396

 C2
 372038.277
 5785191.859
 32.082

Curve no I Radius Arc A B X Y I Mid point RL C1 - C2 90.000 8.600 13.509 2.519 1.864 3.291 2.790 3.377 32.253

# <u>ALIGNMENT D</u>

 Point no
 Easting
 Northing
 RL

 D1
 372031.653
 5785192.870
 32.082

 D2
 372024.449
 5785202.669
 32.276

Curve no I Radius Arc A B X Y I Mid point RL D1 - D2 90.000 8.600 13.509 2.519 1.864 3.291 2.790 3.377 32.210

B 06.02.25 AT How ISSUED FOR COUNCIL SUBMISSION

A 14.11.24 NT MA K. LORRIMAR INITIAL ISSUE

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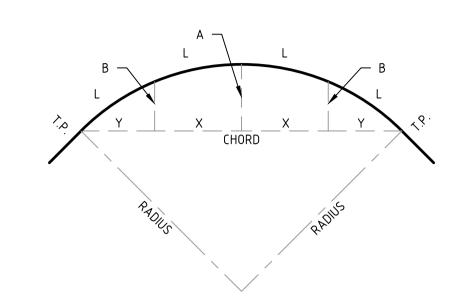
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| SIG GRO            | UP       |
|--------------------|----------|
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| 11                 | M. ALI   |
| KLov               | SCALE    |

AS SHOWN

| PROJECT      | KALA ESTATE - S   | TAGE 02     |             |               | 1       |
|--------------|-------------------|-------------|-------------|---------------|---------|
| TITLE        | INTERSECTION      | N DETAIL    | .S          |               | <       |
| MUNICIPALITY | CARDINIA SHIRE CO | UNCIL       |             |               | RIGINAL |
| PP No.       | 220227            | DRAWING No. | 3086-02-300 | REVISION<br>R | Ö       |



# SETOUT DETAIL

N.T.S.
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Ref No.: S25-006, T220227
Sheet: 14 of 22
Approved by: Vithu Vijeyakumar
CARDINIA SHIRE COUNCIL

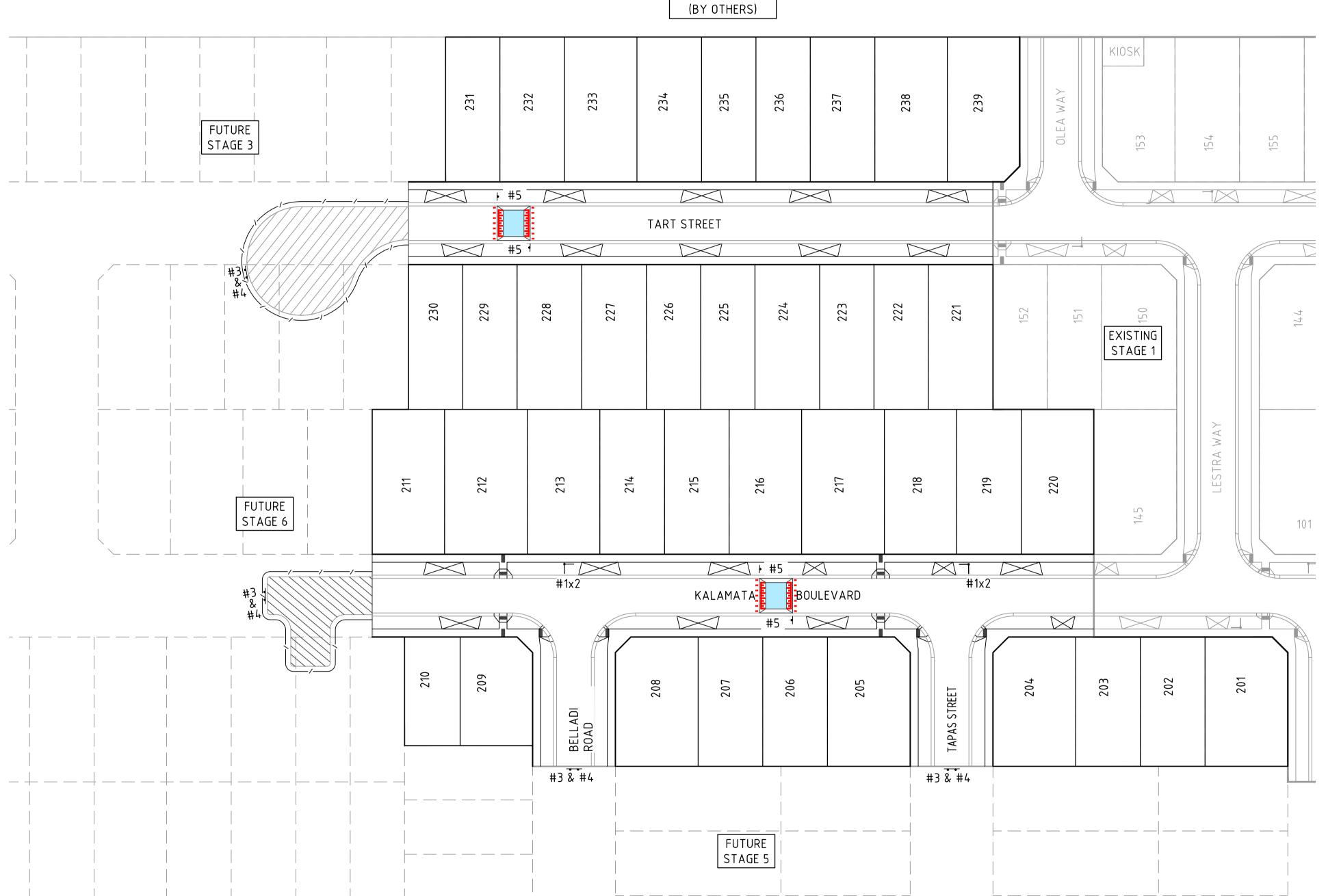
Monday, 28 July 2025

CARDINIA SHIRE COUNCIL

Ref No.: S25-006, T220227
Sheet: 15 of 22
Approved by: Vithu Vijeyakumar
CARDINIA SHIRE COUNCIL
Date: Monday, 28 July 2025



1610 PRINCES HWY
DEVELOPMENT



| SIGNAGE S | CHEDULE          |                |
|-----------|------------------|----------------|
| NO.       | SIGN CODE        | SIGN           |
| #1        | STREET NAME      | STREET NAME    |
| #3        | D4-5             | ROAD<br>CLOSED |
| #4        | G9-20            |                |
| #5        | W5 -10<br>W8 - 2 | 20<br>km/h     |

## NOTES

- 1. RRPM'S IN INSTALLED IN ACCORDANCE WITH AS1742.2 CLAUSE 5.6.
- 2. LINEMARKING TO BE EXTENDED AT LEAST 6m FROM THE TANGENT POINT
- 3. LINEMARKING IN ACCORDANCE WITH AS1742.
- 4. TGSI TO BE INSTALLED IN ACCORDANCE WITH AS1428.4:2002 & MPA STANDARD DWG EDCM 403.
- 5. ALL STREET NAME SIGNS AT INTERSECTIONS TO INCLUDE RELEVENT STREET NUMBERING.
- 6. ALL LINE MARKING PAINT SHALL BE LONG LIFE TYPE. LATERAL WORKS AND ARROWS BEING COLD APPLIED PLASTIC TROWELLED INTO PLACE (MATERIAL DEGADUR PLASTELINE) AND LONGITUDINAL LINES BEING EXTRUDED THERMOPLASTIC MATERIAL.

| <sub>+07</sub> |          |     |        |             |   |   |
|----------------|----------|-----|--------|-------------|---|---|
| Zn-000         | 17.07.25 | DN  | Macine | Lon         | UPDATED RPM AND SIGNS   |   |
| D              | 30.05.25 | EK  | MA     | K. LORRIMAR | SPEED BUMP ADDED IN TART STREET AND TEMPORARY TURN AREA ON KALAMATA BOULEVARD UPDATED |   |
| C              | 05.05.25 | MA  | MA     | K. LORRIMAR | NOTE 4 AMENDED  |   |
| В              | 05.02.25 | АТ  | MA     | K. LORRIMAR | ISSUED FOR COUNCIL SUBMISSION   |   |
| A              | 14.11.24 | NT  | MA     | K. LORRIMAR | INITIAL ISSUE   |   |
| RE\            | / DATE   | DRN | CKD    | APP         | AMENDMENT   | ] |



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| ENT    | SIG GRO    | OUP      |     |
|--------|------------|----------|-----|
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|        |            | L 14     | A 1 |

|      | KALA ESTATE - S1               | AGE 02      |             |               |
|------|--------------------------------|-------------|-------------|---------------|
|      | SIGNAGE AND                    | LINEMA      | RKING PLAN  |               |
| 4LI  | MUNICIPALITY CARDINIA SHIRE CO | UNCIL       |             |               |
| @ A1 | T220227                        | DRAWING No. | 3086-02-350 | REVISION<br>E |



NOTES:
ALL STORMWATER DRAINS UP TO AND INCLUDING 750mm DIA. ARE TO BE CLASS 2 R.R.J. PIPES UNLESS NOTED OTHERWISE.

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Ref No.: S25-006, T220227 Sheet: 16 of 22

Approved by: Vithu Vijeyakumar
CARDINIA SHIRE COUNCIL
Date: Monday, 28 July 2025

|  |   | 2   | 3 (EX   | (.1) (3) (4)  | 5 6   | 7  | (EX.16) 7 8 (EX.17) 9   |
|--|---|---|---|---|---|--|---|
|  |   |   |   | TART<br>STREET  |   |  | KALAMATA KALAMATA BOULEVARD BOULEVARD   |
|  |   |   |   |   |   |  |   |
| PIPE FLOW (m3/s) PIPE CAPACITY (m3/s) PIPE VELOCITY (m/s) PIPE DIAMETER (mm) PIPE CLASS PIPE GRADE DATUM RL  DEPTH TO INVERT | 0.210<br>0.321<br>1.48<br>525¢<br>2<br> | 0.206<br>0.212<br>1.34<br>450ø<br>2<br>1 in 180 | 0.157<br>0.202<br>1.27<br>450¢<br>2<br>1 in 200 | 0.009<br>0.071<br>1 1 3000<br>2 1 in 187 25.0<br>1851               | $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$    | 0.303<br>0.355<br>-1.25<br>-600¢<br>2<br>-1 in 300 | $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$  |
| DESIGN INVERT LEVEL  HYDRAULIC GRADE LEVEL   | 31.078 31.078 31.078                    | 31.261  | 32.092 31.640<br>32.185 31.690<br>32.250 31.797 | 32.349<br>32.092 31.640<br>32.185 31.779<br>32.186 31.825<br>32.194 | 30.900 30.398<br>30.398<br>31.022 30.422<br>31.064 30.452 | 31.356 30.756                                      | 31.685<br>31.685<br>31.422 30.806<br>31.423 30.930<br>31.425<br>31.700 31.164<br>31.700 31.296<br>31.701                |
| EXISTING SURFACE LEVEL   | 32.741 32.968                           | 027.70  | 33.141 33.397                                   | 33.141 33.397   | 32.060 32.129<br>32.072 32.156                            | 32.188   | 4     32.559     32.775       32.188     32.502       32.168     32.512       32.601     32.834       32.563     32.877 |
| PIPE CHAINAGE<br>(Reach Length)  | (23.950)                                | (68.423)  | (21.400)  | 000 059<br>(8.650)&   | 00.00 (76.122)  | <u>\$7.5.4.429)</u>                                | 700.98<br>00.0<br>00.0<br>00.0<br>00.0<br>00.0<br>00.0<br>00.0  |

| 204         | С   | 06.05.25 | MA  | Alasine. | Lon         | DRAINAGE LONG SECTIONS UPDATED |
|-------------|-----|----------|-----|----------|-------------|--------------------------------|
| 6-02        | В   | 05.02.25 | ΑТ  | MA       | K. LORRIMAR | ISSUED FOR COUNCIL SUBMISSION  |
| a\FS03\3086 | Α   | 14.11.24 | NT  | MA       | K. LORRIMAR | INITIAL ISSUE                  |
|             |     |          |     |          |             |                                |
| :\12dS\dat  |     |          |     |          |             |                                |
| :\12d       | REV | DATE     | DRN | CKD      | APP         | AMENDMENT                      |

| H 1:500              | 0 1 | 0 2 | 0 30m |    |
|----------------------|-----|-----|-------|----|
| SCALE @ A1<br>V 1:50 | 0   | 1 2 | 2 3m  | ١  |
|                      |     |     |       | İ, |

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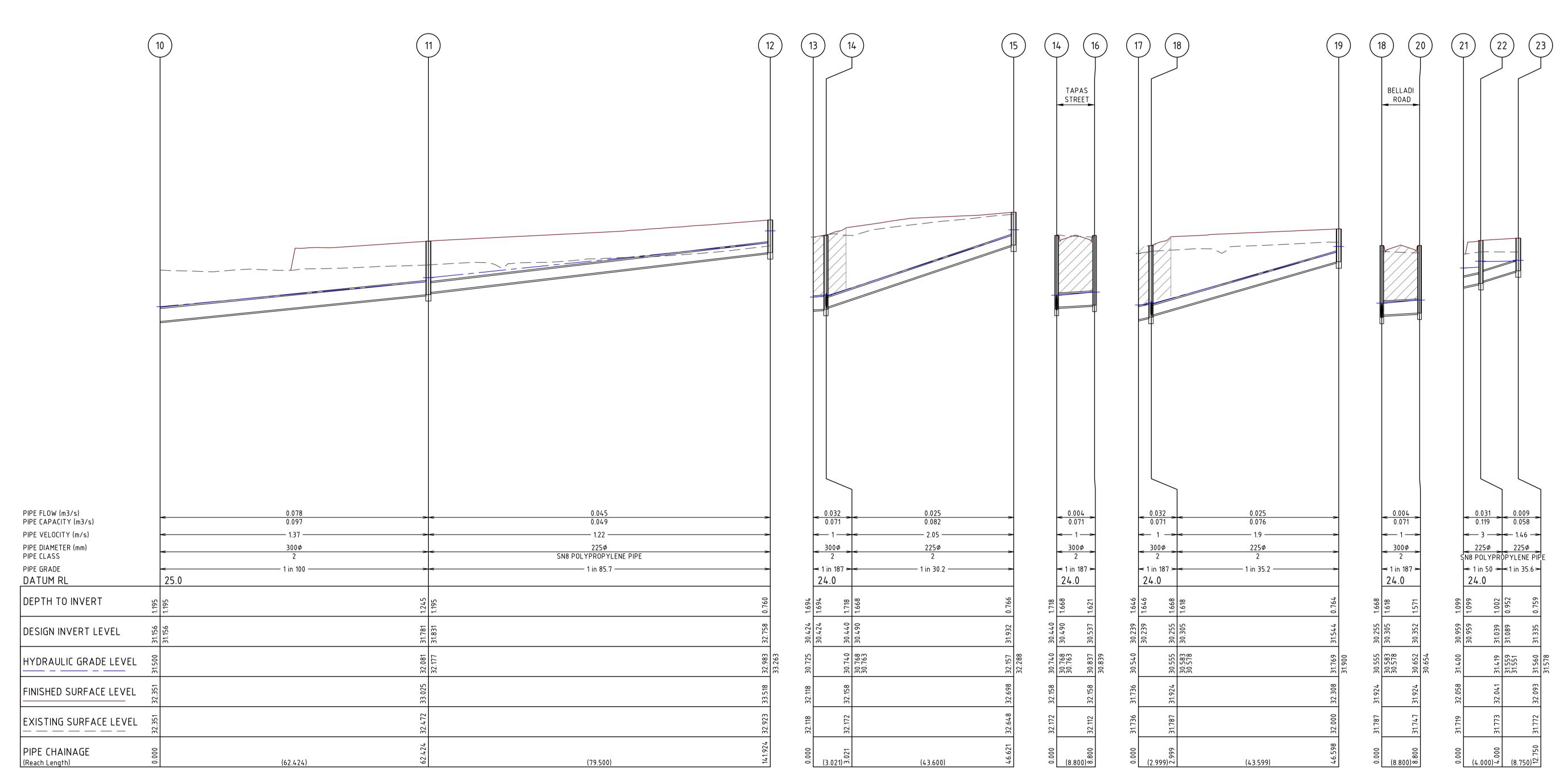
| in<br>II &<br>ying<br>the | CONSULTING ENGINEERS                               |
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|                           | Melbourne VIC 3004 T (03) 8548 1560                |

E Melbourne.Reception@cosweb.com.au

| CLIENT              |                         | PROJECT      | KALA ESTATE - ST                | TAGE 02     |              |            |
|---------------------|-------------------------|--------------|---------------------------------|-------------|--------------|------------|
| SIG GRO             | UP                      | TITLE        | DRAINAGE LO                     | NGITUDI     | NAL SECTIONS |            |
| APPROVED PE 0005927 | DESIGNED M. ALI         | MUNICIPALITY | (SHEET 1 OF 2 CARDINIA SHIRE CO | •           |              |            |
| KLow                | SCALE<br>H 1:500 V 1:50 | PP No.       | 220227                          | DRAWING No. | 3086-02-400  | REVISION C |

EXISTING SURFACE LEVEL PIPE CHAINAGE (43.599) o (4.000)<del>√</del> (8.750)<sup>∞</sup> (Reach Length) (62.424) (79.500)(43.600)o (8.800)∞ (2.999)~ (3.021) m COPYRIGHT
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CONSULTING ENGINEERS SIG GROUP SCALE @ A1 A | 21.11.24 | NT | MA | K. LORRIMAR INITIAL ISSUE DRAINAGE LONGITUDINAL SECTIONS V 1:50 written permission of Cossill & Webley (SHEET 2 OF 2)

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DENOTES 20mm CLASS 3

FCR BACKFILL.

NOTES:
ALL STORMWATER DRAINS UP TO AND INCLUDING 750mm DIA. ARE TO BE CLASS 2 R.R.J. PIPES UNLESS NOTED OTHERWISE.

APPROVED FOR CONSTRUCTION

17 of 22

S25-006, T220227

Approved by: Vithu Vijeyakumar
CARDINIA SHIRE COUNCIL
Date: Monday, 28 July 2025

CARDINIA SHIRE COUNCIL

| PIT SCH  | IEDULE                |            |             |                   |                    |           |          |               |           |                  |           |   |
|----------|-----------------------|------------|-------------|-------------------|--------------------|-----------|----------|---------------|-----------|------------------|-----------|---|
| PIT NAME | ТҮРЕ                  | EASTING    | NORTHING    | INTERNAL<br>WIDTH | INTERNAL<br>LENGTH | INLET DIA | INLET IL | OUTLET<br>DIA | OUTLET IL | PIT<br>SETOUT RL | PIT DEPTH | REMARKS   |
| 1        | ENDWALL               | 371986.978 | 5785288.908 |                   |                    | 525       | 31.078   |               |           | 32.968           | 1.891     |   |
| 2        | SIDE ENTRY PIT        | 372010.654 | 5785285.295 | 900               | 900                | 450       | 31.261   | 525           | 31.211    | 33.088           | 1.878     | HAUNCHED PIT (HAUNCHED TOWARDS ROAD)            |
|          |                       |            |             |                   |                    | 300       | 31.323   |               |           |                  |           | PROVIDE STUB (SOUTH WALL) FOR FUTURE CONNECTION |
| 3        | SIDE ENTRY PIT        | 372078.295 | 5785274.974 | 900               | 900                | 450       | 31.690   | 450           | 31.640    | 33.397           | 1.756     | HAUNCHED PIT (HAUNCHED TOWARDS ROAD)            |
|          |                       |            |             |                   |                    | 300       | 31.779   |               |           |                  |           |   |
| Ex.1     | Ex ENDPIPE            | 372099.450 | 5785271.746 |                   |                    |           |          | 450           | 31.797    | 33.591           | 1.793     |   |
| 4        | SIDE ENTRY PIT GRATED | 372077.064 | 5785266.412 | 600               | 900                |           |          | 300           | 31.825    | 33.406           | 1.581     |   |
| 5        | ENDWALL               | 371969.198 | 5785218.788 |                   |                    | 600       | 30.398   |               |           | 32.129           | 1.73      |   |
| 6        | SIDE ENTRY PIT        | 371974.589 | 5785217.970 | 900               | 900                | 600       | 30.452   | 600           | 30.422    | 32.156           | 1.734     | HAUNCHED PIT (HAUNCHED TOWARDS ROAD)            |
|          |                       |            |             |                   |                    | 300       | 30.452   |               |           |                  |           | PROVIDE STUB (SOUTH WALL) FOR FUTURE CONNECTION |
| 7        | SIDE ENTRY PIT        | 372049.840 | 5785206.483 | 900               | 900                | 600       | 30.786   | 600           | 30.756    | 32.502           | 1.746     | HAUNCHED PIT (HAUNCHED TOWARDS ROAD)            |
|          |                       |            |             |                   |                    | 300       | 30.806   |               |           |                  |           |   |
| Ex.16    | Ex ENDPIPE            | 372103.646 | 5785198.273 |                   |                    |           |          | 600           | 30.968    | 32.775           | 1.807     |   |
| 8        | SIDE ENTRY PIT GRATED | 372048.510 | 5785197.935 | 600               | 900                |           |          | 300           | 30.930    | 32.512           | 1.581     |   |
| Ex.17    | Ex ENDPIPE            | 372117.262 | 5785196.043 |                   |                    | 300       | 31.164   |               |           | 32.834           | 1.671     |   |
| 9        | SIDE ENTRY PIT GRATED | 372120.675 | 5785186.924 | 600               | 900                |           |          | 300           | 31.296    | 32.877           | 1.581     |   |
| 10       | END PIPE              | 371970.452 | 5785249.702 |                   |                    | 300       | 31.156   |               |           | 32.654           | 1.498     |   |
| 11       | JUNCTION PIT          | 372032.161 | 5785240.286 | 600               | 900                | 225       | 31.831   | 300           | 31.781    | 33.025           | 1.245     |   |
| 12       | JUNCTION PIT          | 372110.752 | 5785228.294 | 600               | 900                |           |          | 225           | 32.758    | 33.518           | 0.760     |   |
| 13       | ENDWALL               | 372108.026 | 5785157.879 |                   |                    | 300       | 30.424   |               |           | 32.036           | 1.613     |   |
| 14       | SIDE ENTRY PIT GRATED | 372108.455 | 5785160.869 | 600               | 900                | 225       | 30.490   | 300           | 30.440    | 32.158           | 1.718     |   |
|          |                       |            |             |                   |                    | 300       | 30.490   |               |           |                  |           |   |
| 15       | JUNCTION PIT          | 372151.556 | 5785154.291 | 600               | 900                |           |          | 225           | 31.932    | 32.698           | 0.766     |   |
| 16       | SIDE ENTRY PIT GRATED | 372099.756 | 5785162.197 | 600               | 900                |           |          | 300           | 30.537    | 32.158           | 1.621     |   |
| 17       | ENDWALL               | 372035.865 | 5785168.912 |                   |                    | 300       | 30.239   |               |           | 31.928           | 1.689     |   |
| 18       | SIDE ENTRY PIT GRATED | 372036.291 | 5785171.880 | 600               | 900                | 225       | 30.305   | 300           | 30.255    | 31.924           | 1.668     |   |
|          |                       |            |             |                   |                    | 300       | 30.305   |               |           |                  |           |   |
| 19       | JUNCTION PIT          | 372079.392 | 5785165.304 | 600               | 900                |           |          | 225           | 31.544    | 32.308           | 0.764     |   |
| 20       | SIDE ENTRY PIT GRATED | 372027.592 | 5785173.208 | 600               | 900                |           |          | 300           | 30.352    | 31.924           | 1.571     |   |
| 21       | ENDWALL               | 372000.554 | 5785177.333 |                   |                    | 225       | 30.959   |               |           | 32.058           | 1.099     |   |
| 22       | JUNCTION PIT          | 372001.157 | 5785181.288 | 600               | 900                | 225       | 31.089   | 225           | 31.039    | 32.041           | 1.002     |   |
| 23       | JUNCTION PIT          | 372009.807 | 5785179.968 | 600               | 900                |           |          | 225           | 31.335    | 32.093           | 0.759     |   |

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KLov

 $\mathbf{\circ}$  SIG GROUP PPROVED PE 0005927 M. ALI

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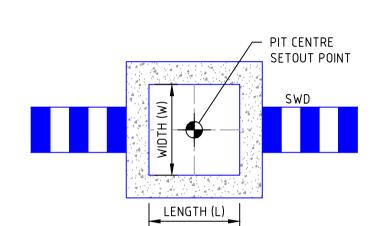
T220227

KALA ESTATE - STAGE 02 DRAINAGE PIT SCHEDULE MUNICIPALITY CARDINIA SHIRE COUNCIL

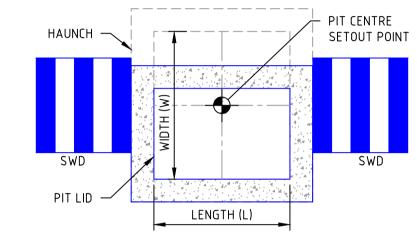
3086-02-420

1. ALL PITS ARE TO BE TO VPA STANDARDS UNLESS NOTED OTHERWISE.

- 2. PITS DEEPER THAN 1.00m SHALL BE FITTED WITH STEPIRONS, FIRST STEPIRON TO BE 300mm FROM THE BOTTOM OF THE PIT.
- 3. COVER LEVELS TO BE SET TO MATCH THE FINISHED SURFACE PROFILES AND ADJACENT CONSTRUCTION. 4. UNLESS OTHERWISE SPECIFIED, PIT TYPES REFER TO VICTORIAN PLANNING AUTHORITY STANDARD DRAWINGS
- FIGURE EDCM 601 SIDE ENTRY PIT GRATED B2 KERB AND CHANNEL
- FIGURE EDCM 602 DOUBLE SIDE ENTRY PIT GRATED B2 KERB AND CHANNEL
- FIGURE EDCM 603 SIDE ENTRY PIT GRATED SM2 KERB AND CHANNEL
- FIGURE EDCM 605 JUNCTION PIT 6. FOR HAUNCHED PITS REFER VPA STANDARD DRAWING FIGURE EDCM 607 & EDCM 608. PITS TO BE HAUNCHED TO COUNCIL STANDARD OPENINGS.
- 7. STUBS AND PIPE ENDS TO BE BLOCKED OFF TO COUNCIL'S SATISFACTION.
- 8. ALL GRATED PITS TO HAVE BICYCLE SAFE LOCKDOWN GRATES.
- 9. ALL GRATED SIDE-ENTRY PITS TO HAVE MIN 100mm THICK CONCRETE APRON BETWEEN GRATE AND ASPHALT. REFER VPA STANDARD DRAWINGS.
- 10. PIT LIDS TO BE IN ACCORDANCE WITH VPA STANDARD DRAWING EDCM 605.
- 11. PITS WITHIN ROAD PAVEMENT, VEHICLE CROSSINGS OR WITHIN 0.75m OF A VEHICLE CROSSING, TO HAVE CLASS D CAST IRON LOCK DOWN LIDS. 12. ALL PITS WITHIN ROAD TO BE CONSTRUCTED WITH 32 MPa CONCRETE WITH SL92 MESH IN WALLS AND BASE.
- 13. CONTRACTOR TO VERIFY EXISTING SERVICES CONNECTION LEVELS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES MUST BE IMMEDIATELY IDENTIFIED
- AND THE SUPERINTENDENT NOTIFIED PRIOR TO CONSTRUCTION COMMENCING. 14. REFER TO RELEVANT AUTHORITY STANDARDS FOR PIT INTERFACE WITH KERB & CHANNEL.



TYPICAL DRAINAGE PIT SETOUT DETAIL



APPROVED FOR CONSTRUCTION

Approved by: Vithu Vijeyakumar
CARDINIA SHIRE COUNCIL

Monday, 28 July 2025

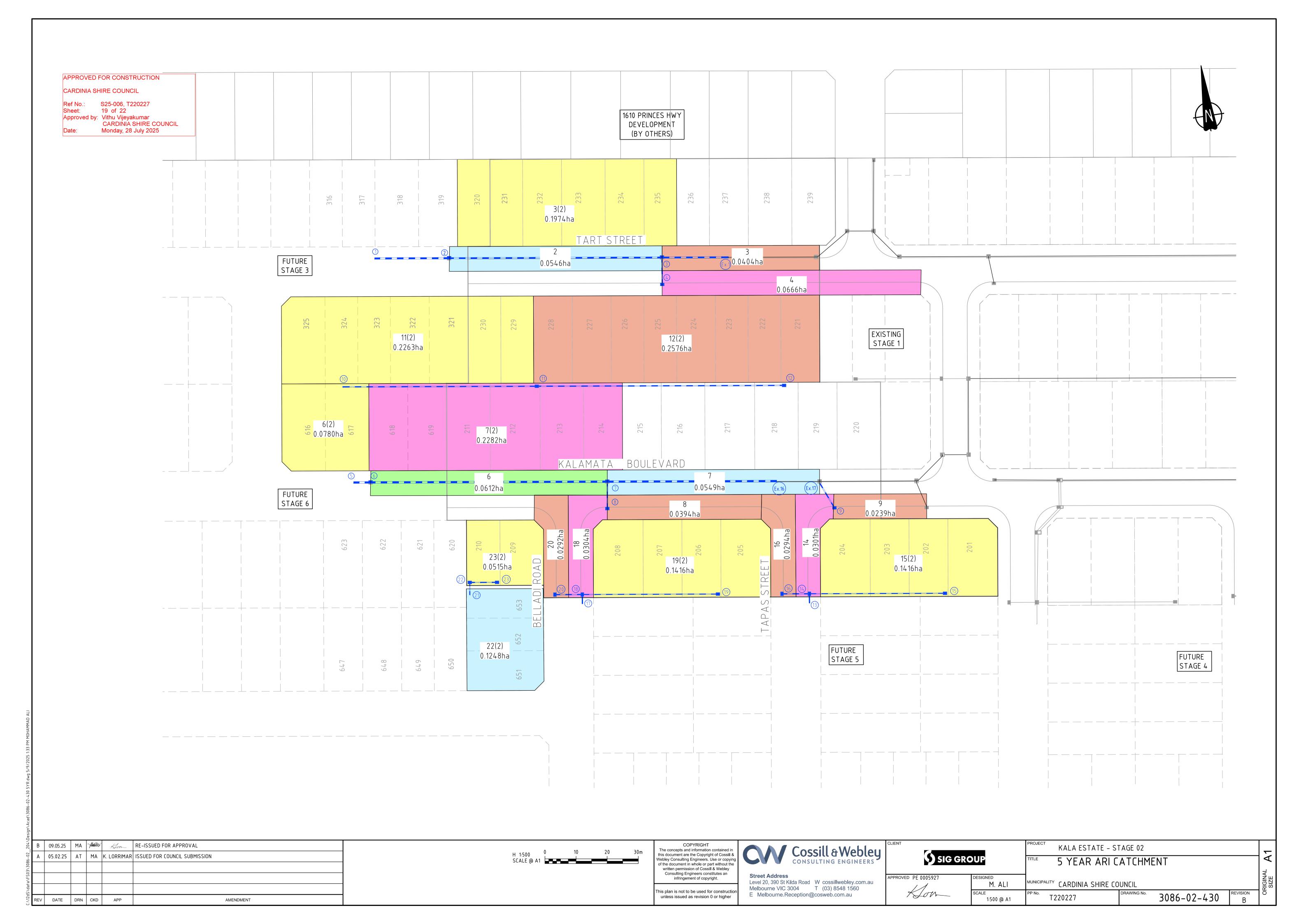
CARDINIA SHIRE COUNCIL

Sheet:

Ref No.: S25-006, T220227 18 of 22

TYPICAL HAUNCH PIT SETOUT DETAIL

| С   | 09.05.25 | MA  | Master | Lon         | DRAINAGE PIT SCHEDULE UPDATED |
|-----|----------|-----|--------|-------------|-------------------------------|
| В   | 05.02.25 | ΑТ  | MA     | K. LORRIMAR | ISSUED FOR COUNCIL SUBMISSION |
| Α   | 14.11.24 | NT  | MA     | K. LORRIMAR | INITIAL ISSUE                 |
|     |          |     |        |             |                               |
|     |          |     |        |             |                               |
| REV | DATE     | DRN | CKD    | APP         | AMENDMENT                     |



Ref No.: S25-006, T220227
Sheet: 20 of 22
Approved by: Vithu Vijeyakumar
CARDINIA SHIRE COUNCIL
Date: Monday, 28 July 2025

# **KALA ESTATE - STAGE 02**

MINOR DRAINAGE COMPUTATIONS

**DESIGNED BY** 

M. ALI

AEP 20% DATE

2/05/2025



| D:+    | D/C       |        |       |        | CATCI | HMENT  |       |        |        | Pipe | Pipe   | Pipe   | Tc    | Intensity | Pipe   | Pipe     | Pipe     |      | Pit  | Pipe     | HGL     | Pipe       | Freeboard |
|--------|-----------|--------|-------|--------|-------|--------|-------|--------|--------|------|--------|--------|-------|-----------|--------|----------|----------|------|------|----------|---------|------------|-----------|
| Pit    | D/S       | Area 1 | CofR1 | Area 2 | CofR2 | Area 3 | CofR3 | Ae     | Sum Ae | Size | Length | Grade  |       |           | Flow   | Velocity | Capacity | Q/Qf | K    | Vel Head | Grade   | Total Loss | Freeboard |
| Number | Structure | (ha)   |       | (ha)   |       | (ha)   |       | (ha)   | (ha)   | (mm) | (m)    | (1 in) | (min) | (mm/hr)   | (I/s)  | (m/s)    | (I/s)    |      |      | (m)      | (1 in)  | (m)        | (m)       |
| 2      | 1         | 0.0550 | 0.56  |        |       |        |       | 0.0300 | 0.2290 | 525  | 23.950 | 180.2  | 9.40  | 68.32     | 210.20 | 1.48     | 320.50   | 0.66 | 0.00 | 0.0480   | 237.7   | 0.101      | 1.353     |
| 3      | 2         | 0.0400 | 0.56  | 0.197  | 0.71  |        |       | 0.1620 | 0.1990 | 450  | 68.423 | 180.2  | 8.55  | 71.41     | 205.90 | 1.34     | 212.50   | 0.97 | 1.08 | 0.0860   | 191.9   | 0.357      | 1.212     |
| Ex.1   | 3         | 0.0000 | 0.56  |        |       |        |       | 0.0000 | 0.0000 | 450  | 21.400 | 200.0  | 8.27  | 72.47     | 157.00 | 1.27     | 201.70   | 0.78 | 2.00 | 0.0500   | 330.0   | 0.065      | 1.242     |
| 4      | 3         | 0.0670 | 0.56  |        |       |        |       | 0.0370 | 0.0370 | 300  | 8.650  | 187.2  | 5.00  | 88.90     | 9.20   | 1.00     | 70.70    | 0.13 | 9.70 | 0.0010   | 11136.9 | 0.001      | 1.212     |
| 6      | 5         | 0.0610 | 0.56  | 0.078  | 0.71  |        |       | 0.0890 | 0.3030 | 600  | 5.452  | 229.9  | 9.75  | 67.16     | 373.00 | 1.43     | 405.10   | 0.92 | 0.48 | 0.0890   | 44.7    | 0.099      | 1.092     |
| 7      | 6         | 0.0550 | 0.56  | 0.228  | 0.71  |        |       | 0.1920 | 0.2140 | 600  | 76.122 | 250.0  | 8.82  | 70.37     | 355.70 | 1.37     | 388.50   | 0.92 | 0.82 | 0.0810   | 260.6   | 0.292      | 1.080     |
| Ex.16  | 7         |        | 0.56  |        |       |        |       | 0.0000 | 0.0000 | 600  | 54.429 | 299.9  | 8.10  | 73.12     | 303.00 | 1.25     | 354.70   | 0.85 | 2.00 | 0.0590   | 373.9   | 0.146      | 1.090     |
| 8      | 7         | 0.0390 | 0.56  |        |       |        |       | 0.0220 | 0.0220 | 300  | 8.650  | 69.7   | 5.00  | 88.90     | 5.40   | 1.64     | 115.80   | 0.05 | 8.89 | 0.0010   | 31819.1 | 0.000      | 1.086     |
| 9      | Ex.17     | 0.0240 | 0.56  |        |       |        |       | 0.0130 | 0.0130 | 300  | 9.737  | 73.6   | 5.00  | 88.90     | 3.30   | 1.37     | 96.70    | 0.03 | 9.70 | 0.0010   | 86319.2 | 0.000      | 1.175     |
| 11     | 10        |        |       | 0.226  | 0.71  |        |       | 0.1600 | 0.3420 | 300  | 62.424 | 100.0  | 6.09  | 82.47     | 78.30  | 1.37     | 96.70    | 0.81 | 1.53 | 0.0630   | 107.5   | 0.581      | 0.849     |
| 12     | 11        |        |       | 0.258  | 0.71  |        |       | 0.1820 | 0.1820 | 225  | 79.500 | 85.7   | 5.00  | 88.90     | 44.90  | 1.22     | 48.50    | 0.93 | 4.29 | 0.0650   | 98.5    | 0.807      | 0.255     |
| 14     | 13        | 0.0300 | 0.56  |        |       |        |       | 0.0170 | 0.1330 | 300  | 3.021  | 187.2  | 5.35  | 86.78     | 32.10  | 1.00     | 70.70    | 0.45 | 2.15 | 0.0110   | 202.5   | 0.015      | 1.391     |
| 15     | 14        |        |       | 0.142  | 0.71  |        |       | 0.1000 | 0.1000 | 225  | 43.600 | 30.2   | 5.00  | 88.90     | 24.70  | 2.05     | 81.70    | 0.30 | 6.64 | 0.0200   | 31.3    | 1.395      | 0.410     |
| 16     | 14        | 0.0290 | 0.56  |        |       |        |       | 0.0160 | 0.0160 | 300  | 8.800  | 187.2  | 5.00  | 88.90     | 4.00   | 1.00     | 70.70    | 0.06 | 9.70 | 0.0010   | 118.3   | 0.074      | 1.320     |
| 18     | 17        | 0.0300 | 0.56  |        |       |        |       | 0.0170 | 0.1330 | 300  | 2.999  | 187.2  | 5.38  | 86.61     | 32.00  | 1.00     | 70.70    | 0.45 | 2.15 | 0.0100   | 196.5   | 0.015      | 1.341     |
| 19     | 18        |        |       | 0.142  | 0.71  |        |       | 0.1000 | 0.1000 | 225  | 43.599 | 35.2   | 5.00  | 88.90     | 24.70  | 1.90     | 75.70    | 0.33 | 6.64 | 0.0200   | 36.6    | 1.192      | 0.408     |
| 20     | 18        | 0.0290 | 0.56  |        |       |        |       | 0.0160 | 0.0160 | 300  | 8.800  | 187.2  | 5.00  | 88.90     | 4.00   | 1.00     | 70.70    | 0.06 | 9.70 | 0.0000   | 118.2   | 0.074      | 1.270     |
| 22     | 21        |        |       | 0.125  | 0.71  |        |       | 0.0880 | 0.1240 | 225  | 4.000  | 50.0   | 5.08  | 88.44     | 30.60  | 1.60     | 63.50    | 0.48 | 3.62 | 0.0300   | 215.5   | 0.019      | 0.505     |
| 23     | 22        |        |       | 0.052  | 0.71  |        |       | 0.0360 | 0.0360 | 225  | 8.750  | 35.6   | 5.00  | 88.90     | 9.00   | 1.89     | 75.20    | 0.12 | 7.00 | 0.0030   | 275.4   | 0.032      | 0.515     |

| _204\  | В   | 06.05.25 | MA  | Masili | Lon         | 5YR DRAINAGE COMPUTATIONS UPDATED |
|--------|-----|----------|-----|--------|-------------|-----------------------------------|
| 86-02_ | Α   | 05.02.25 | АТ  | MA     | K. LORRIMAR | ISSUED FOR COUNCIL SUBMISSION     |
| 3\30   |     |          |     |        |             |                                   |
| a\FS0  |     |          |     |        |             |                                   |
| S\dat  |     |          |     |        |             |                                   |
| \12dS  | REV | DATE     | DRN | CKD    | APP         | AMENDMENT                         |

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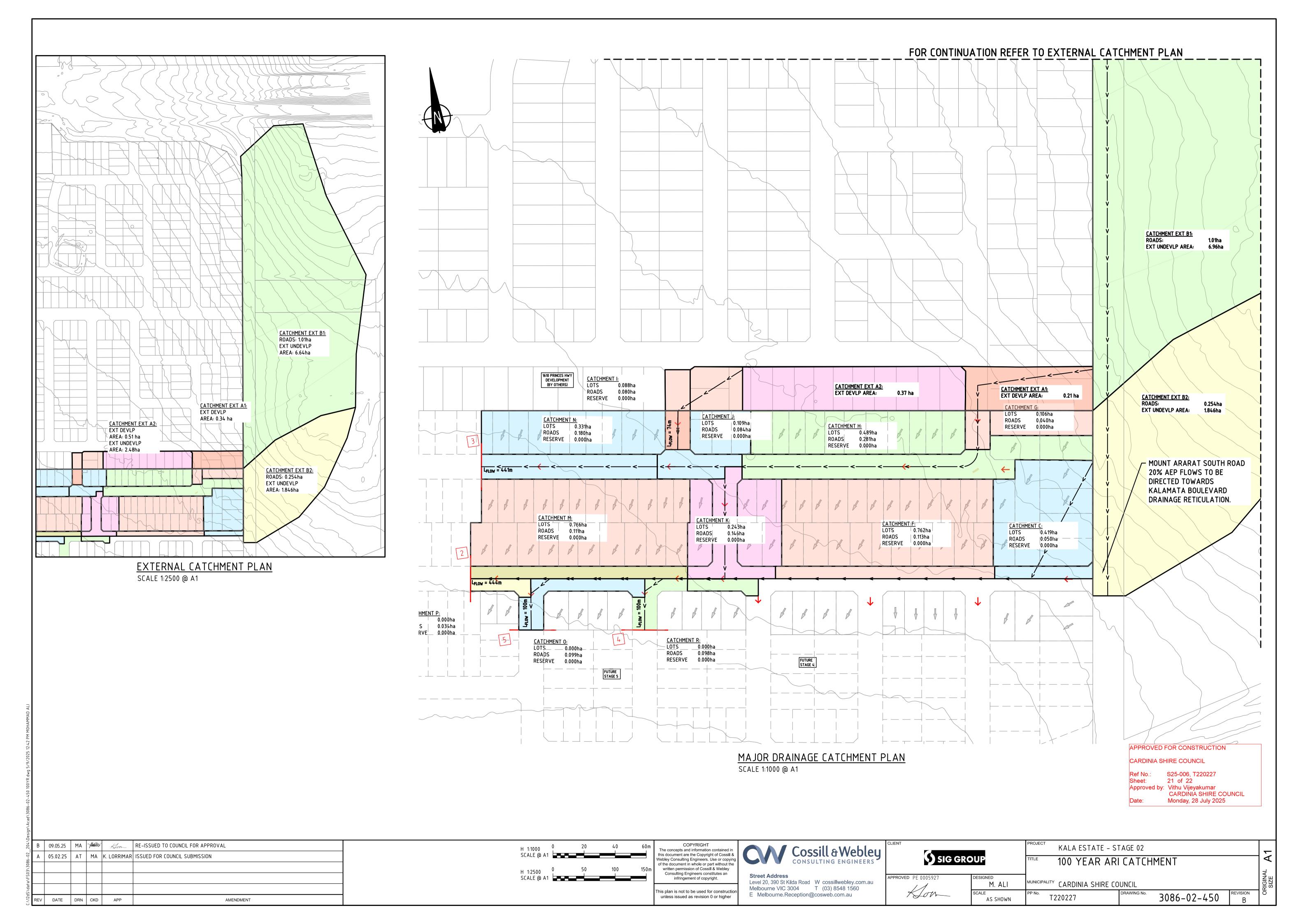
M. ALI

AS SHOWN

KALA ESTATE - STAGE 02 5 YEAR DRAINAGE CALCULATIONS

MUNICIPALITY CARDINIA SHIRE COUNCIL

3086-02-440



| Project:    | KALA ESTATE, STAGE 2 |
|-------------|----------------------|
| Project No. | 3086-02              |

CARDINIA SHIRE COUNCIL

Ref No.: S25-006, T220227 Sheet: 22 of 22

Approved by: Vithu Vijeyakumar
CARDINIA SHIRE COUNCIL Monday, 28 July 2025

|                        |                   | CATCI | HMENT AREAS |         |           |             |                | MINO           | R FLOW (20% | AEP)  |             |                |                | MAJOR FLC | W (1% AEF | <b>'</b> )  |         | $Q_{GAP}$ |
|------------------------|-------------------|-------|-------------|---------|-----------|-------------|----------------|----------------|-------------|-------|-------------|----------------|----------------|-----------|-----------|-------------|---------|-----------|
| Location               | NAME              | Lots  | Road        | Reserve | Ext Devlp | Ext Undevlp | A <sub>e</sub> | t <sub>c</sub> | I           | Q     | 0.8xQ Total | A <sub>e</sub> | t <sub>c</sub> | I         | Q         | Q diversion | Q Total |           |
|                        |                   | ha    | ha          | ha      | ha        | ha          | ha             | min            | mm/hr       | m³/s  | m³/s        | ha             | min            | mm/hr     | m³/s      | m³/s        | m³/s    | m³/s      |
|                        |                   |       |             |         |           |             |                |                |             |       |             |                |                |           |           |             |         |           |
| MT ARARAT STH ROAD     | B1, B2            | 0.000 | 1.264       | 0.000   | 0.000     | 8.806       | 2.351          | 16.7           | 50.928      | 0.333 | 0.266       | 2.967          | 16.7           | 98.840    | 0.815     | 0.000       | 0.815   | 0.482     |
| (2) KALAMATA BOULEVARD | A1,C,F,G,H,K,M    | 2.296 | 0.556       | 0.000   | 0.105     | 0.000       | 2.005          | 12.4           | 59.632      | 0.332 | 0.266       | 2.532          | 12.4           | 115.613   | 0.813     | 0.000       | 0.813   | 0.481     |
| (3) TART STREET        | A1, A2, G,H,I,J,N | 1.123 | 0.505       | 0.000   | 0.475     | 0.000       | 1.409          | 14.5           | 55.068      | 0.216 | 0.172       | 1.780          | 14.5           | 106.948   | 0.529     | 0.000       | 0.529   | 0.313     |
| OLEA WAY               | A2, J             | 0.088 | 0.080       | 0.000   | 0.370     | 0.000       | 0.368          | 6.2            | 81.693      | 0.083 | 0.067       | 0.465          | 6.2            | 152.333   | 0.197     | 0.000       | 0.197   | 0.113     |
| (4) TAPAS STREET       | R                 | 0.000 | 0.098       | 0.000   |           |             | 0.055          | 6.7            | 79.480      | 0.012 | 0.010       | 0.069          | 6.7            | 149.080   | 0.029     | 0.000       | 0.029   | 0.016     |
| (5) BELLADI ROAD       | 0                 | 0.000 | 0.099       | 0.000   |           |             | 0.055          | 6.7            | 79.480      | 0.012 | 0.010       | 0.070          | 6.7            | 149.080   | 0.029     | 0.000       | 0.029   | 0.017     |
| ,                      |                   |       |             |         |           |             |                |                |             |       |             |                |                |           |           |             |         |           |

| Flow Length  |
|--------------|
| m            |
|              |
| See tc below |
| 444.000      |
| 441.000      |
| 74.000       |
| 100.000      |
| 100.000      |
|              |

# COEFFIECIENT OF RUNOFF

|               |         | Lots  | Road Reserve | Reserve | Ext Devlp | Ext Undevlp |
|---------------|---------|-------|--------------|---------|-----------|-------------|
| STORM EVENT   | 20% AEP | 0.706 | 0.557        | 0.333   | 0.706     | 0.187       |
| STORIVI EVERT | 1% AEP  | 0.892 | 0.703        | 0.420   | 0.892     | 0.236       |

|        |       | CATCHMENT AREAS |         |           |             |       |  |
|--------|-------|-----------------|---------|-----------|-------------|-------|--|
| NAME   | Lots  | Road            | Reserve | Ext Devlp | Ext Undevlp | TOTAL |  |
|        | ha    | ha              | ha      | ha        | ha          | ha    |  |
| EXT A1 |       |                 |         | 0.210     |             | 0.210 |  |
| EXT A2 |       |                 |         | 0.370     |             | 0.370 |  |
| EXT B1 |       | 1.010           |         |           | 6.960       | 7.970 |  |
| EXT B2 |       | 0.254           |         |           | 1.846       | 2.100 |  |
| С      | 0.419 | 0.050           |         |           |             | 0.469 |  |
| F      | 0.762 | 0.113           |         |           |             | 0.875 |  |
| G      | 0.106 | 0.040           |         |           |             | 0.146 |  |
| Н      | 0.489 | 0.281           |         |           |             | 0.770 |  |
| 1      | 0.088 | 0.080           |         |           |             | 0.168 |  |
| J      | 0.109 | 0.084           |         |           |             | 0.193 |  |
| K      | 0.243 | 0.146           |         |           |             | 0.389 |  |
| R      | 0.000 | 0.098           |         |           |             | 0.098 |  |
| М      | 0.766 | 0.111           |         |           |             | 0.877 |  |
| N      | 0.331 | 0.180           |         |           |             | 0.511 |  |
| 0      |       | 0.099           |         |           |             |       |  |
| Р      |       | 0.034           |         |           |             |       |  |
|        |       |                 |         |           |             |       |  |

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|--------|-----|----------|-----|--------|-------------|--------------------------------|
| _204\  | В   | 09.05.25 | MA  | Master | Lon         | RE-ISSUED FOR COUNCIL APPROVAL |
| 6-02   | Α   | 05.02.25 | АТ  | MA     | K. LORRIMAR | ISSUED FOR COUNCIL SUBMISSION  |
| 3\3086 |     |          |     |        |             |                                |
| a\FS0  |     |          |     |        |             |                                |
| \dat   |     |          |     |        |             |                                |
| :\12dS | REV | DATE     | DRN | CKD    | APP         | AMENDMENT                      |

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| APPROVED PE 0005927 | DESIGNED |
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| Klow                | SCALE    |
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KALA ESTATE - STAGE 02 100 YEAR DRAINAGE CALCULATIONS

M. ALI AS SHOWN

MUNICIPALITY CARDINIA SHIRE COUNCIL 3086-02-460 T220227