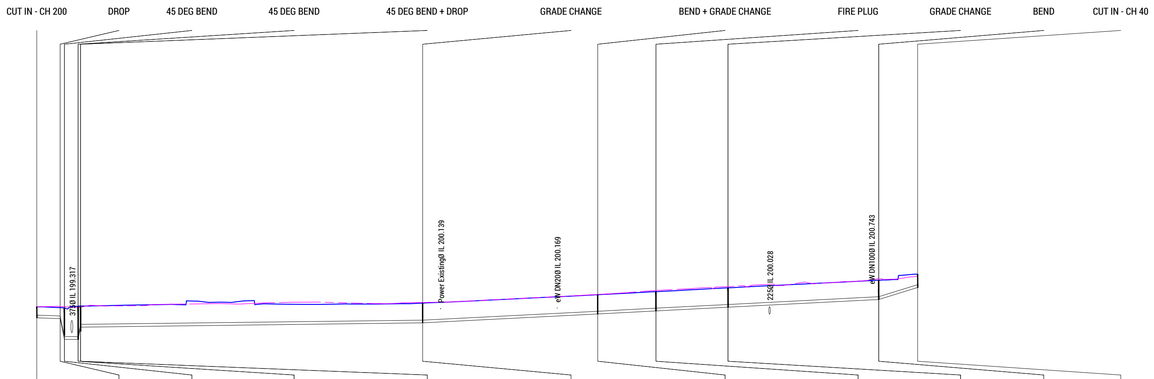

PIPE DETAILS	100Ø PVC	100Ø PVC	100Ø PVC	100Ø PVC	100Ø PVC	100Ø PVC	100Ø PVC	100Ø PVC	100Ø PVC	100Ø PVC
SLOPE/GRADE	-0.71%	-96.32%	0.00%	98.74%	0.25%	1.01%	1.05%	1.03%	1.02%	6.18%
DATUM RL 195.8										
EMBEDMENT TYPE EMBEDMENT MATERIAL										
DEPTH TO INVERT	0.400	0.402	1.146	1.202	0.766	0.717	0.700	0.701	0.702	0.699	0.483
INVERT LEVEL	199.824	199.794	199.044	199.044	199.488	199.443	199.964	200.075	200.210	200.490	200.936
FINISHED SURFACE	200.224	200.196	200.190	200.246	200.254	200.360	200.664	200.776	200.912	201.189	201.409
EXISTING SURFACE	200.228	200.229	200.236	200.204	200.207	200.382	200.672	200.818	200.957	201.241	201.322
CHAINAGE	0.000	4.220	4.999	7.485	7.935	69.980	101.737	112.298	125.370	152.704	159.759

WATER LONGITUDINAL SECTION FOR LINE 1
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

NORTHERN MIDLANDS COUNCIL

REV:	DESCRIPTION:	BY:	DATE:
0	APPROVAL / TENDER	PVD	00-00-00

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APPROVED: R. JESSON | ACRED. No: CC5848I

DESIGN BY:	RJ
DESIGN CHK:	JS
DRAWN BY:	PVD
DRAFT CHK:	JS
DATE:	00-00-00

LANGE design landscape architecture
rare.
Level 1a, 10-14 Paterson Street
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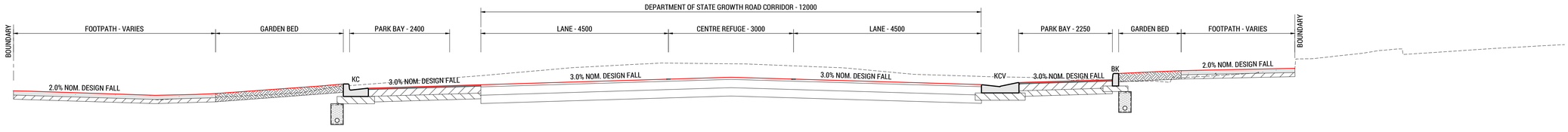
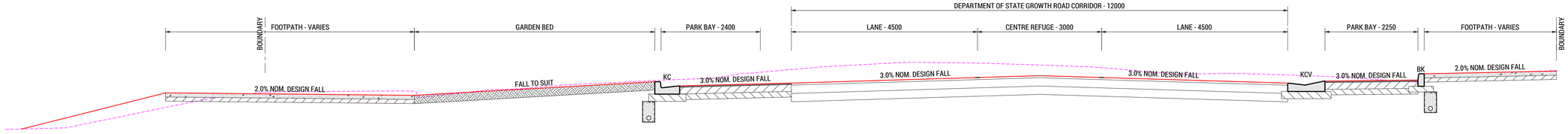
CLIENT: NORTHERN MIDLANDS COUNCIL
PROJECT: URBAN DESIGN & TRAFFIC MANAGEMENT STRATEGY - STAGE 3 WORKS
ADDRESS: MIDLANDS HIGHWAY CAMPBELL TOWN

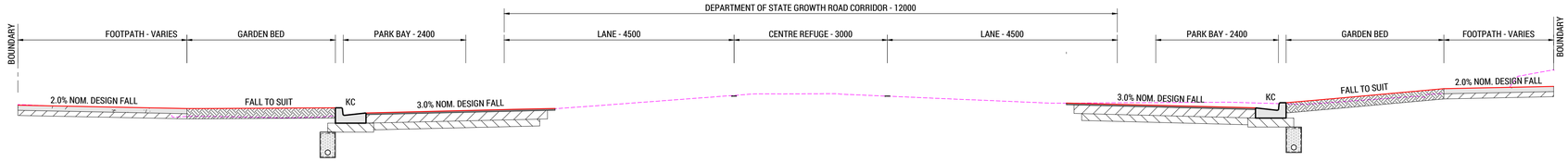
TITLE: WATER MAIN LONGITUDINAL SECTION
SCALE: 1:500H 1:100V SHEET SIZE: A1 DWGs IN SET: -
PROJECT No: 17.340 DWG No: C611 REV: 0



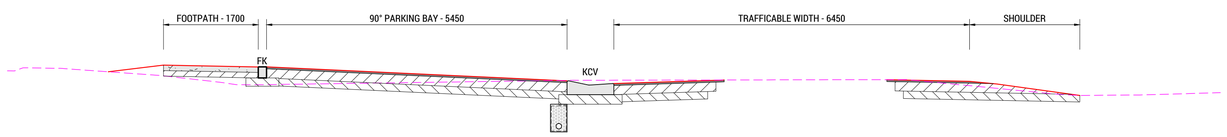
CH60 - **TYPICAL ROAD CROSS SECTION - FULL RECONSTRUCTION**
SCALE 1:50



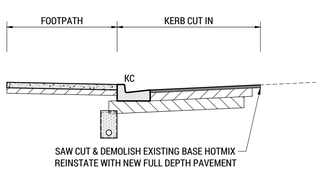
CH160 - **TYPICAL ROAD CROSS SECTION - FULL RECONSTRUCTION**
SCALE 1:50



CH300 - **TYPICAL ROAD CROSS SECTION - EDGE RECONSTRUCTION**
SCALE 1:50



CH30 - **TYPICAL ROAD CROSS SECTION - WILLIAM STREET**
SCALE 1:50



D01 - **TYPICAL FULL DEPTH KERB CUT IN**
SCALE 1:50

NORTHERN MIDLANDS COUNCIL

REV:	DESCRIPTION:	BY:	DATE:
0	APPROVAL / TENDER	PVD	00-00-00

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APPROVED: R. JESSON | ACRED. No: CC5848I

DESIGN BY:	RJ
DESIGN CHK:	JS
DRAWN BY:	PVD
DRAFT CHK:	JS
DATE:	00-00-00

LANGE design landscape architecture

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CLIENT: NORTHERN MIDLANDS COUNCIL

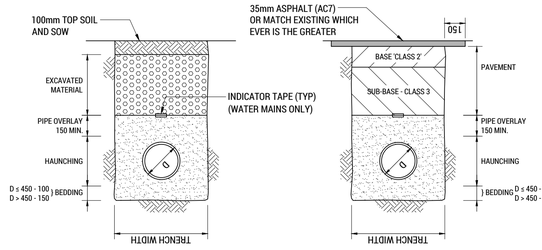
PROJECT: URBAN DESIGN & TRAFFIC MANAGEMENT STRATEGY - STAGE 3 WORKS

ADDRESS: MIDLANDS HIGHWAY CAMPBELL TOWN

TITLE: TYPICAL CIVIL SECTION

SCALE: 1:50 SHEET SIZE: A1 DWGs IN SET: -

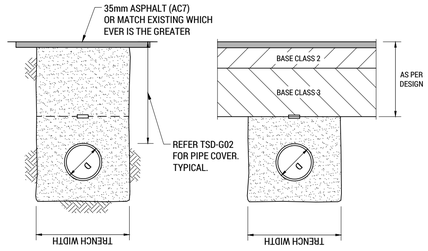
PROJECT No: 17.340 DWG No: C701 REV: 0



D01 - **TRENCHES - NON-TRAFFICABLE**
SCALE 1:20

D02 - **TRENCHES - EXISTING ROADS**
SCALE 1:20

CLASS 1, 2 AND 3 ROADS



CLASS 4 LOCAL ROADS
PARKING LANES - ALL ROADS
FOOTPATHS / DRIVEWAYS

D03 - **TRENCHES - NEW ROADS**
SCALE 1:20

TRENCH WIDTH		
PIPE TYPE	**NOM. DIA (D)**	**TRENCH WIDTH**
CONCRETE	≤ 1500	D + 300
	> 1500	DESIGN REQ.
OTHER PIPES	100	300
	150	450
	225-300	600
	450	750
	450-1500	D + 600
	> 1500	DESIGN REQ.

MINIMUM TRENCH WIDTHS MAY BE VARIED ABOVE THE PIPE OVERLAY ZONE TO MEET 'WORPLACE STANDARDS' REQUIREMENTS.
ie EXCAVATIONS OVER 1.5m MAY REQUIRE RISK ASSESSMENT.

COMPACTION OF BEDDING, HAUNCHING & OVERLAY
REFER TO AS 1289-5.5
CONCRETE PIPES = MIN. DENSITY INDEX = 60% (85% STD. COMPACTION)
uPVC PIPES = DENSITY INDEX = 65% (90% STD. COMPACTION)
DICL PIPES = DENSITY INDEX = 65% (90% STD. COMPACTION)

BEDDING, HAUNCHING AND OVERLAY MATERIAL
BEDDING , HAUNCHING AND PIPE OVERLAY MATERIAL SHALL CONTAIN NO DELETERIOUS MATERIAL OR CLAY LUMPS AND SHALL COMPLY WITH THE FOLLOWING GRADINGS:

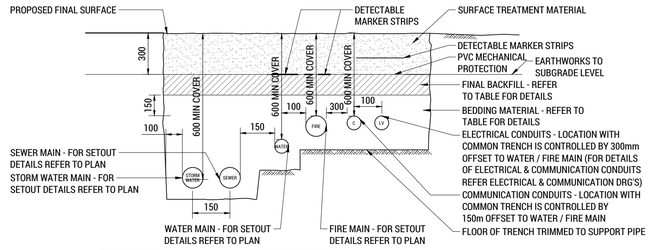
FOR uPVC AND DUCTILE IRON PIPES
SAND OR CRUSHED ROCK (STONE DUST)

SIEVE APERTURE (mm) TO AS 1152	% PASSING (BY MASS)
6.7	100
2.36	70-100
0.6	20-90
0.3	8-50
0.15	0-20
0.075	0-10

FOR CONCRETE PIPES
CRUSHED ROCK

SIEVE APERTURE (mm) TO AS 1152	% PASSING (BY MASS)
19	100
2.36	50-100
0.6	20-90
0.3	10-60
0.15	0-25
0.075	0-10

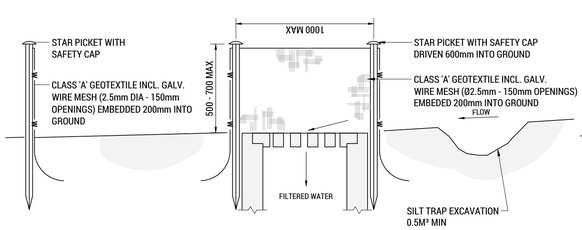
ALL MATERIAL SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH AS 3725 AND TO THE SATISFACTION OF THE SUPERINTENDENT.



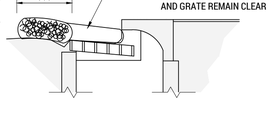
COMPACTION DETAILS EXPRESSED AS MMDD		
MATERIAL	**GENERAL**	**UNDER ROADS***
BEDDING MATERIAL	90%	90%
INITIAL BACKFILL	90%	95%
FINAL BACKFILL	SAME AS SURROUNDING SOIL	95%

* OR AS DIRECTED BY SUPERINTENDENT

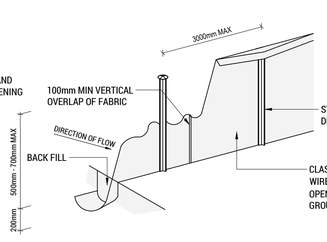
D04 - **TYPICAL COMBINED TRENCH DETAIL**
SCALE 1:10



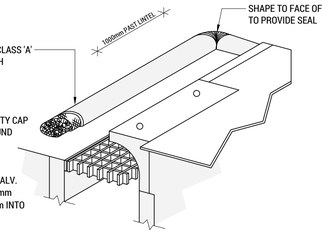
D05 - **SILT FENCE AT GRATED PIT**
SCALE N.T.S



D06 - **SILT FENCE AT GULLY PIT**
SCALE N.T.S



D07 - **SILT FENCE DETAIL**
SCALE N.T.S



D08 - **SILT FENCE AT GULLY PIT**
SCALE N.T.S

SILT FENCE
CONSTRUCT AS DETAILED AND INSTALL CLASS 'A' GEOTEXTILE OR USE PROPRIETARY SILT FENCE. EG; MACCAFERRI 'SILT LOK'.

OMIT SANDBAG WALL AND SILTTRAP WHEN PIT IS IN A LOW POINT.

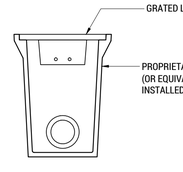
GULLY PIT
GALVANIZED WIRE MESH 2mm DIA x 12mm OPENING.

GENERAL
SEDIMENT FENCES ARE TO BE CLEANED DAILY TO PREVENT BREAKAGE/OVERTOPPING.

IT IS THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL, MAINTAIN AND (UPON COMPLETION) REMOVE ALL TEMPORARY SEDIMENT CONTROL MEASURES.

IT IS STRONGLY RECOMMENDED THAT THE DEVELOPER RE-COVERS ANY DISTURBED AREAS WITH TOPSOIL AS QUICKLY AS POSSIBLE AFTER BULK EARTHWORKS ARE COMPLETED, TO PREVENT SOIL DISPERSION.

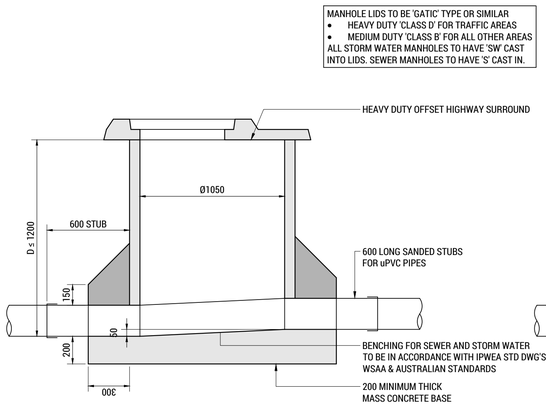
NOTE:
INSTALL SILT MANAGEMENT AS REQUIRED. LOCATIONS TO BE CONFIRMED ON SITE. ENSURE SILT MANAGEMENT COMPLIES WITH CURRENT COUNCIL STANDARDS AND REQUIREMENTS.



D09 - **uPVC GRATED PIT DETAIL - GP1**
SCALE 1:10

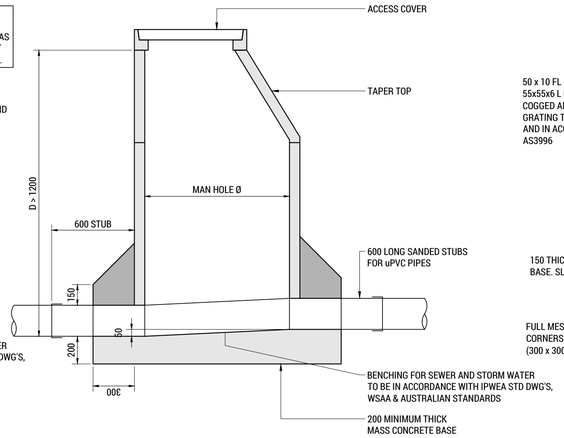
MANHOLE LIDS TO BE 'GATIC' TYPE OR SIMILAR
- HEAVY DUTY 'CLASS D' FOR TRAFFIC AREAS
- MEDIUM DUTY 'CLASS B' FOR ALL OTHER AREAS

ALL STORM WATER MANHOLES TO HAVE 'SW' CAST INTO LIDS. SEWER MANHOLES TO HAVE 'S' CAST IN.

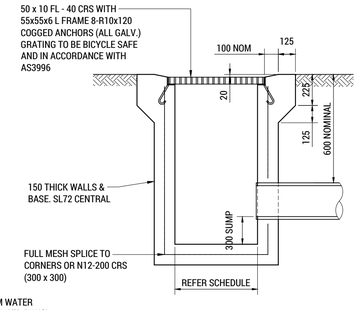


D10 - **DETAIL OF MANHOLE - D ≤ 1200**
SCALE 1:20

REFER IPWEA STD DWG TSD-SW02-v1 FOR STORMWATER MANHOLE DETAILS
REFER WSAA STD DWG'S FOR SEWER MANHOLE DETAILS

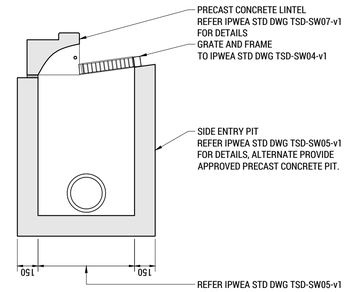


D11 - **DETAIL OF MANHOLE - D > 1200**
SCALE 1:20



D12 - **DETAIL OF GRATED PIT -TRAFFICABLE AREA**
SCALE 1:20

REFER IPWEA STANDARD DRAWINGS FOR ALTERNATE PIT CONSTRUCTION DETAILS.
APPROVED PRECAST UNITS MAY ALSO BE SUBSTITUTED.



D13 - **SECTION DETAIL - SIDE ENTRY PIT 'TYPE 1'**
SCALE 1:20

REFER IPWEA STANDARD DRAWINGS FOR ADDITIONAL SIDE ENTRY PIT DETAILS

NORTHERN MIDLANDS COUNCIL

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0	APPROVAL / TENDER	PVD	00-00-00

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APPROVED: **R. JESSON** ACRED. No: **CC5848I**

DESIGN BY:	RJ
DESIGN CHK:	JS
DRAWN BY:	PVD
DRAFT CHK:	JS
DATE:	00-00-00

LANGE design landscape architecture

rare. Level 1a, 10-14 Paterson Street Launceston TAS 7250 rarein.com.au P. 03 6388 9200

CLIENT: **NORTHERN MIDLANDS COUNCIL**

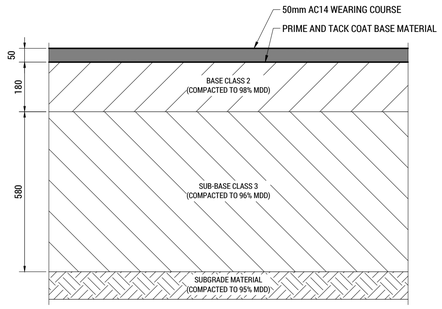
PROJECT: **URBAN DESIGN & TRAFFIC MANAGEMENT STRATEGY - STAGE 3 WORKS**

ADDRESS: **MIDLANDS HIGHWAY CAMPBELL TOWN**

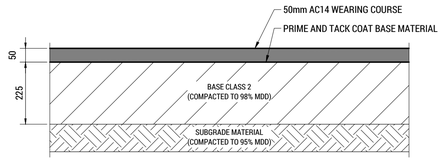
TITLE: **CIVIL SECTIONS & DETAILS - SHEET 1**

SCALE: **1:10, 1:20** SHEET SIZE: **A1** DWGs IN SET: **-**

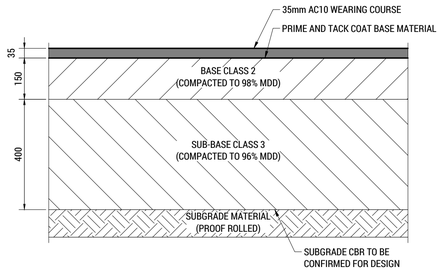
PROJECT No: **17.340** DWG No: **C711** REV: **0**



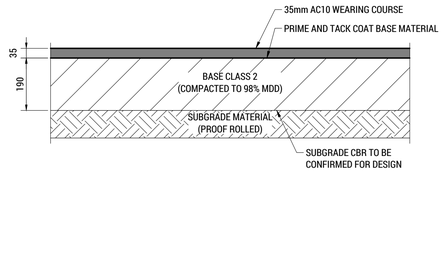
D01 - HOT MIX PAVEMENT 'A1C' - STATE ROADWAYS - CLAY
SCALE 1:10
MIN CBR 4% (CONTRACTOR TO CONFIRM ONSITE)



D02 - HOT MIX PAVEMENT 'A1R' - STATE ROADWAYS - ROCK
SCALE 1:10
MIN CBR 4% (CONTRACTOR TO CONFIRM ONSITE)

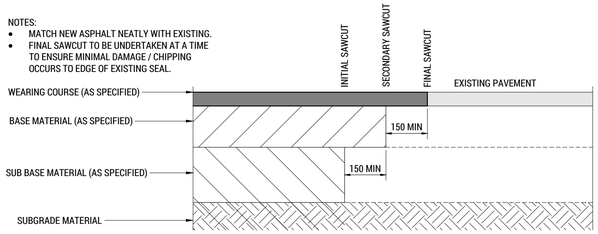


D03 - HOT MIX PAVEMENT 'A2C' - LGAT ROADWAYS - CLAY
SCALE 1:10
MIN CBR 4% (CONTRACTOR TO CONFIRM ONSITE)

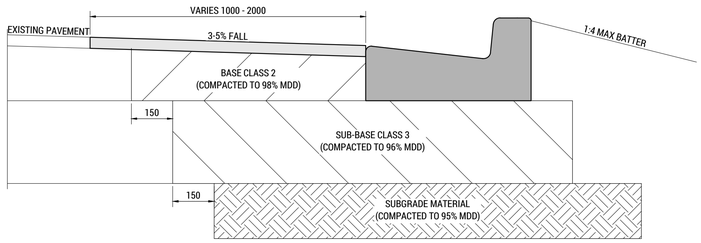


D04 - HOT MIX PAVEMENT 'A2R' - LGAT ROADWAYS - ROCK
SCALE 1:10
MIN CBR 4% (CONTRACTOR TO CONFIRM ONSITE)

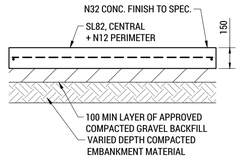
NOTES:
- MATCH NEW ASPHALT NEATLY WITH EXISTING.
- FINAL SAWCUT TO BE UNDERTAKEN AT A TIME TO ENSURE MINIMAL DAMAGE / CHIPPING OCCURS TO EDGE OF EXISTING SEAL.



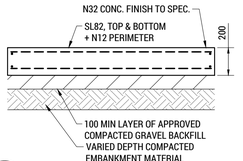
D05 - NEW TO EXISTING HOT MIX TRANSITION
SCALE 1:10
MIN CBR 8% (CONTRACTOR TO CONFIRM ONSITE)



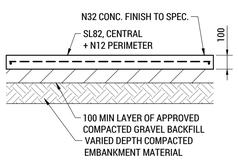
D06 - TYPICAL KERB CUT IN DETAIL
SCALE 1:10



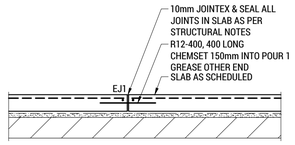
D07 - SECTION - PAVEMENT 'B' DRIVEWAY (TYP.)
SCALE 1:20
REFER IPWEA STD DWG TSD-R09-v3 FOR ADDITIONAL DRIVEWAY DETAILS



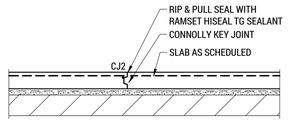
D08 - SECTION - PAVEMENT 'B1' DRIVEWAY (TYP.)
SCALE 1:20
REFER IPWEA STD DWG TSD-R16-v3 FOR ADDITIONAL DRIVEWAY DETAILS



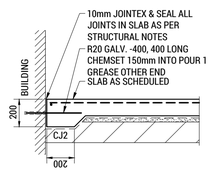
D09 - SECTION DETAIL - PAVEMENT 'C' (TYP.)
SCALE 1:20
REFER IPWEA STD DWG TSD-R11-v3 FOR ADDITIONAL FOOTPATH DETAILS



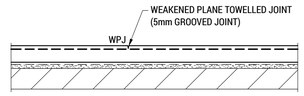
D10 - CONSTRUCTION JOINT EJ1 (TYP.)
SCALE 1:20
PROVIDE EXPANSION JOINTS EACH SIDE DRIVEWAYS AND AT 18.0m MAX CRS
REFER IPWEA STD DWG TSD-R09-v3 & TSD-R11-v3 FOR DETAILS



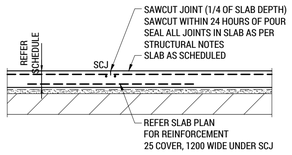
D11 - CONSTRUCTION JOINT CJ1 (TYP.)
SCALE 1:20
PROVIDE CONSTRUCTION JOINTS AT 6.0m MAX CRS
REFER IPWEA STD DWG TSD-R11-v3 FOR DETAILS



D12 - CONSTRUCTION JOINT CJ2 (TYP.)
SCALE 1:20



D13 - WEAKENED PLANE JOINT WPJ (TYP.)
SCALE 1:20
PROVIDE WEAKENED PLANE JOINTS AT 2.0m MAX CRS
REFER IPWEA STD DWG TSD-R11-v3 FOR DETAILS



D14 - SAWCUT JOINT SCJ (TYP.)
SCALE 1:20

NORTHERN MIDLANDS COUNCIL

REV:	DESCRIPTION:	BY:	DATE:
0	APPROVAL / TENDER	PVD	00-00-00

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APPROVED: R. JESSON | ACRED. No: CC5848I

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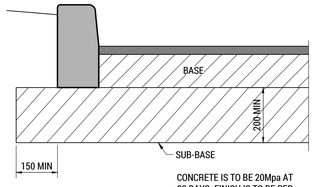
DESIGN CHK:	JS
DRAWN BY:	PVD
DRAFT CHK:	JS
DATE:	00-00-00

LANGE design landscape architecture

rare. Level 1a, 10-14 Paterson Street Launceston TAS 7250 rarein.com.au P. 03 6388 9200

CLIENT: NORTHERN MIDLANDS COUNCIL
PROJECT: URBAN DESIGN & TRAFFIC MANAGEMENT STRATEGY - STAGE 3 WORKS
ADDRESS: MIDLANDS HIGHWAY CAMPBELL TOWN

TITLE: CIVIL SECTIONS & DETAILS - SHEET 2
SCALE: 1:10, 1:20 SHEET SIZE: A1 DWGs IN SET: -
PROJECT No: 17.340 DWG No: C712 REV: 0



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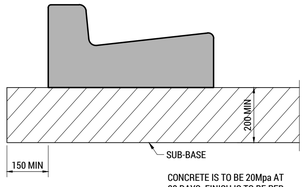
FOR APPROVED KERB & CHANNEL
PROFILES & DIMENSIONS



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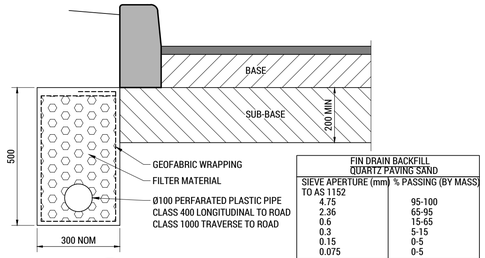
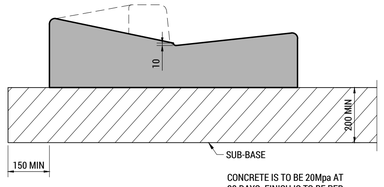
PROFILES & DIMENSIONS



FIN DRAIN BACKFILL QUARTZ PAVING SAND	
SIEVE APERTURE (mm) TO AS 1152	% PASSING (BY MASS)
4.75	95-100
2.36	65-95
0.6	15-65
0.3	5-15
0.15	0-5
0.075	0-5

D12 - **SUB-SOIL DRAIN DETAIL**
SCALE 1:10
INSTALL TO DSG SPEC ON DWG
3401-3/P17-4



D13 - **TYPE KCV KERB - VEHICULAR CROSSING**
SCALE 1:10
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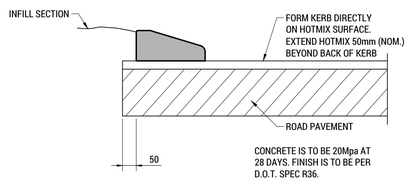
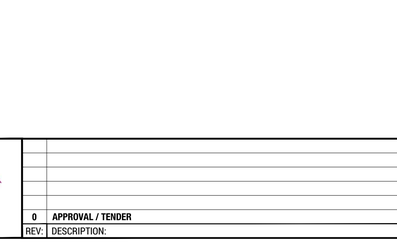
FOR APPROVED KERB & CHANNEL
PROFILES & DIMENSIONS



D14 - **TYPE M3 KERB**
SCALE 1:10
REFER DSG STD DWG 3402-7/P37-2
FOR APPROVED KERB & CHANNEL
PROFILES & DIMENSIONS

D15 - **TYPE KCV-R KERB - HEAVY VEHICULAR CROSSING**
SCALE 1:10
REFER IPWEA STD DWG TSD-R14-v3 & TSD-R16-v3
FOR ADDITIONAL DETAILS



D16 - **TYPE KCM2 KERB - MODIFIED MOUNTABLE KERB**
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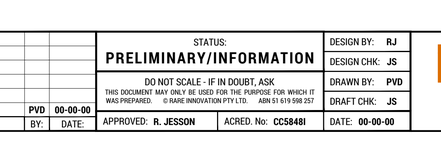

D17 - **TYPE PAVER EDGE BANDING DETAIL**
SCALE 1:10

NORTHERN MIDLANDS COUNCIL

REV:	DESCRIPTION:	BY:	DATE:
0	APPROVAL / TENDER	PVD	00-00-00

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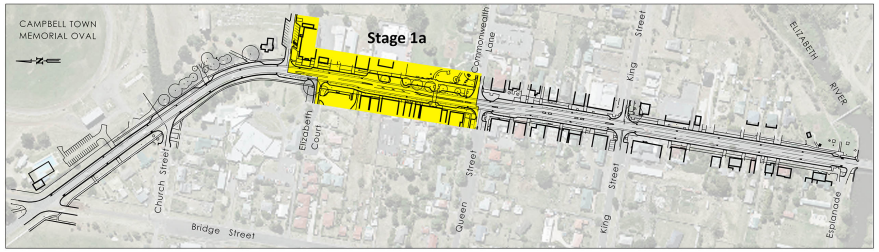
CLIENT: NORTHERN MIDLANDS COUNCIL
PROJECT: URBAN DESIGN & TRAFFIC MANAGEMENT STRATEGY - STAGE 3 WORKS
ADDRESS: MIDLANDS HIGHWAY CAMPBELL TOWN

TITLE: CIVIL SECTIONS & DETAILS - SHEET 3
SCALE: 1:10, 1:20 SHEET SIZE: A1 DWGs IN SET: -
PROJECT No: 17.340 DWG No: C713 REV: 0



LOCATION PLAN

PLAN LEGEND

- New road pavement where required to blend with existing roadway.
- Feature concrete driveway and footpath pavement with sandstone paver trimming.
- Existing trees to be retained.
- Proposed street trees to provide shade, form, colour and texture.
- New grass areas.

NUMBER LEGEND

1 Extent of works along William Street to terminate at the property boundary of the Town Hall rear parking lot.

2 New designated car parking bays including two disabled parking bays with easy access to the Town Hall forecourt.

3 New wheelchair accessible footpath connecting the new car parking bays to the Town Hall forecourt.

4 Existing vegetation to be replaced with new less intrusive planting to provide colour and texture against the Hall.

5 New kerb and channeling to formalise the William Street intersection with pedestrian access to connect the Town Centre with the Campbell Town Memorial Oval.

6 Feature pavement to the Town Hall forecourt to consist of pre-cast concrete paver trim with a decorative pavement infill.

7 Garden bed with bollards provides a safe and colourful foreground to the Town Hall, and assists in the change in levels between the roadway and the Town Hall forecourt.

8 Existing traffic island to be retained.

9 New ornamental street trees to match the existing street trees fronting Valentine's Park, to reinstate part of the Able Tasman Mmeorial avenue, and to provide seasonal colour and texture along the streetscape, as well as shade in summer.

10 New kerb and channeling moved closer to the road center to reduce the width of asphalt pavement.

11 Existing line marked turning lane to be retained.

12 Pavement art installation consisting of a series of convict arrow pavement insets that connect each of the 24 convict brick ship elements, leading visitors to explore the whole streetscape and adjoining businesses.

13 New car parking bays to replace the relocated bus stop.

14 Existing bus stop to be relocated.

15 New kerbed grass area to increase the visual entry and exist driveways of the service station.

16 New turning lane into the service station.

17 new narrowed 'Left Only' exit from the services station.

18 Existing concrete pavement fronting Valentine Park to be renewed.

19 Existing car parking bays to be replaced with grass, new planting beds and parallel parking under existing trees.

20 New seating area and wide pedestrian access path leading to a new pedestrian safe crossing node.

21 New traffic islands with decorative sandstone pavement to reflect the preferred material for many of Campbell Towns buildings.

22 Pedestrian safe crossing node with street furniture, feature pavement and interpretation signage.

23 Secondary pedestrian safe crossing node.

24 Low planting areas to direct pedestrian movement and to provide colour and texture to the streetscape.

25 Pedestrian node with street furniture, feature pavement and interpretation signage adjoining the Queen Street crossing point.


'Claret Ash' street trees.


Exposed coloured concrete pavement.


Example of interpretation signage.

CAMPBELL TOWN STREETSCAPE REDEVELOPMENT

High Street (from William Street to Commonwealth Lane / Queens Street), Campbell Town Tasmania

Stage 1a Concept Plan

0 1 2 5 10m

28 September 2023
Issue F

NORTHERN MIDLANDS COUNCIL

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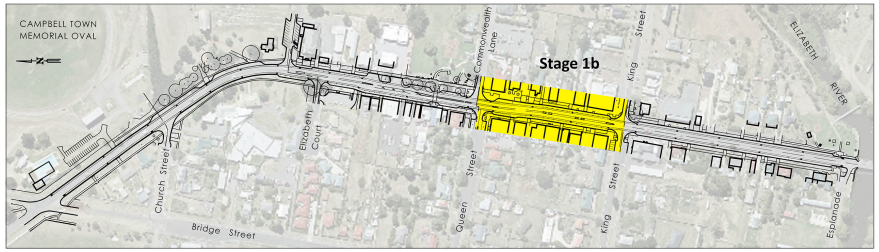

LOCATION PLAN

PLAN LEGEND

- New road pavement where required to blend with existing roadway.
- Feature concrete driveway and footpath pavement with sandstone paver trimming.
- existing trees to be retained.
- Proposed street trees to provide shade, form, colour and texture.
- New grass areas.

NUMBER LEGEND

1. New kerb and channeling to formalise the Queen Street intersection with pedestrian access to connect the Town Centre with the remaining streetscape.
2. Low planting areas direct pedestrian movement and provides colour and texture to the intersection, and reduces the amount of hardstand pavement.
3. Open lawn area to provide a natural surface to the adjoining hard pavements.
4. Pedestrian node with street furniture, feature pavement and interpretation signage adjoining the Queens Street crossing point.
5. New traffic islands for pedestrian safety, with concrete pavement infill replaced with decorative sandstone pavement to reflect the preferred material for many of Campbell Towns buildings.
6. New location for the north bound bus stop as per State Growth requirements, with the two existing post lights fronting the Antique store to be retained.
7. New location for the south bound bus stop as per State Growth requirements, with large open hardstand area with seating and interpretation signage.
8. Nine new ornamental street trees to match the existing street trees fronting Valentine's Park, to reinstate part of the Able Tasman Memorial avenue, and to provide seasonal colour and texture along the streetscape, as well as shade in summer.
9. One of 24 ship outlines containing 100 existing printed convict brick elements accompanied with a series of convict arrow pavement insets that connect each of the 24 convict brick ship elements, leading visitors to explore the whole streetscape and adjoining businesses.
10. New grass verge to provide a natural surface to the adjoining hard pavements.
11. Line marked bays to delineate car parking only, with truck parking relocated further south.
12. Existing line marked turning lanes to be retained.
13. New kerb and channeling moved closer to the road center to reduce the width of asphalt pavement.
14. Coloured concrete pavement to extend from the new realigned kerb and channeling to the shop front to allow for pedestrian traffic from the car parking bays to the adjoining businesses.
15. Existing car parking bays to be retained.


Street trees to add seasonal colour.


Grass verge with street trees.


Pedestrian node with seating and planting.


Exposed coloured concrete pavement.


Seating nodes with feature pavement.


Interpretation signage.


Low planting to provide colour.

CAMPBELL TOWN STREETSCAPE REDEVELOPMENT

High Street (from Bridge Street to the Red Bridge), Campbell Town Tasmania

Stage 1b Concept Plan

0 1 2 5 10m

28 September 2023
Issue D

NORTHERN MIDLANDS COUNCIL

rare.

LANGE design landscape architecture

Trent Atkinson

From: Paul Vandonselaar <Paul.Vandonselaar@rarein.com.au>
Sent: Thursday, 24 August 2023 1:17 PM
To: Trent Atkinson
Subject: FW: High Street William to Queen Streets, Landscape Upgrade - Traffic Analysis Input

Follow Up Flag: Follow up
Flag Status: Flagged

Paul Van Donselaar
Senior Civil Draftsperson

rare.

P: 03 6388 9200
A: 22-24 Paterson Street, Launceston TAS 7250
PO Box 1898, Launceston TAS 7250

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From: Terry Eaton <terry.eaton@bigpond.com>
Sent: Tuesday, July 17, 2018 11:47 AM
To: Rodney Jesson <RodneyJ@rarein.com.au>
Cc: Jonathan Galbraith <jonathan.galbraith@nmc.tas.gov.au>; Des Jennings <des.jennings@nmc.tas.gov.au>
Subject: High Street William to Queen Streets, Landscape Upgrade - Traffic Analysis Input

Hallo Rod, further to the discussions on this requirement the following analysis is provided in regard to traffic factors for consideration as the redesign of this section of street proceeds:
1 Design Considerations
It is considered important to take into consideration the design criteria factors relating to this section of road such as, safety, resident amenity, business needs, highway traffic efficiency, road user requirements – rest stop, provisions, visual amenity and maintaining local sense of place. These criteria are seen as competing factors and need to be weighted according to their relative importance to stakeholders, I see no value in depreciating the business needs such as parking supply to improve the visual amenity with say a commensurate reduction in road efficiency.
I believe it inevitable that with even low traffic growth, at present 2% per annum that eventually Campbelltown will be bypassed with the indicative traffic service level suggesting likely in some 25 to 30 years. This scenario suggests any street upgrades should not have a negative impact on traffic service and the local business needs to ensure any bypass can be deferred as long as possible.
TRAFFIC DATA
A, DSG traffic count data indicates a high variation in daily / hourly traffic with the Friday 5pm to 6pm the heaviest flow (829 vehicles) from south of the town adding some 85% of the flow on Lake Leake Road (77 vehicles) provides an indicative highway flow through Campbelltown at some 906 vehicles.
A design traffic figure adopted by road authorities is the40th highest hour annual value, perusal of the DSG monthly factors suggests a value of 0.96 of the peak Friday value represents an acceptable approximation of this number, ie. 870 vehicles.
DSG traffic growth indicates a 2% increase annually indicating a 10 year say 2030 year volume of some 1060 vehicles
B, Site Traffic Survey, Friday June 22, 2018 – High Street This survey found a substantially lower traffic flow than the comparable DSG values, some 612 vehicles ie 42% less than the DSG count data with the traffic distributed with

48% toward the south and 52% toward the north. Based on this distribution an assessed 2030 40th hour volume of 510 vehicles and 550 vehicles travelling north and south respectively has been adopted for this analysis.

C, Service Station, traffic count data for the service station Friday 5pm to 6pm indicated:

Left in 48, right in 34

Left out 50, right out 40

Comparison with the through volumes indicates, some16% of southbound traffic entered with 17% southbound traffic exiting the site and 11% northbound entering and13% exiting to the north.

Expanding this data to the year 2030 predicted volumes suggests for the period 5pm to 6pm:

Total northbound 550 vehicles, right turn to service station demand 60 vehicles with 70 vehicles exiting right

Total southbound 510 vehicles, left turn to service station demand 80 vehicles with left turn exit 85 vehicles

Service Station, service capacity, facilities 8 fuel outlets and 15 parking spaces, based on an average refill time of 8 minutes and parking time at 15 minutes suggests a maximum site demand at 120 vehicles per hour. Note this value is less than the 140 vehicle assessed as predicted demand to enter the site in 2030 , accordingly the access values have been reduced to right turn in 50, left turn in 70 and right turn exit 60 with left turn exit 75

ASSESSMENT

Service Station Access

The critical traffic movements for assessment are:

1 Right turn entry, conflict 510 through vehicles with 50 right turns, based on a 5 second gap time and 2 second move up time the practical absorption capacity is some 800 vehicles, utilisation ratio .05 and average delay to turn vehicles some 2.5 seconds, required right turn queue 1 vehicle – ideal traffic conditions. Suggest design to provide 30 metre turn length, allowing for a heavy vehicle with 1 in 30 taper.

2 Right turn exit, conflict 1060 through vehicles and 60 right turn exiting vehicles, based on a 6 second gap and 3 second move up time suggests a practical absorption capacity of 250 vehicles, utilisation ratio .19 and average delay to exiting vehicles of some12 seconds with exit storage space requirement for 2 vehicles .

Highway Lane Capacity,

It is suggested minimum design values of lane width 3.7 metres with 1 metre to the outer edge of parking bays. Based on Austroads values for this road width and the location and traffic use factors with a road side parking provision suggests a level of service “c” value for the lane capacity of some 650 vehicles. Comparison with the year 2030 predicted traffic volume suggests an acceptable level of service should be maintained. However with continued growth at 2% per annum suggests capacity may be reached by2040.

CONCLUSION

This assessment indicates an acceptable traffic level of service should be maintained to 2030 for both High Street and the service station access provided the design parameters indicated in this report are considered.

It should be noted that this analysis has been limited to the street capacity and the service station access, no analysis has been undertaken for the parking demand / supply for the businesses fronting this section of High Street .

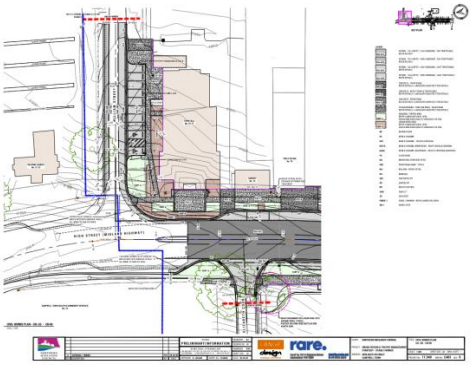
Terry Eaton

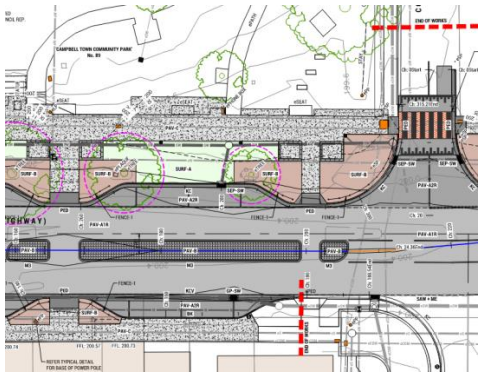
NORTHERN MIDLANDS COUNCIL

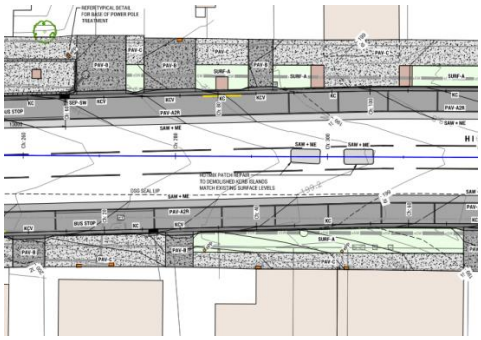
Planning Submission Statement

Campbell Town Streetscape Improvements – High Street Campbell Town

Date – 15th September 2023







Contents

1 Executive Summary

1.1 PROPOSAL SUMMARY

This submission is prepared to support the redevelopment of the Campbell Town Main Street streetscape improvements. The redevelopment is from the intersection of William Street to 115 High street, Campbell Town. The subject site is zoned utilities. This Application is made under section 57 of the Land Use Planning and Approvals Act 1993, which provides for the submission of an application for a discretionary planning permit. The proposal has been prepared in accordance with the Tasmanian Planning Scheme - Northern Midlands.

2 Subject Land & Locality

2.1 SUBJECT LAND DESCRIPTION

The subject site is contained within a State Road Casement and is controlled by Department of State Growth. Maintenance and reconstruction of the drainage and shoulders is the responsibility of the local authority in accordance with Roads and Jetties Act 1935.

Figure 1 Subject site

2.2 LOCALITY DESCRIPTION

The subject site is located within Heritage Precinct identified within the Tasmanian Planning Scheme - Northern Midlands and zoned Utilities.
Neighboring properties are zoned General Business, General Residential, Community Purpose and Open Space, with a number of heritage listed properties adjoining the subject site.

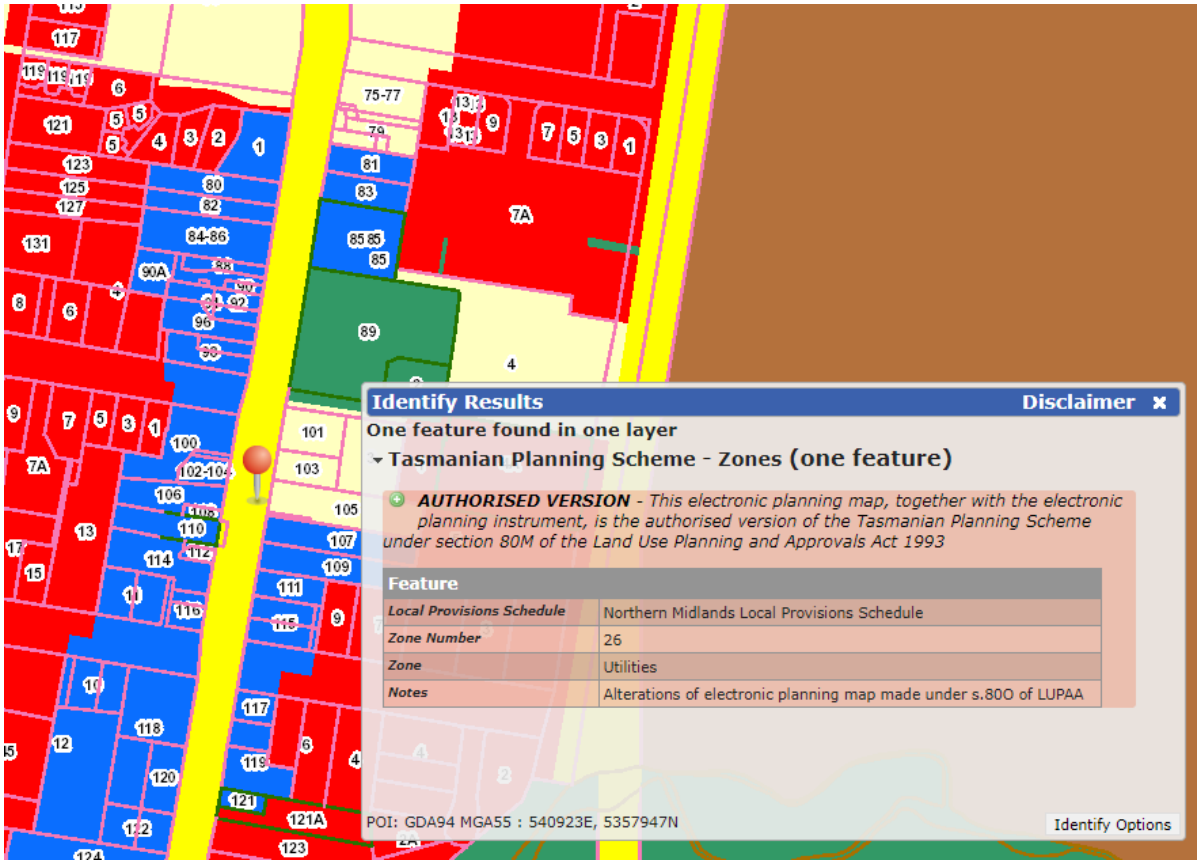


Figure 2 Planning Zones

2.3 HERITAGE

The proposed development is located within the Heritage Precinct and has a number of heritage listed buildings adjoining the proposal.

Figure 1 Heritage Listings

3 Proposal

3.1 DEVELOPMENT PROPOSAL

The proposed development consists of the following:

- Kerb Extension
- Pedestrian Barriers & Bollards
- Reduced carriageway crown
- Street furniture
- Garden beds within kerb build-outs and along footpaths
- Interpretation signage
- Replacement Kerb in areas
- Side street threshold surface treatments
- New concrete pavement to footpaths
- New pedestrian Nodes with island refuge
- Pavement drainage

Refer to plans attached with this planning submission for further details.

4 Planning Assessment / Design Statement

4.1 DEVELOPMENT PROPOSAL

Consideration of this proposal will be governed by the requirements set out within the Heritage Precinct Specific Area Plan.

Campbell Town High Street streetscape design is to enhance the visual amenity of the streetscape and to provide a safer environment for pedestrians of all ages and mobility. Key aspects of the design focus on reducing the amount of hardstand at each intersection by incorporating kerb build-outs, and to add greenery in the form of low planting and street furniture. The main carriageway will have the existing crown reduced to benefit all users. Gardens are also proposed for the kerb build-outs.

Proposed kerb build-outs will provide safer pedestrian crossing nodes by reducing the amount of exposed roadway that a person has to cross, without reducing the actual width of the carriageway. By reducing this hardstand area, and maintaining the existing carriageway width, drivers are encouraged to slow down to allow them to navigate safely through the intersections.

Proposed street furniture will include custom made drink fountains, bollards, bike racks, pedestrian barriers, litter bins and interpretation signage frames. The general theme of the street furniture will be based on the post members that will feature a low pyramid chamfered top with a recessed band below. Satin black is the proposed colour to ensure the items are visible but do not clash with the heritage fabric of the adjoining buildings. Pedestrian barriers are proposed for kerb build-outs to clearly define the pedestrian crossing nodes to add to pedestrian safety, and to provide visual encouragement for drivers to slow down.

Interpretation signage is proposed for key areas and intersections along the streetscape that focus on the historical features, stories and characters of Campbell Town.

4.2 DEVELOPMENT STANDARDS

Standards for development under the Tasmanian Planning Scheme - Northern Midlands are as follows:

ZONES

8.0 General Residential Zone

8.1 Zone purpose

The purpose of the General Residential Zone is:

8.1.1 To provide for residential use or development that accommodates a range of dwelling types where full infrastructure services are available or can be provided.

8.1.2 To provide for the efficient utilization of available social, transport and other service infrastructure.

8.1.3 To provide for non-residential use that:
(a) primary serves the local community; and
(b) does not cause an unreasonable loss of amenity through scale, intensity, noise, activity outside of business hours, traffic generation and movement, or other off site impacts.

8.1.4 To provide for Visitor Accommodation that is compatible with residential character.

8.2 Use Table

Use Class – Discretionary for Utilities if not listed as, No Permit Required.

The Application would meet all the requirements of the **Exemptions 4.0** (4.2.4, 4.2.5 & 4.2.7) The Heritage Precinct triggers the discretionary aspect of this application and will be addressed under section C6.0 Local Historic Heritage Code.

The use is existing and will remain the same.

15.0 General Business Zones

15.1 Zone Purpose

The purpose of the General Business Zone is:

15.1.1 To provide for business, retail, administrative, professional, community, and entertainment functions within the Tasmanian's main suburban and rural centres.

15.1.2 To ensure that the type and scale of use and development does not compromise or distort the activity centre hierarchy.

15.1.3 To encourage activity at pedestrian levels with active frontage and shop windows offering interest and engagement to shoppers.

15.1.4 To encourage Residential and Visitor Accommodation use if it supports the viability of the activity centre and an active street frontage is maintained.

15.2 Use Table

Use Class – Discretionary for Utilities if not listed as, No Permit Required.

15.3 Use Standards

15.3.1 A1 – Not Applicable
A2 – Any proposed external lighting is for security and safety purposes.
A3 – Not applicable

15.3.2 The proposed development is designed to meet all the Zone Purposes and will not compromise or distort the activity Centre Hierarchy.

15.3.3 Not Applicable

15.4 Development Standards for Building and Works

15.4.1 Not Applicable

15.4.2 Not Applicable

15.4.3 Not Applicable

15.4.4 A1 - Pedestrian barriers are proposed and meet all requirements of P1
A2 – Not Applicable

15.4.5 Not Applicable

15.4.6 Not Applicable

15.5 Development Standards for Subdivision

15.5.1 Not Applicable

15.5.2 Not Applicable

26.0 Utilities Zone

26.1 Zone Purpose

The purpose of the utilities zone is:

26.1 To provide land for major utilities installation and corridors.

26.1.2 To provide other compatible uses where they do not adversely impact on the utility.

26.2 Use Table

Use Class – Permitted for Utilities

26.2 Use Standards

26.3.1 Not Applicable

26.3.2 Not Applicable

26.4 Development standards for Building and Works

26.4.1 Not Applicable

26.4.2 Not Applicable

26.4.3 Not Applicable

26.4.4 Not Applicable

26.5 Development Standards for Subdivision

26.5.1 Not Applicable

26.5.2 Not Applicable

27.0 Community Purpose Zone

27.1 Zone Purpose

27.1.1 To provide for key community facilities and services including health, educational, government, cultural and social facilities.

27.1.2 To encourage multi-purpose, flexible and adaptable social infrastructure.

27.2 Use Table

Use Class – Discretionary for Utilities if not listed as, No Permit Required.

The Application would meet all the requirements of the **Exemptions 4.0** (4.2.4, 4.2.5 & 4.2.7) The Heritage Precinct triggers the discretionary aspect of this application and will be addressed under section C6.0 Local Historic Heritage Code.

29.0 Open Space Zone

29.1 Zone Purpose

The purpose of the Open Space Zone is:

29.1.1 To provide land for open space purposes including for passive recreation and natural or landscape amenity.

29.1.2 To provide for use and development that supports the use of the land for open space purposes or for other uses.

29.2 Use Table

Use Class – Discretionary for Utilities if not listed as, No Permit Required.

The Application would meet all the requirements of the **Exemptions 4.0** (4.2.4, 4.2.5 & 4.2.7) The Heritage Precinct triggers the discretionary aspect of this application and will be addressed under section C6.0 Local Historic Heritage Code.

The use is existing and will remain the same.

CODES

C2.0 Parking and Sustainable Transport Code

It is questionable if the code applies to this proposal, However the proposal meets all the objectives of the code's purpose **C2.1**- C2.1.1 to C2.1.5. There are no parking precincts or pedestrian priority Streets so C2.1.6 is not applicable.

C6.0 Local Historic Heritage Code

C6.1 Code Purpose

The purpose of the Local Historic Heritage code is:

C6.1.1 To recognize and protect:
(a) The local historic heritage significance of local places, precincts, landscapes and areas of archaeological potential; and
(b) Significant trees.

C6.2 Application of this Code

C6.2.1 This code applies to**:**
(a) Development on land within any of the following, as defined in this code:

(ii) a local heritage precinct.

C6.6 Developments Standards for Local Places

C6.6.1 Not Applicable
C6.6.2 Not Applicable
C6.6.3 Not Applicable
C6.6.4 Not Applicable
C6.6.5 Not Applicable
C6.6.6 Not Applicable
C6.6.7 Not Applicable
C6.6.8 Not Applicable
C6.6.9 Not Applicable
C6.6.10 Not Applicable

C6.7 Development Standards for Local Heritage Precincts and Local Historic Landscapes Precincts

C6.7.1 Not Applicable
C6.7.2 Not Applicable
C6.7.3 A1
P1.1- The proposals design, colours and materials used are keeping within the character of the area and sympathetic with the local heritage precinct. Please refer to section 4.1 Design Statement and Lange Designs drawings for further details
P1.2 Not Applicable
P1.3 – The proposals has taken the heritage values and significance into consideration. The works in front of Valentines park will make sure it remains the heart of the town. Pavement and gardens will not detract from the colonial architecture that exists but will make it a more inviting and safer place to stop or reside. The listed significant trees will be retained and the work proposed should benefit them.
A2 – No new front fences are proposed, however pedestrian barriers at intersections have been proposed for added safety, these are black in colour and the design does not distract away from the surrounding buildings and precinct, refer to section 4.1 Design Statement and Lange Designs drawings for further details.

C6.8 Development Standards for Places or Precincts of Archaeological Potential

C6.8.1 Not Applicable

C6.9 Significant Trees

Please refer to Enspec Tree Impact Assessment to address A1 – P1, A2 is not applicable, no trees are being removed.

C16.0 Safeguarding of Airports Code

The Proposal is under the 1350mAHD and therefore complies with the Airport Obstacle Limitation areas requirements.

Specific Area Plan

Campbell Town
There is no multiple buildings or subdivision proposed, so no provisions apply to this proposal.

5 Conclusion

This proposal complies with the development standards set out by the Tasmanian Planning Scheme - Northern Midlands, provides a safer pedestrian environment and enhance the visual appearance, usability and enjoyment of the streetscape for residents and visitors.

Prepared by:

Name	Position, Department/Organisation
Trent Atkinson	Project Manager - Northern Midlands Council

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Tree Impact Assessment

Midland Highway (High Street), Campbell Town

Completed for: Northern Midlands Council

Report date: September 19th, 2023

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MORNINGTON. 7018

NEW SOUTH WALES
WATERLOO. 2017

NORTHERN TERRITORY
HUMPTY DOO 0836

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Reference/supplied documents –

- *URBAN DESIGN & TRAFFIC MANAGEMENT STRATEGY – STAGE 3 WORKSDWG201 Rev0*

1. EXECUTIVE SUMMARY

Northern Midlands Council have requested a tree impact assessment for heritage trees along Midland Highway (High Street) Campbell Town where road reconstruction is proposed.

Reconstruction of a section of the Midland Highway is proposed in the vicinity of six heritage *Fraxinus* 'Raywood' (Claret Ash) within the existing pavement in the parking bays, as well as three other trees at the intersection of Elizabeth Court.

1.a. Heritage *Fraxinus* 'Raywood' (Claret Ash)

A plaque is located under Tree 214 dedicating the row to Abel Tasman. Apparently, there were 12 trees planted originally in 1942 as recorded by Monument Australia, but only six remain at this location. This established the row as having notable European heritage value.

While the expected effort to preserve and protect the existing six trees is commendable, given that the original row comprised 12 trees, the current design is a lost opportunity to re-establish additional trees to reconstitute the row.

The proposal includes lowering the height of the traffic lanes, with associated redevelopment of the roadside parking and footpath. Detailed plans of the proposed works have been provided by Council.

Given the apparent age and condition of these trees they are likely to be intolerant of significant detrimental impacts to their health and injudicious actions in executing this project could easily result in the death of one or more of the trees.

1.a.1 Design elements

Garden beds are proposed to be established around the existing trees. Carefully implemented, this will enhance the growing environment for the trees. Turf areas are proposed around the garden beds. Where practical it is recommended that the turf areas be reduced, and the gardens extended, as turf is a competitor for root space and soil resources with the trees.

Irrigation will be an advantage for the trees, especially in the initial years as they recover from any adverse impact of the works on their health. It will be necessary to monitor irrigation so that the garden beds do not become waterlogged.

1.a.2 Likely impacts

There are three primary concerns with regard to the works and their potential impact on the trees –

1. Excavation of the carriageway side of the trees to lower the road profile and install new kerb,
2. Removal of the existing pavement,
3. Damage to the trunk or crown from incidental impacts.

The trunks of the trees should be padded with timber planks to protect them from incidental impacts.

Hi-vis warning tape should be wrapped around the lower branches of the trees to improve visibility and awareness for equipment operators.

Visible evidence indicates the bulk of the trees' roots are likely to be between the trees and the existing road edge kerb, within the carpark area. Limited roots are expected in the carriageway, therefore, careful supervised excavation in this area should be achievable without significant detriment to the trees.

Demolition of the existing pavement poses the risk of direct mechanical damage to existing roots, and exposure of currently covered roots to drying out when exposed. For this reason, the works should be timed to avoid hot weather in late spring and summer.

Carefully peeling the existing asphalt will be required to reveal the subgrade and allow for an assessment of the current depth and extent of roots.

The project plan must incorporate the flexibility to vary the amount of subgrade to be removed or retained, and the amount of subsequent fill that may be required, based on the need to preserve the existing roots.

Removal of the existing kerb around the trees poses a high risk of damage to structural roots and the trunk. Each section will need to be carefully rolled away. If there is any sign of damage or resistance, the section will need to be broken up and removed by hand.

The proposed civil works pose a significant risk of damage to these trees; however, it is considered that with minor design changes, if well planned and carefully executed as described in this report, the proposed project will ultimately enhance the growing environment for these trees.

1.b. Trees at Elizabeth Court

One small *Quercus robur* (English Oak) is growing on the south side of Elizabeth Court in an existing garden area. This tree is not expected to be significantly affected.

On the north side are two large *Ulmus* X *hollandica* (Dutch Elm). These trees will be significantly affected by the need to match the footpath and pram crossing to the new lower road levels. A re-design of the footpath to move it further away form the trees is required if the potential for catastrophic root damage is to be avoided.

1.c. Recommendation summary

ENSPEC's key preventative and remedial tree work recommendations –

- Remove dead branches over the road in Tree 843.
- Undertake a sonic tomography test of the primary union of Tree 214.

ENSPEC's key preservation and protection recommendations –

- Appoint a Project Arborist to provide additional guidance on design and implementation of the project, and to supervise specific high-risk activities as discussed in this report.
- Hold a pre-commencement meeting between key Council personnel, the civil contractor and the Project Arborist to establish clear project goals, responsibility and lines of communication.
- Pad the trunks of the trees with timber planks to protect them from incidental impacts.
- Hi-vis warning tape should be wrapped around the lower branches of the trees to improve visibility and awareness for equipment operators.
- High risk works within the Tree protection Zone (TPZ) of the trees are to be supervised by the Project Arborist. These include, but are not necessarily limited to –
    - Peeling of the existing asphalt,
    - Removal of the existing concrete kerb,
    - Excavation of within the Structural Root Zone (SRZ) of any tree.
- Hand or hydrovac excavation to be used to expose woody roots within the SRZ. Any roots to be removed must be cleanly cut with hand tools. Tearing or ripping with excavation machinery is strictly prohibited.
- Each small section of existing kerb is to be carefully rolled away from the tree under supervision. If there is resistance or obvious evidence of roots being damaged, the segment will need to be broken up and removed by hand.
- It is strongly recommended that exposure of the tree's roots be avoided in hot weather, therefore, summer should be avoided. Ideally the works will occur when the trees are dormant following leaf fall in early autumn.

ENSPEC's key design recommendations –

- Where practical it is recommended that the turf areas be reduced, and the gardens extended, as turf is a competitor for root space and soil resources with the trees.
- Minor amounts of fill will be tolerated by the trees but any proposed soil fill in excess of 10cm should be reviewed by an arborist before implementing.
- Irrigation will be an advantage for the trees, especially in the initial years as they recover from any adverse impact of the works on the health.
- Re-direct the footpath away from the trees at Elizabeth Court utilising the proposed outstand to minimise the risk of damage to structural roots.
- While the expected effort to preserve and protect the existing six trees is commendable, given that the original row comprised 12 trees, the current design is a lost opportunity to re-establish additional trees to reconstitute the row.

2. BRIEF & INSPECTION METHODOLOGY

Northern Midlands Council have requested a tree impact assessment for heritage trees along Midland Highway (High Street) Campbell Town where road reconstruction is proposed.

Site methodology involved a visual inspection of the trees' present health and growing environment. The influence of previous and proposed activities on the trees current and future condition was considered during the assessment.

The trunk diameter and basal diameter was measured for each tree using a forestry tape measure for the calculation of the Tree Protection Zone (TPZ) and Structural Root Zone (SRZ) in accordance with AS4970-2009 *Protection of trees on development sites*. All other dimensions were visually estimated.

3. DATE OF INSPECTION

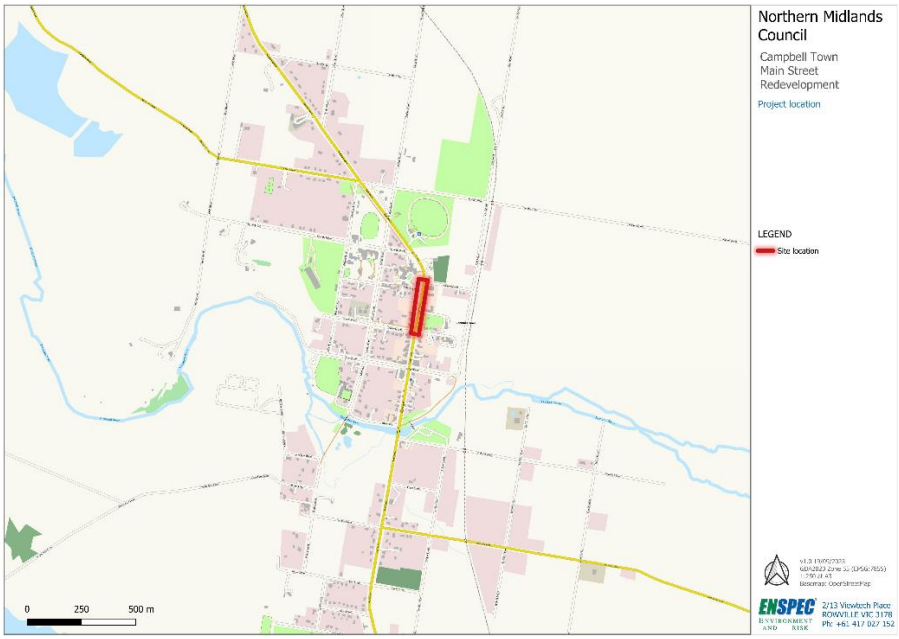
The site assessment was conducted on September 12th. 2023. The weather conditions while conducting the assessment were overcast.

4. ARBORIST CONDUCTING ASSESSMENT

Name of Arborist	**Craig Hinton**
Qualifications	B. App. Sci. (Hort. [Env. Hort.]) Diploma of Arboriculture Diploma of Ecology Dip. App. Sci. (Hort.) Licenced Professional Registered Consulting Arborist #AL1100 Tree Risk Assessment Qualification (TRAQ) Quantified Tree Risk Assessment (QTRA) #3968 VALID Tree Risk-Benefit Validator Cert. IV Assessment and Workplace Training
Industry experience	1994-current, 29 years in consultancy, local government, utility, industry development & research
Phone number	+61 428 193 626
E-mail Address	craig.hinton@enspec.com

5. SITE ADDRESS

The Project is located in the centre of Campbell Town on the Midland Highway (High Street).



6. OVERVIEW

Reconstruction of the section of the Midland Highway is proposed in the vicinity of six heritage *Fraxinus* 'Raywood' (Claret Ash) within the existing pavement in the parking bays, as well as three other trees at the intersection of Elizabeth Court.

A plaque is located under Tree 214 (Photo 1) dedicating the row to Abel Tasman. Apparently, there were 12 trees planted originally in 1942, but only six remain at this location as recorded by Monument Australia (https://monumentaustralia.org.au/themes/people/exploration/display/101473-abel-tasman).

Photo 1 - Plaque

Figure 1 - Plan (supplied)

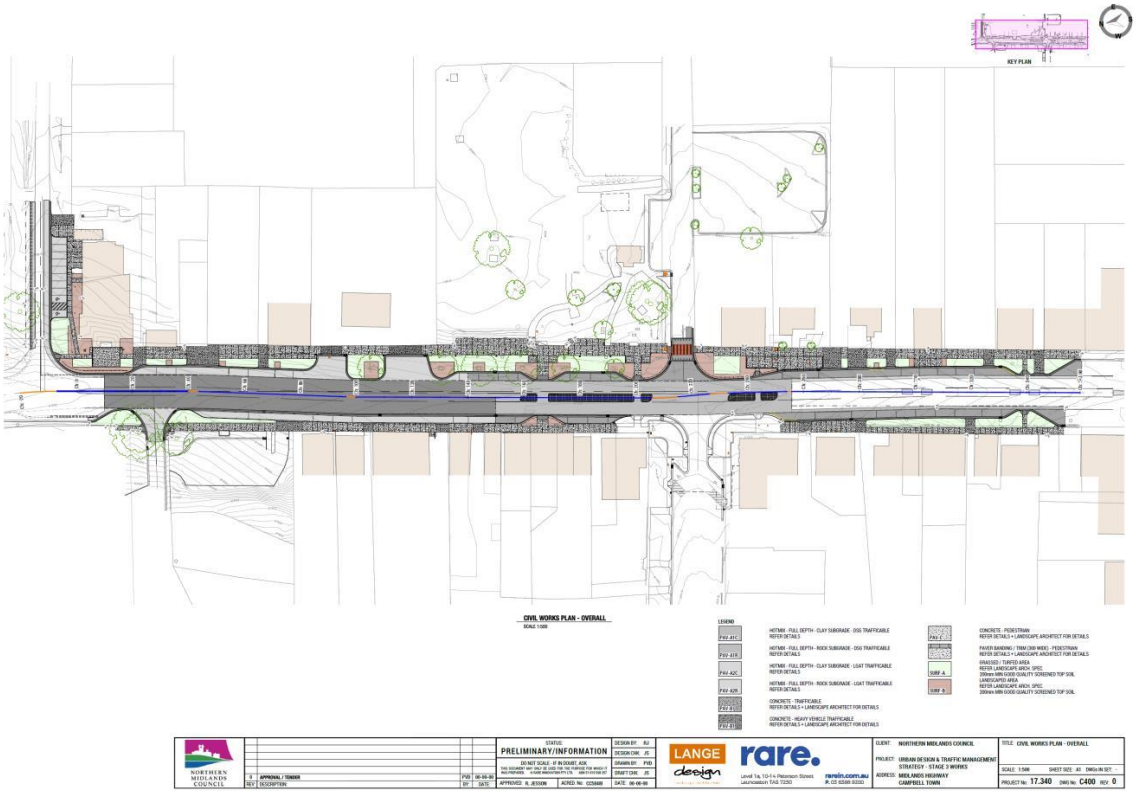


Photo 2 – Heritage row of Fraxinus 'Raywood' (5 of 6 trees)

Photo 3 - Elizabeth Court

Assessment data for each of the trees is provided in the appendices.

An overview of the site and affected trees is shown below and provided in an enlarged version in the appendices.

Figure 2 - Overview

The current road pavement has a high crown. The *Fraxinus* 'Raywood' are growing in small kerbed outstands within the asphalt parking area.

The proposal includes lowering the height of the traffic lanes, redevelopment of the roadside parking and footpath. Detailed plans of the proposed works have been provided by Council.

The outstands around the *Fraxinus* 'Raywood' are proposed to be removed along with some of the parking area to create enlarged garden beds and lawns around the trees.

One small *Quercus robur* (English Oak) is growing on the south side of Elizabeth Court in an existing garden area. On the north side are two large *Ulmus* X *hollandica* (Dutch Elm). These trees will be affected by the need to match the footpath and pram crossing to the new lower road levels.

7. RISK ASSESSMENT

Trees are living, dynamic organisms that pose some risk of harm to people and property. There are many factors that affect the level of risk associated with trees including the time of the year, extreme weather, and previous maintenance works.

Overall risk from trees is extremely low. Norris (2010) compiled statistics from a 53-month period and calculated the fatality rate from accidental tree failure in an urban area at 1:17.7 million annually during that period.

Management of unreasonable risk is an appropriate response; however, the elimination of all risk from trees in our community is not practical or environmentally sound, as this would require the removal of many trees in the community. This is not desirable as the exceedingly small risk that the population of trees represent is outweighed by the benefits that the trees provide.

Risk versus Hazard
There is often confusion between risks and hazards when assessing risk. Risk and hazard are not the same. A hazard is the presence of, or ability of, something to cause harm. With all mature trees, there may be a hazard present, just as there may be with any man-made structure. For example, the ceiling of a building could fall into a room. This is a hazard. It is a hazard that, if it falls on a person, will most likely cause some level of injury. This injury is classified as a consequence. The likelihood of the ceiling failing is extremely remote. The likelihood of the ceiling failing when it could cause an injury is even more remote, as the room will not be occupied at all times over a 24-hour period.

The combination of the consequence and the likelihood is the risk. In the example above the risk is so small that a reasonable person would take no particular action to avoid the risk. A risk assessment aims to categorise risks to identify risks that are unacceptably high. A decision then can be made on the most appropriate way to manage the risk down to an acceptable level.

Risk assessment
A tree risk assessment is undertaken to identify trees that pose a risk of harm to people or property that is greater than the risk threshold that is acceptable based on normal community standards of risk and any specific factors for the tree or location.

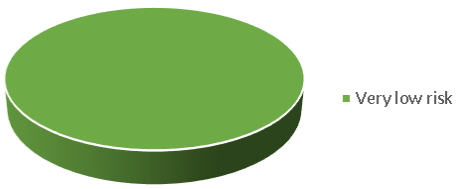
The risk assessment considers the hazard from the tree, and any factors that increase the hazard of that tree from the general population of trees. These factors will include tree health, tree structure and the presence of observable dead or broken branches, cavities, or structural issues. The risk assessment also takes into account the magnitude of harm that may occur from the most likely hazard posed by the tree and the likelihood of that harm occurring based on the type of target (e.g. person, building) and how often that target is likely to occupy the target area.

Mitigation measures are recommended for trees that have been identified as an unacceptable risk to reduce the risk to an acceptable level.

When conducting the assessment, the most serious hazard that could foreseeably occur within a 3-year re-inspection period is assessed and rated.

A summary of the risk assessments is provided in the following table. Individual tree risk assessments and inspection periods are provided in the accompanying data tables.

Risk rating	No of trees	% of total
Very low risk	10	100%
Grand Total	**10**	**100%**



More information on the risk assessment process is provided in APPENDIX 1 – TREE RISK ASSESSMENT PROCESS.

8. DISCUSSION

8.a. Heritage *Fraxinus* 'Raywood' (Claret Ash)

The six heritage *Fraxinus* 'Raywood' (Claret Ash), shown in the following photos, are within the existing pavement of the road.

Given the apparent age and condition of the trees they are likely to be intolerant of significant detrimental impacts to their health and injudicious actions in executing this project could easily result in the death of one or more of the trees.

The proposed civil works therefore pose a significant risk of damage to these trees; however, it is considered that if well planned and carefully executed as described in this report, the proposal will ultimately enhance the growing environment for these trees.

Photo 4 - Tree 210 (north)

Photo 5 - Tree 211

Photo 6 - Tree 212

Photo 7 - Tree 213

Photo 8 - Tree 214

Photo 9 - Tree 215 (south)

These trees were not in leaf at the time of assessment, but bud development and minimal obvious dead wood indicates the trees are probably in fair to good health. Reasonable effort to preserve them is therefore justified.

8.a.1 Likely impacts

There are three primary concerns with regard to the works and their potential impact on the trees –

4. Excavation of the carriageway side of the trees to lower the road profile and install new kerb,
5. Removal of the existing pavement,
6. Damage to the trunk or crown from incidental impacts.

8.a.1.1 Excavation of the carriageway

Examination of the existing pavement around these trees showed cracking and heave of the pavement between the trees and the kerb. While this damage is not typically significant, it does indicate that shallow woody roots are present under this section of the pavement (Photo 10). There is no such evidence on the carriageway side of the trees (Photo 11). This is unsurprising as the depth and standard of the pavement construction is likely to be greater for the carriageway which in turn discourages root growth. It is therefore concluded that the majority of the roots of these trees are on the east side between the trees and the existing kerb and footpath.

This is further suggested by the potential availability of soil water where the pavement joins the kerb. Degradation of the asphalt and some displacement of the kerb will be allowing some water to infiltrate the soil profile (Photo 12).

Some roots may have utilised subsurface soil gaps, uncompacted service trenches or the like, and extended beyond the footpath pavement into the open lawn area of the reserve. This is unlikely but it is possible.

While the nominal TPZ of the trees extends well into the carriageway, the factors discussed above indicate that the actual root systems of these trees will be heavily truncated on the carriageway side.

Photo 10 – Car park pavement

Photo 11 – Carraigaway side

Photo 12 - Car park pavement

Based on these observations and given that the design generally increases the distance from the tree trunks to the new kerb, the excavation for the carriageway is considered unlikely to have a major impact on the existing root systems of the trees.

That said, extreme caution must be taken with the initial works to establish the actual extent of roots around the base of the trees as damage to roots close to the base will detrimentally affect the trees health and could affect their stability.

Removal of the existing pavement is discussed in the next section, but once the asphalt is removed, it will be necessary to establish the extent of roots on the carriageway side and ensure that any roots that need to be cut are cut cleanly by hand and not ripped or torn by excavation machinery. Hand or hydrovac excavation will therefore be required within the SRZ of the trees, which is ~1.5 metres to either side of the trunk.

It is strongly recommended that the excavation within the SRZ is supervised by a qualified arborist with experience with civil infrastructure projects. They can also undertake any root pruning that is required.

8.a.1.2 Removal of the existing pavement

Asphalt layer and subgrade

There is clear evidence that the trees have shallow roots under the existing asphalt layer within the carparking area. Preservation of these roots will be critical for preventing detrimental health impacts for these trees.

Removal of the asphalt within the nominal TPZ of the trees must be undertaken with extreme care, using appropriate machinery and techniques that ensure the root systems of the trees are not damaged during the demolition or once they are exposed. The asphalt will need to be peeled back without disturbing the underlying subgrade so that the extent, depth and distribution of the existing root system can be examined. This process needs to be supervised by a qualified arborist with experience in civl infrastructure projects.

The extent and distribution of the existing roots will determine whether any of the subgrade can be removed. It may be necessary to retain the subgrade and install the proposed garden of lawn over the top of it; however, this will not be determined until the asphalt is removed. The project needs to include the flexibility to remove or retain as much of the subgrade as is determined necessary once the root systems are exposed.

Kerb

The current outstands are defined by concrete kerb right at the base of the trees. It is highly likely that the structural roots will in places be compressed against or incorporated into the kerb. Removal of the kerb is therefore a high-risk activity.

It is recommended that each small section be carefully rolled away from the tree under supervision. If there is resistance or obvious evidence of roots being damaged, the segment will need to be broken up and removed by hand.

8.a.1.3 Damage to the trunk or crown from incidental impacts

There will be machinery operating in very close proximity to the trees. Incidental impact will cause bark damage or could fracture branches. This must be avoided. Tree 210 already has a substantial trunk wound from a mechanical impact.

The trunks of the trees should be padded with timber planks to protect them from incidental impacts (Photo 13).

Hi-vis warning tape should be wrapped around the lower branches of the trees to improve visibility and awareness for equipment operators.

Photo 13

8.a.2 Project timing

Demolition of existing pavement and excavation associated with the project will result in previously covered roots of the trees being exposed to the open elements. They are therefore at high risk of drying out, as well as at risk of incidental mechanical damage.

It is strongly recommended that exposure of the tree's roots be avoided in hot weather, therefore, summer works should be avoided. Ideally the works will occur when the trees are dormant following leaf fall in early autumn.

8.a.3 Design elements

Garden beds are proposed to be established around the existing trees. Carefully implemented, this will enhance the growing environment for the trees. Turf areas are proposed around the garden beds. Where practical it is recommended that the turf areas be reduced, and the gardens extended, as turf is a competitor for root space and soil resources with the trees.

It is assumed that irrigation will be incorporated into the design to maintain the turf and garden beds. Irrigation will be an advantage for the trees, especially in the initial years as they recover from any adverse impact of the works on the health. It will be necessary to monitor irrigation so that the garden beds do not become waterlogged.

It is expected that some fill will be required on the eastern side of the project to match the existing carpark level to the footpath level. Minor amounts of fill will be tolerated by the trees, but any proposed soil fill in excess of 10cm should be reviewed by an arborist before implementing.

While the expected effort to preserve and protect the existing six trees is commendable, given that the original row comprised 12 trees, the current design is a lost opportunity to re-establish additional trees to reconstitute the row.

8.b. Trees at Elizabeth Court

Tree 842, the young *Quercus robur* on the southwest corner (Photo 14), is not considered at significant risk of harm from the project as it is relatively small, set back form the road and within a relatively large open space area. Rehabilitation of the existing garden bed behind the tree will improve the growing conditions of the tree and therefore its capacity to tolerate any adverse effects.

Photo 14 - Tree 842

Photo 15 - Tree 843 & 844

Photo 16

Trees 843 & 844, two large *Ulmus* X *hollandica* on the northwest corner (Photo 15), are considered at high risk of structural root damage.

In order to match the lowered road level, the existing footpath and pram crossing will need to be reconstructed at a lower level. These structures are right at the base of the trees and excavation in this area will cause structural root damage (Photo 16).

Re-direction of the footpath away from the trees will be necessary, utilising the proposed outstand. This is indicatively shown on the figure at 14.b in Appendix 2. Even so, supervised careful excavation will be required to ensure the trees' stability and health are not compromised.

8.c. Supervision by a Project Arborist

Works are proposed that pose a high risk to the health, and potentially to the stability, of eight trees, including six heritage trees. By carefully implementing well designed plans, the project offers the opportunity to enhance the growing environment for these trees.

To ensure this occurs, mindful execution of the works in an appropriate manner is essential. Experience shows that such civil works rarely occur in such a manner around established trees without the supervision of a Project Arborist.

It is therefore recommended that a Project Arborist be appointed to provide additional guidance on design and implementation of the project, and to supervise specific high-risk activities as discussed in this report.

The Project Arborist should hold an AQF Level 5 (Diploma) in Arboriculture and have extensive experience in implementing civil infrastructure projects.

A pre-commencement meeting between key Council personnel, the civil contractor and the Project Arborist is strongly recommended to establish clear project goals, responsibility and lines of communication.

9. RECOMMENDATIONS & WORKS

9.a. Preventative and remedial work

There is a trunk cavity in Tree 214 (Photo 17) that indicates there is potentially significant decay in this tree. Sonic tomography testing is recommended at the primary union.

Relatively minor dead branches are present in Tree 843 (Photo 18); however, as they overhang the waiting area for vehicles at the intersection of Elizabeth Court it is recommended that these be removed.

Photo 17- Cavity in Tree 214

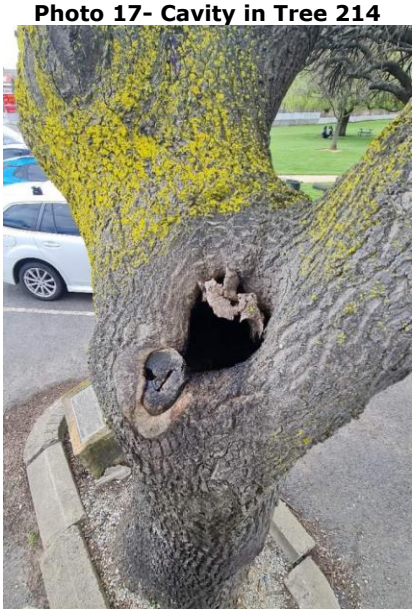


Photo 18 - Deadwood in Tree 843

9.a.1 Pruning

Any pruning work must be carried out by appropriately qualified arborists working to AS4373-2007 *Pruning of amenity trees* and Minimum Industry Standard *MIS308 Tree pruning*.

9.b. Key recommendation summary

ENSPEC's key preventative and remedial tree work recommendations –

- Remove dead branches over the road in Tree 843.
- Undertake a sonic tomography test of the primary union of Tree 214.

ENSPEC's key preservation and protection recommendations –

- Appoint a Project Arborist to provide additional guidance on design and implementation of the project, and to supervise specific high-risk activities as discussed in this report.
- Hold a pre-commencement meeting between key Council personnel, the civil contractor and the Project Arborist to establish clear project goals, responsibility and lines of communication.
- Pad the trunks of the trees with timber planks to protect them from incidental impacts.
- Hi-vis warning tape should be wrapped around the lower branches of the trees to improve visibility and awareness for equipment operators.
- High risk works within the TPZ of the trees are to be supervised by the Project Arborist. These include, but are not necessarily limited to –
    - Peeling of the existing asphalt,
    - Removal of the existing concrete kerb,
    - Excavation of within the SRZ of any tree.
- Hand or hydrovac excavation to be used to expose woody roots within the SRZ. Any roots to be removed must be cleanly cut with hand tools. Tearing or ripping with excavation machinery is strictly prohibited.
- Each small section of existing kerb is to be carefully rolled away from the tree under supervision. If there is resistance or obvious evidence of roots being damaged, the segment will need to be broken up and removed by hand.
- It is strongly recommended that exposure of the tree's roots be avoided in hot weather, therefore, summer works should be avoided. Ideally the works will occur when the trees are dormant following leaf fall in early autumn.

ENSPEC's key design recommendations –

- Where practical it is recommended that the turf areas be reduced, and the gardens extended, as turf is a competitor for root space and soil resources with the trees.
- Minor amounts of fill will be tolerated by the trees but any proposed soil fill in excess of 10cm should be reviewed by an arborist before implementing.
- Irrigation will be an advantage for the trees, especially in the initial years as they recover from any adverse impact of the works on the health.
- Re-direct the footpath away from the trees at Elizabeth Court utilising the proposed outstand to minimise the risk of damage to structural roots.
- While the expected effort to preserve and protect the existing six trees is commendable, given that the original row comprised 12 trees, the current design is a lost opportunity to re-establish additional trees to reconstitute the row.

10. CONCLUSION

Six heritage *Fraxinus* 'Raywood' (Claret Ash) are currently growing within the existing pavement of the Midland Highway. Given the apparent age and condition of these trees they are likely to be intolerant of significant detrimental impacts to their health and injudicious actions in executing this project could easily result in the death of one or more of the trees.

A further three trees at Elizabeth Court are also at risk from the proposed works.

The proposed civil works pose a significant risk of damage to these trees; however, it is considered that with minor design changes, if well planned and carefully executed as described in this report, the proposed project will ultimately enhance the growing environment for these trees.

11. REFERENCES & BIBLIOGRAPHY

- Arboriculture Australia (2020) MIS308 Tree Pruning, Arboriculture Australia, Adelaide
- Arboriculture Australia (2021) MIS313 Tree Health & Maintenance, Arboriculture Australia, Adelaide
- Norris, M. (2010) *Acts of God: Urban Tree Management*, Proceedings of the 11th National Street Tree Symposium, TREENET, Adelaide.
- Standards Australia (2007) AS4373-2007 *Pruning of amenity trees*, Standards Australia, Sydney.
- Standards Australia (2009) AS4970-2009 *Protection of trees on development sites*, Standards Australia, Sydney.

12. DISCLOSURE STATEMENT

ENSPEC Pty Ltd and their employees are specialists who use their knowledge, training and education (qualifications), infield learning experiences, personal experiences research, diagnostic tools, scientific equipment to examine trees, recommend measures to enhance the beauty, health and preservation of trees, to reduce the risk of living near trees.

Trees are living organisms that can be affected by pests, diseases and natural events outside of ENSPEC control. ENSPEC and their employees cannot detect every condition that affects a trees health, condition and structural integrity. Conditions are often hidden within trees and below ground where humans cannot naturally see. Unless otherwise stated, ENSPEC's employee's observations have been visually made from ground level.

In the event that ENSPEC recommends retesting or inspection of trees at stated intervals, or ENSPEC recommends the installation engineering solutions, ENSPEC must inspect the engineering solution at intervals of not greater than 12 months, unless otherwise specified in writing. It is the client's responsibility to make arrangements with ENSPEC to conduct re-inspections.

Intervention treatments of trees may involve considerations beyond the scope of ENSPEC's service, such as property boundaries and ownership, disputes between neighbours, sight lines, landlord-tenant matters and other related incidents. ENSPEC cannot take such issues into account unless complete and accurate information is given prior or at the time of the site inspection. Likewise ENSPEC Pty Ltd cannot accept responsibility for the authorisation or non-authorisation of any recommended treatment or remedial measures undertaken.

ENSPEC Pty Ltd cannot guarantee that a tree will be healthy or safe under all circumstances or for a specified period of time after our initial inspection and recommendations.

If this written report is to be used in a court of law, or any other legal situation, or by other parties ENSPEC must be advised in writing prior to the written report being presented in any form to any other party. All written reports must be read in their entirety. At no time shall part of the written assessment be referred to unless taken in full context with the whole written report.

Clients may choose to accept or disregard the recommendations of the assessment and written report.

Notwithstanding anything in the report, express or implied, the client is not entitled to recover from ENSPEC Pty Ltd, its employees, agents and/or subcontractors any damages for business interruption or loss of actual or anticipated revenue, income or profits or any consequential, special, contingent or penal damage, whatsoever, and the client releases ENSPEC Pty Ltd from any such liability. Without limitation of the foregoing, a party shall at all times be limited (to the extent permitted by law) damages in the amount paid by the Client to ENSPEC Pty Ltd for ENSPEC Pty Ltd services. The limitation applies whether the claim is based on warranty, contract, statute, tort (including negligence) or otherwise.

13. APPENDIX 1 – TREE RISK ASSESSMENT PROCESS

The following table shows the ratings for the Likelihood of Failure, Likelihood of Impact, and the Consequences. We have developed a simple formula to categorise the risk posed by the tree. The formula is:

$$\frac{\text{Likelihood of Failure X Likelihood of Impact X Consequences}}{2}$$

At the completion of this assessment a more detailed analysis may be required to document the risk. The maximum total score that can be allocated to a tree or area using this matrix is **500 points**.

At the completion of the assessment, and to help categorise the final quantified risk of the tree, we have applied the following points table; these categories are not set and may be amended to meet specific local requirements for special needs. It is important that the assessor uses common sense when providing recommendations. Mitigation of risk should not always involve only the tree; simple options such as the relocation or realignment of the target can be a workable, cost effective outcome (e.g. shifting a footpath). Alternative options can be clearly documented in a management plan.

1 -125 points = Very Low Risk Tree. For example, the tree will have no failures prior to the next inspection period and in most cases no remedial arboriculture works will be required.

125 – 250 points = Low Risk Tree. For example, remedial arboricultural work or tree removal may be required to mitigate the risk of this tree. A management plan defining the outcomes of the assessment may be required. Engineering solutions may also be considered to mitigate the risk.

250 – 375 points = Medium Risk Tree. For example, remedial arboricultural work or a management plan will be required to manage the tree. Engineering solutions may need to be implemented to mitigate the risk. Total removal may be the only option.

375 – 500 points = High Risk Tree. For example, extensive remedial arboricultural work and an extensive management plan are required to manage the tree (if retained). Engineering solutions may need to be implemented to mitigate the risk. Total removal of the tree may be the only option.

Likelihood of Failure
The Likelihood of Failure (e.g. the branch or tree failing) is assessed up to the next designated inspection date. If the tree is on an annual inspection regime the assessor must only assess that part of the tree he believes could, or will, fail within the inspection period. If there are other defects in the tree that could fail outside of the inspection period their Likelihood of Failure should not be considered, as they have not been identified as the 'immediate risk'. Such defects should be documented in some form, such as in a comment section or a more detailed written report – the client should define these requirements.

Likelihood of Impact
The Likelihood of Impact is assessed by estimating the period the target is occupied by a human. A tree could have several different Likelihood of Impact ratings under the tree's own canopy; for example, the tree may overhang a footpath, as well as an area that cannot be accessed by humans or vehicles. If the defect is located above a footpath that is used for 4-8 hours per day the assessor would categorise the Likelihood of Impact as 'Frequent Use', whereas, if the defect is located above an area that is not used (e.g. grass or garden bed) the Likelihood of Impact would be assessed as 'Low Use'.

Consequences
When assessing the Consequences, the section of tree that must be assessed (e.g. branch, trunk) is that which the arborist believes could fail within the defined inspection time frame and hit the designated Likelihood of Impact (target). The specific section being assessed for Likelihood of Failure could be any part of the tree, from a small piece of dead wood of <25 mm through to the whole tree. The rating for Consequences is calculated by estimating the extent, severity and value of damage caused by a tree failure resulting in an impact.

The re-inspection date plays a critical role in determining the Likelihood of Failure and it is critical that the future inspection regime is determined prior to or at the completion of the tree inspection. Full inspection cycles are generally categorised as 1, 3 or 5 years.

Additional Assessment
At all times, the assessor should complete a second risk assessment while on site if remedial works or engineering solutions are to be recommended in the final report; this allows the client to understand the risk the tree poses **after the recommendations have been implemented**.

Likelihood of Failure

10	**Almost certain**	Obvious fault that indicates a failure is almost certain under normal conditions within the re-inspection period (better than 1:2 – 50% chance)
8	**Likely**	Obvious fault that indicates a failure is highly likely under normal conditions within re-inspection period (better than 1:4 – 25% chance)
6	**Moderate**	Obvious fault that indicates failure is possible under normal conditions within re-inspection period (better than 1:10 – 10% chance)
4	**Unlikely**	Obvious fault that indicates failure is unlikely to occur under normal conditions within re-inspection period (better than 1:50 – 2% chance)
2	**Rare**	Obvious fault that indicates failure is very unlikely to occur under normal conditions within re-inspection period (better than 1:100 –< 2% chance)
1	**Not expected**	No observable fault that would suggest failure is likely to occur within re-inspection period

Likelihood of Impact

10	**Constant Use 1:3**	An area that is used or occupied more than 8 hours per day by human beings or other transient situations, such as parked cars
8	**Frequent Use 1:6.25**	An area that is used or occupied between 4 & 8 hours per day by human beings or other transient situations, such as parked cars
6	**Occasional Use 1:12.5**	An area that is used or occupied between 2 & 4 hours per day by human beings or other transient situations, such as parked cars
4	**Minimal Use 1:25**	An area used or occupied between 1 & 2 hours per day by human beings or other transient situations, such as parked cars
1	**Low Use <1:25**	An area used or occupied for less than 1 hour per day by human beings or other transient situations, such as parked cars

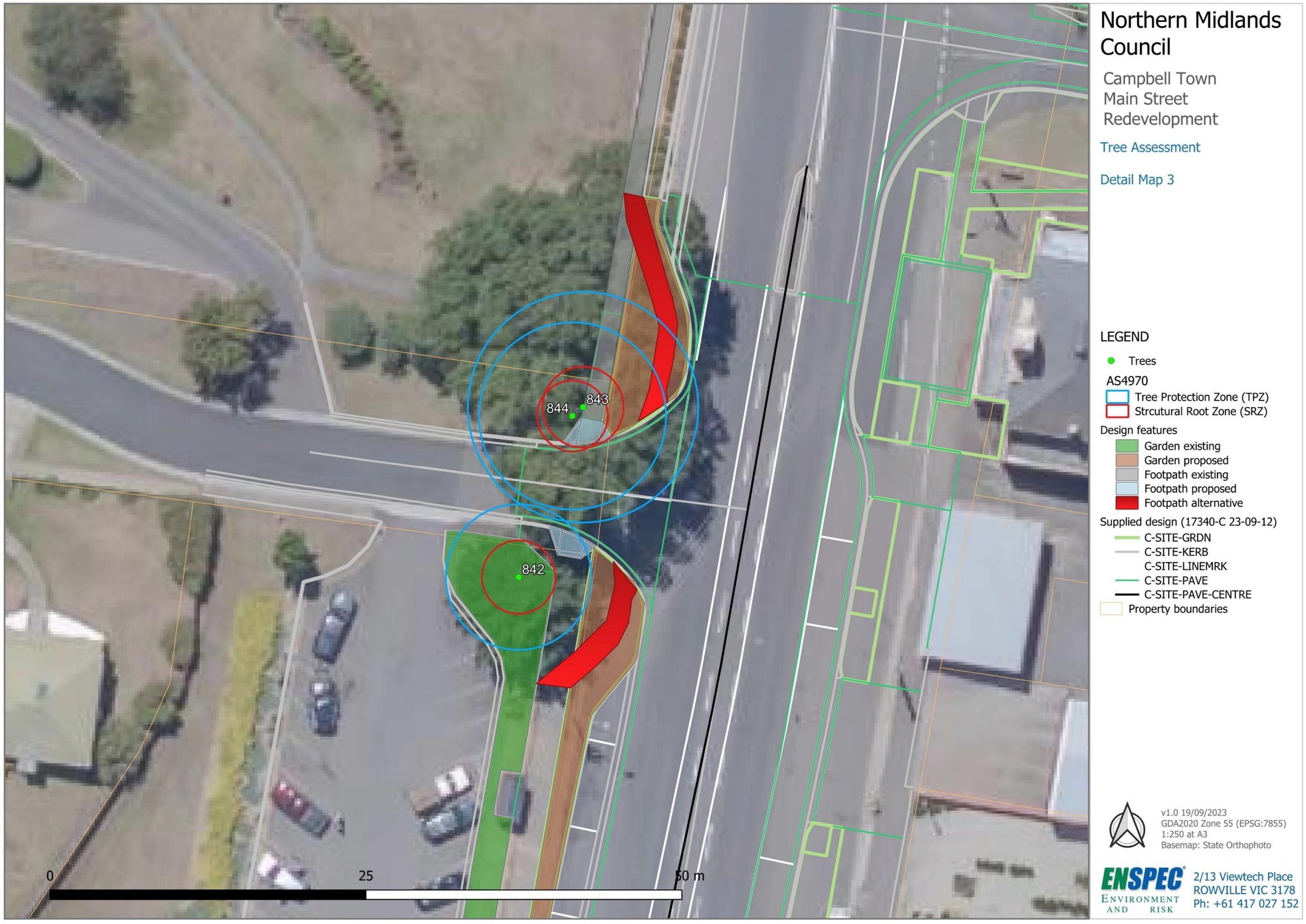
Consequences

10	**Catastrophic**	1. HUMAN impacts – paraplegia, quadriplegia, brain damage or death 2. Extensive property damage – will require the building to be rebuilt; potential for a consequence catastrophic Property damage likely to be more than $100,000
8	**Major**	1. HUMAN impacts – serious and / or extensive injuries requiring medical treatment with hospital admission 2. Significant property damage / partial loss – will require substantial works to repair the building; consequence major Damage likely to be greater than $20,000 and less than $100,000
6	**Moderate**	1. HUMAN impacts – moderate injuries requiring medical treatment but without hospital admission 2. Moderate property damage requiring repair work; damage to building medium; consequences moderate Damage likely to be more than $5000 and less than $20,000
4	**Minor**	1. HUMAN impacts – minor injuries immediately treated on-site with First Aid treatment 2. Minor property damage – damage to building light; minor effect on persons inside; consequences minor Damage likely to be more than $1000 and less than $5000
1	**Insignificant**	1. HUMAN impacts – unlikely to cause injuries 2. Insignificant damage likely to the building or property; consequences insignificant Damage will be less than $1000 e.g. broken tiles or windows

14. APPENDX 2 – MAPS

14.a. Site overview

14.b. Detail 1


844
843
842
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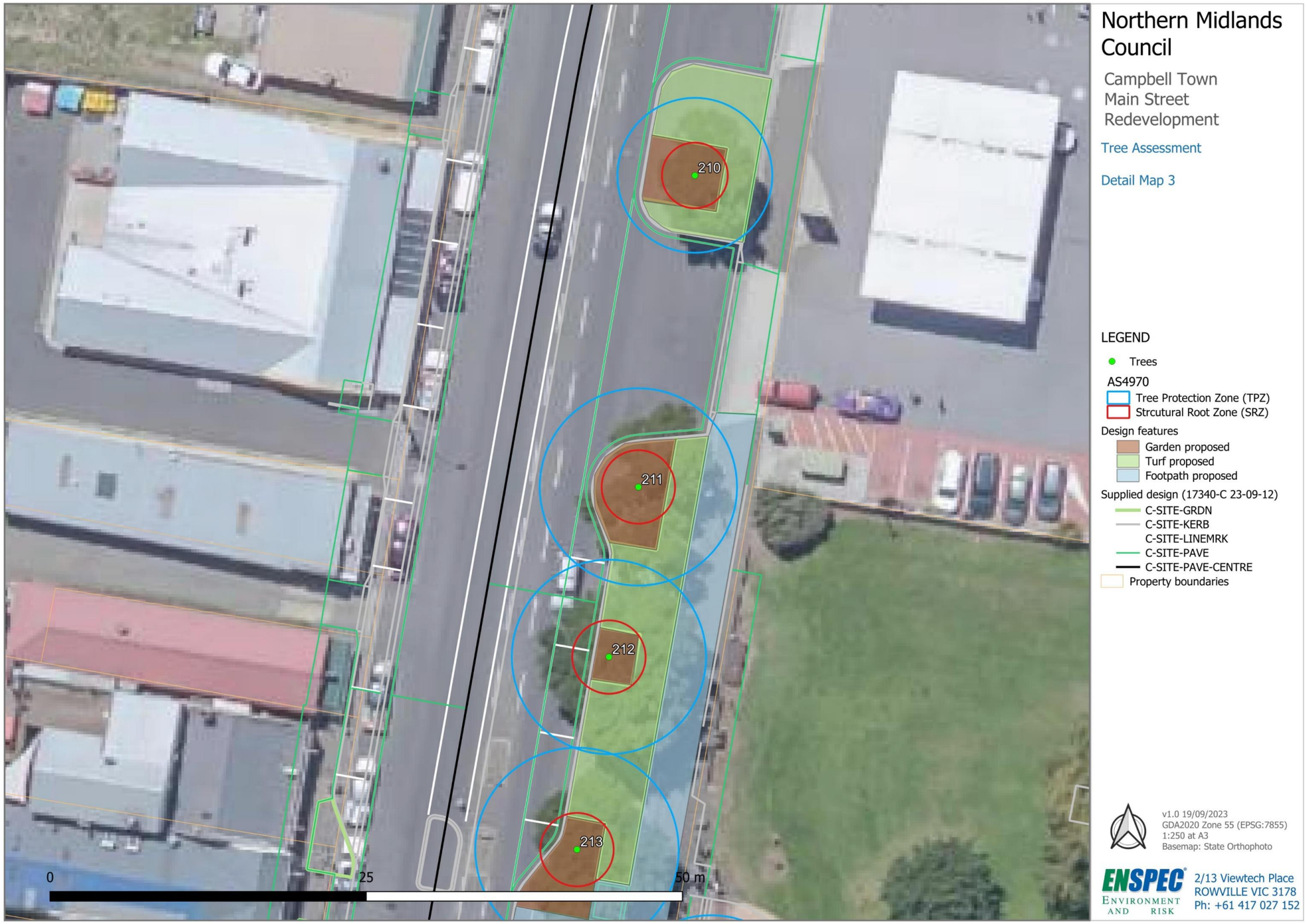
25
50 m
Northern Midlands Council
Campbell Town Main Street Redevelopment
Tree Assessment
Detail Map 3
LEGEND
Trees
AS4970
Tree Protection Zone (TPZ)
Strcutural Root Zone (SRZ)
Design features
Garden existing
Garden proposed
Footpath existing
Footpath proposed
Footpath alternative
Supplied design (17340-C 23-09-12)
C-SITE-GRDN
C-SITE-KERB
C-SITE-LINEMRK
C-SITE-PAVE
C-SITE-PAVE-CENTRE
Property boundaries
v1.0 19/09/2023
GDA2020 Zone 55 (EPSG:7855)
1:250 at A3
Basemap: State Orthophoto
ENSPEC
ENVIRONMENT AND RISK
2/13 Viewtech Place
ROWVILLE VIC 3178
Ph: +61 417 027 152

14.c. Detail 2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Northern Midlands Council
Campbell Town Main Street Redevelopment
Tree Assessment
Detail Map 3
LEGEND
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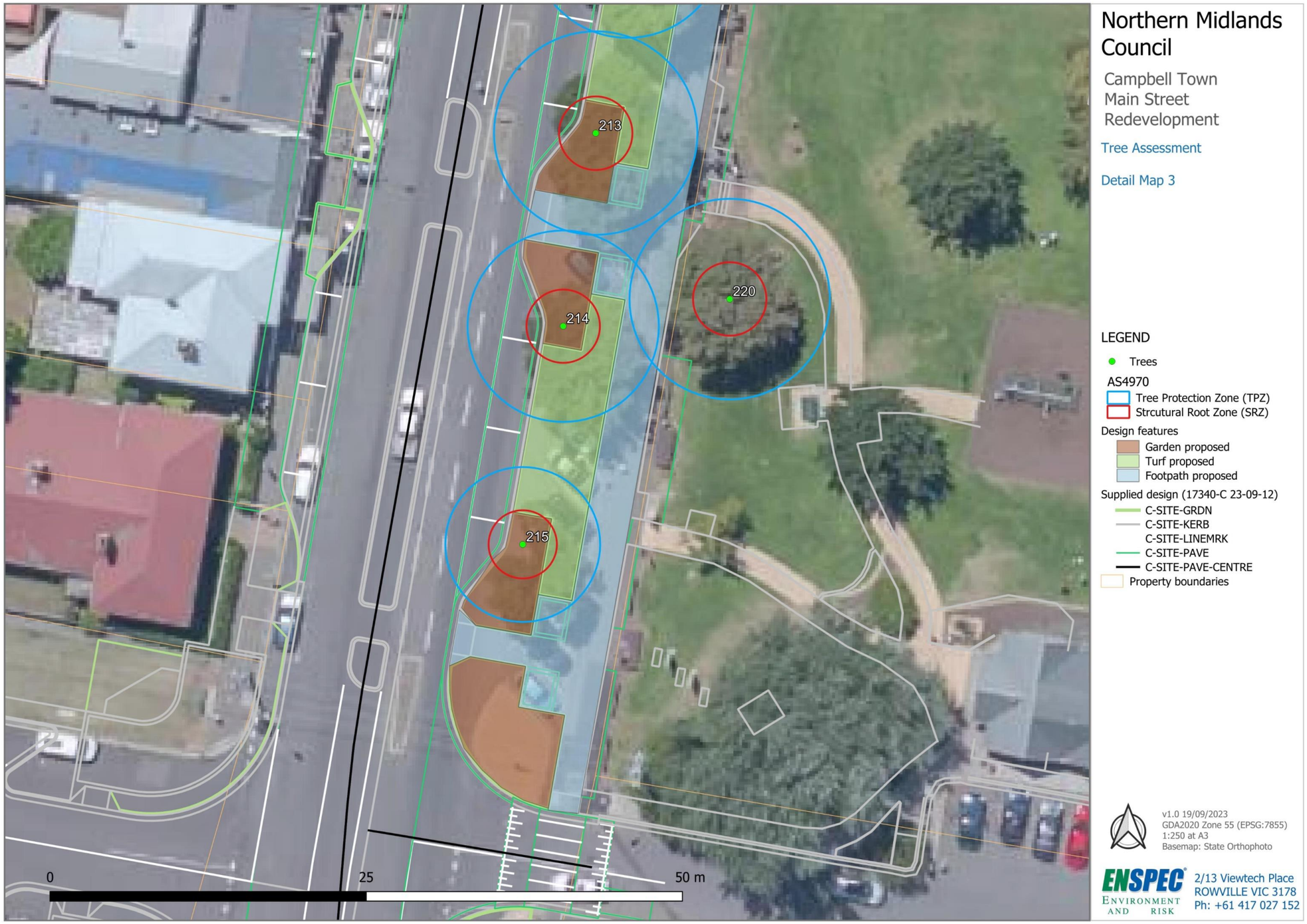
AS4970
Tree Protection Zone (TPZ)
Strcutural Root Zone (SRZ)
Design features
Garden proposed
Turf proposed
Footpath proposed
Supplied design (17340-C 23-09-12)
C-SITE-GRDN
C-SITE-KERB
C-SITE-LINEMRK
C-SITE-PAVE
C-SITE-PAVE-CENTRE
Property boundaries
v1.0 19/09/2023
GDA2020 Zone 55 (EPSG:7855)
1:250 at A3
Basemap: State Orthophoto
ENSPEC
Environment and Risk
2/13 Viewtech Place
ROWVILLE VIC 3178
Ph: +61 417 027 152

14.d. Detail 3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215
220
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50 m
Northern Midlands Council
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GDA2020 Zone 55 (EPSG:7855)
1:250 at A3
Basemap: State Orthophoto
ENSPEC
ENVIRONMENT AND RISK
2/13 Viewtech Place
ROWVILLE VIC 3178
Ph: +61 417 027 152

15. APPENDX 3 –DATA TABLES

15.a. Tree data

Tree ID	*Species*	*Common name*	*Trunk type*	*DBH cm*	*TPZ radius m*	*Basal*	*SRZ radius m*	*Height*	Canopy EW *m*	Canopy NS *m*	*Deadwood*	*Life stage*	*Health*	*Structure*	*Life expectancy*	*Factor 1*	*Factor 2*
211	*Fraxinus* 'Raywood'	Claret Ash	Single	65	7.8	75	2.9	9	8	13	Negligible	Mature	Medium decline	Poor	10 - 29 years	Powerline pruned	Scaffold wound
213	*Fraxinus* 'Raywood'	Claret Ash	Single	67	8	76	2.9	10	10	13	2-5 cm	Mature	Minor decline	Fair	30 - 49 years	Scaffold wound	Asymmetric canopy
215	*Fraxinus* 'Raywood'	Claret Ash	Single	51	6.1	60	2.7	9	6	9	2-5 cm	Mature	Medium decline	Fair	30 - 49 years	Cavity-scaffold	Scaffold wound
220	*Pyrus communis*	Common Pear	Single	66	7.9	75	2.9	9	11	11	5-8 cm	Mature	Dieback	Typical	50 plus years	Trunk wound	Crossing limbs
212	*Fraxinus* 'Raywood'	Claret Ash	Single	64	7.7	74	2.9	10	10	14	2-5 cm	Mature	Minor decline	Fair	30 - 49 years	Scaffold wound	Powerline pruned
214	*Fraxinus* 'Raywood'	Claret Ash	Single	63	7.6	73	2.9	11	8	12	2-5 cm	Mature	Minor decline	Fair	30 - 49 years	Cavity-trunk	Trunk wound
842	*Quercus robur*	English Oak	Single	48	5.8	71	2.9	12	10	10	Negligible	Mature	Healthy	Typical	50 plus years	Scaffold wound	None observed
210	*Fraxinus* 'Raywood'	Claret Ash	Single	51	6.1	58	2.6	8	7	8	2-5 cm	Mature	Minor decline	Fair	30 - 49 years	Trunk wound	Scaffold wound
843	*Ulmus* X *hollandica*	Dutch Elm	Single	76	9.1	89	3.2	15	12	11	8-10 cm	Mature	Healthy	Typical	50 plus years	Asymmetric canopy	None observed
844	*Ulmus* X *hollandica*	Dutch Elm	Single	62	7.4	68	2.8	14	10	7	0-2 cm	Mature	Healthy	Typical	50 plus years	Asymmetric canopy	Basal/buttress wound

15.b. Risk assessment

Tree ID	Species	Common name	Target	Likelihood value	Impact value	Consequence value	Risk	Reinspection
211	*Fraxinus* 'Raywood'	Claret Ash	Sealed Carpark	6	8	6	Low risk	3 years
213	*Fraxinus* 'Raywood'	Claret Ash	Sealed Carpark	4	8	4	Very low risk	3 years
215	*Fraxinus* 'Raywood'	Claret Ash	Sealed Carpark	4	8	4	Very low risk	3 years
220	*Pyrus communis*	Common Pear	Footpath	4	6	4	Very low risk	3 years
212	*Fraxinus* 'Raywood'	Claret Ash	Sealed Carpark	4	8	4	Very low risk	3 years
214	*Fraxinus* 'Raywood'	Claret Ash	Sealed Carpark	4	8	4	Very low risk	3 years
842	*Quercus robur*	English Oak	Footpath	1	4	1	Very low risk	3 years
210	*Fraxinus* 'Raywood'	Claret Ash	Road	4	8	4	Very low risk	3 years
843	*Ulmus* X *hollandica*	Dutch Elm	Footpath/Road	2	4	6	Very low risk	3 years
844	*Ulmus* X *hollandica*	Dutch Elm	Footpath/Road	1	8	4	Very low risk	3 years

15.c. Work recommendations

Tree ID	Species	Common name	Work recommendation 1	Work recommendation 2	Work priority	Equipment	Work instructions
214	*Fraxinus* 'Raywood'	Claret Ash	Diagnostic test	No work required	High	Specialist	Tomography at primary union.
843	*Ulmus* X *hollandica*	Dutch Elm	Deadwood removal	No work required	High	EWP	Over intersection

From: Hills, Garry
Sent: Wednesday, 25 October 2023 2:23 PM
To: NMC Planning
Subject: RE: Referral-DSG PLN23-0199 - Campbell Town Main Streetscape

Our Ref: D23/253642

Hello Sylvia – thank you for the referral of the above planning application

The department have no objection to the proposal

Noting that there is road construction activity in the State road reservation proposed, we request Council provide the following condition and note on any planning permit issued:

- Prior to commencement of the use, plans showing all works to be undertaken in the road reservation (road construction, drainage, sewer, water, power, communications, and traffic facilities etc) along with must be submitted to the Department of State Growth for review and acceptance as part of applications for service works and access works permits, see Note 1

  NOTE 1: A valid works permit is required for all works undertaken in the State road (High Street) reservation Details of the permit process and application forms can be found at: www transport tas gov au/road_permits/permits_and_bookings/general_works_pathways,_stock_underpass Applications must be received by the Department of State Growth a minimum of twenty (20) business days prior to the expected commencement date for works to allow sufficient time for the application to be assessed No works are to be undertaken until a written permit has been issued

Thanks, Garry

Garry Hills | Principal Analyst Traffic Engineering
Infrastructure Tasmania | Department of State Growth
GPO Box 536, Hobart TAS 7001
Phone: (03) 6777 1940
www.stategrowth.tas.gov.au

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

Rosemary Jones

From: Bonner, Chris <Chris.Bonner@heritage.tas.gov.au>
Sent: Monday, 16 October 2023 10:06 AM
To: NMC Planning
Cc: Rebecca Green
Subject: RE: Referral to THC - Planning Application PLN-23-0199 Campbell Town Streetscape

Dear Sylvia,

Thank you for you email.
The Tasmanian Heritage Council can have **no interest** in determining this DA, as the works are not proposed to be carried out in relation to a registered place that is entered in the Tasmanian Heritage Register.
The works are therefore not heritage works or development for the purpose of the *Historic Cultural Heritage Act 1995.*

If you have any questions, please contact me on the details below.
regards

Tasmanian Government

Chris Bonner | Regional Heritage Advisor | M: 0428 992 763
Heritage and Land Tasmania | Environment, Heritage & Land
Department of Natural Resources and Environment Tasmania
Public Buildings | Level 1 / 53 St John Street | Launceston TAS 7250
GPO Box 618 | Hobart TAS 7001 | T: 1300 850 332
W: www.heritage.tas.gov.au

Delivering a sustainable Tasmania

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.

From: Bonner, Chris
Sent: Friday, October 13, 2023 4:19 PM
To: NMC Planning <planning@nmc.tas.gov.au>
Cc: Rebecca Green <rebecca.green@nmc.tas.gov.au>
Subject: RE: Referral to THC - Planning Application PLN-23-0199 Campbell Town Streetscape

Thank you Sylvia,

We will reply formally next week.
Regards

Tasmanian Government

Chris Bonner | Regional Heritage Advisor | M: 0428 992 763
Heritage and Land Tasmania | Environment, Heritage & Land
Department of Natural Resources and Environment Tasmania
Public Buildings | Level 1 / 53 St John Street | Launceston TAS 7250
GPO Box 618 | Hobart TAS 7001 | T: 1300 850 332
W: www.heritage.tas.gov.au

Submission to Planning Authority Notice

Council Planning Permit No.	PLN23-0199	**Council notice date**	12/10/2023
TasWater details			
TasWater Reference No.	TWDA 2023/01435-NMC	**Date of response**	16/10/2023
TasWater Contact	Al Cole	**Phone No.**	0439605108
Response issued to			
Council name	NORTHERN MIDLANDS COUNCIL		
Contact details	Planning@nmc.tas.gov.au		
Development details			
Address	115 HIGH ST, CAMPBELL TOWN	**Property ID (PID)**	6203300
Description of development	Campbell Town Streetscape/Roadworks Project (Heritage Precinct)		

Schedule of drawings/documents

Prepared by	Drawing/document No.	Revision No.	Date of Issue
Rare	17.340/C401-C404, C601-C604	0	--

Conditions

Pursuant to the *Water and Sewerage Industry Act* 2008 (TAS) Section 56P(1) TasWater imposes the following conditions on the permit for this application:

CONNECTIONS, METERING & BACKFLOW

In the event that any adjustments to existing property connections are required, Conditions 1-3 shall apply.

1. A suitably sized water supply with metered connections and sewerage system and connections to each property in the development area must be designed and constructed to TasWater's satisfaction and be in accordance with any other conditions in this permit.
2. Any removal/supply and installation of water meters and/or the removal of redundant and/or installation of new and modified property service connections must be carried out by TasWater at the developer's cost.
3. Prior to commencing construction/use of the development, any water connection utilised for construction/the development must have a backflow prevention device and water meter installed, to the satisfaction of TasWater.

ASSET CREATION & INFRASTRUCTURE WORKS

4. Plans submitted with the application for Engineering Design Approval must, to the satisfaction of TasWater show, all existing, redundant and/or proposed property services and mains.

   Advice: New water mains constructed in the National Highway must be DICL/MSCL at 1200mm depth.
5. Prior to applying for a Permit to Construct new infrastructure the developer must obtain from TasWater Engineering Design Approval for new TasWater infrastructure. The application for Engineering Design Approval must include engineering design plans prepared by a suitably qualified person showing the hydraulic servicing requirements for water and sewerage to TasWater's satisfaction.
6. Prior to works commencing, a Permit to Construct must be applied for and issued by TasWater. All

infrastructure works must be inspected by TasWater and be to TasWater's satisfaction.

7. In addition to any other conditions in this permit, all works must be constructed under the supervision of a suitably qualified person in accordance with TasWater's requirements.

8. Prior to the issue of a Certificate of Water and sewerage Compliance (Building and/or Plumbing) all additions, extensions, alterations or upgrades to TasWater's water and sewerage infrastructure required to service the development, are to be completed generally as shown on, and in accordance with, the plans listed in the schedule of drawings/documents, and are to be constructed at the expense of the developer to the satisfaction of TasWater, with live connections performed by TasWater.

9. After testing/disinfection, to TasWater's requirements, of newly created works, the developer must apply to TasWater for connection of these works to existing TasWater infrastructure, at the developer's cost.

10. At practical completion of the water and sewerage works and prior to applying to TasWater for a Certificate of Water and Sewerage Compliance (Building and/or Plumbing), the developer must obtain a Certificate of Practical Completion from TasWater for the works that will be transferred to TasWater. To obtain a Certificate of Practical Completion:

    a. Written confirmation from the supervising suitably qualified person certifying that the works have been constructed in accordance with the TasWater approved plans and specifications and that the appropriate level of workmanship has been achieved.

    b. A request for a joint on-site inspection with TasWater's authorised representative must be made.

    c. Security for the twelve (12) month defects liability period to the value of 10% of the works must be lodged with TasWater. This security must be in the form of a bank guarantee.

    d. Work As Constructed drawings and documentation must be prepared by a suitably qualified person to TasWater's satisfaction and forwarded to TasWater.

    Upon TasWater issuing a Certificate of Practical Completion, the newly constructed infrastructure is deemed to have transferred to TasWater.

11. After the Certificate of Practical Completion has been issued, a 12-month defects liability period applies to this infrastructure. During this period all defects must be rectified at the developer's cost and to the satisfaction of TasWater. A further 12-month defects liability period may be applied to defects after rectification. TasWater may, at its discretion, undertake rectification of any defects at the developer's cost. Upon completion, of the defects liability period the developer must request TasWater to issue a "Certificate of Final Acceptance". TasWater will release any security held for the defect's liability period.

12. The developer must take all precautions to protect existing TasWater infrastructure. Any damage caused to existing TasWater infrastructure during the construction period must be promptly reported to TasWater and repaired by TasWater at the developer's cost.

13. Ground levels over the TasWater assets and/or easements must not be altered without the written approval of TasWater. Should the proposed works reduce the existing cover, TasWater infrastructure must be renewed to current standards, eg 1200mm cover under National Highways.

14. New curb/gutter cannot be built over TasWater infrastructure unless crossing at +/- 90 degrees or for short (<2m) distances, eg C603.

15. A construction management plan must be submitted with the application for TasWater Engineering Design Approval. The construction management plan must detail how the new TasWater infrastructure will be constructed while maintaining current levels of services provided by TasWater

to the community. The construction plan must also include a risk assessment and contingency plans covering major risks to TasWater during any works. The construction plan must be to the satisfaction of TasWater prior to TasWater's Engineering Design Approval being issued.

DEVELOPMENT ASSESSMENT FEES

16. The applicant or landowner as the case may be, must pay a development assessment fee of, $389.86, to TasWater, as approved by the Economic Regulator and the fee will be indexed, until the date paid to TasWater.

    The payment is required within 30 days of the issue of an invoice by TasWater.

Advice

General

For information on TasWater development standards, please visit https://www.taswater.com.au/building-and-development/technical-standards

For application forms please visit https://www.taswater.com.au/building-and-development/development-application-form

Service Locations

Please note that the developer is responsible for arranging to locate the existing TasWater infrastructure and clearly showing it on the drawings. Existing TasWater infrastructure may be located by a surveyor and/or a private contractor engaged at the developers cost to locate the infrastructure.

(a) A permit is required to work within TasWater's easements or in the vicinity of its infrastructure. Further information can be obtained from TasWater.

(b) TasWater has listed a number of service providers who can provide asset detection and location services should you require it. Visit https://www.taswater.com.au/building-and-development/service-locations for a list of companies.

(c) Sewer drainage plans or Inspection Openings (IO) for residential properties are available from your local council.

Declaration

The drawings/documents and conditions stated above constitute TasWater's Submission to Planning Authority Notice.

TasWater Contact Details			
Phone	13 6992	Email	development@taswater.com.au
Mail	GPO Box 1393 Hobart TAS 7001	Web	www.taswater.com.au

PLANNING APPLICATION

Proposal

Description of proposal: ……

Perth Main Road - Streetscape Improvements. Consisting of kerb extension, Bicycle treatments, pedestrian barriers, Street Furniture, garden beds, signage, new pavement, replacement kerb, new pedestrian nodes

……

……

……

(attach additional sheets if necessary)

If applying for a subdivision which creates a new road, please supply three proposed names for the road, in order of preference:

1…NA…… 2…… 3……

***Site address**:* The Intersection of Mary Street & Main Road to Intersection of Old Punt Road & Main Street, Perth

……

CT no: ……

Estimated cost of project *$*…3,800,000.00…… *(include cost of landscaping, car parks etc for commercial/industrial uses)*

Are there any existing buildings on this property? Yes / No
If yes – main building is used as ……Road Infrastructure and associated items……

If variation to Planning Scheme provisions requested, justification to be provided:

……

……

……

……

……

(attach additional sheets if necessary)

Is any signage required? ……As per documents……
(if yes, provide details)

Department of State Growth

Salamanca Building Parliament Square
4 Salamanca Place, Hobart TAS
GPO Box 536, Hobart TAS 7001 Australia
Email permits@stategrowth.tas.gov.au Web www.stategrowth.tas.gov.au
Ref: SRA-23-600

Tasmanian Government

Trent Atkinson
Northern Midlands Council
By email: trent.atkinson@nmc.tas.gov.au

Received
20/09/2023

Dear Trent

Crown Landowner Consent Granted - Main Road (Midland Highway), Perth. Between Mary Street and Old Punt Road

I refer to your recent request for Crown landowner consent relating to the development application at Main Road (Midland Highway), Perth. Between Mary Street and Old Punt Road for Streetscape Improvements.

I, Fiona McLeod, Director Asset Management, the Department of State Growth, having been duly delegated by the Minister under section 52 (1F) of the *Land Use Planning and Approvals Act 1993* (the Act), and in accordance with the provisions of section 52 (1B) (b) of the Act, hereby give my consent to the making of the application, insofar as it affects the State road network and any Crown land under the jurisdiction of this Department.

The consent given by this letter is for the making of the application only insofar as that it impacts Department of State Growth administered Crown land and is with reference to your application dated 1 September 2023, and the approved documents, as accessible via the link below:

https://files.stategrowth.tas.gov.au/index.php/s/SGhJoYfalxTXlSy

A copy of the Instrument of Delegation from the Minister authorising the delegate to sign under section 52 of the Act can also be accessed via the above link.

Please access and download these documents for your records as soon as possible as this link will expire six months from the date of this letter.

In giving consent to lodge the subject development application, the Department notes the following applicable advice:

Other types of works (pipeline, etc.) OR Construction of infrastructure in the road reserve/on Crown land (Works permit required)

In giving consent to lodge the subject development application, the Department notes that the works in the State road network will require the following additional consent:

The consent of the Minister under Section 16 of the *Roads and Jetties Act 1935* to undertake works within the State road reservation.

For further information please visit https://www.transport.tas.gov.au/roads_and_traffic_management/permits_and_bookings or contact permits@stategrowth.tas.gov.au.

Received
20/09/2023

Other:

The design plan needs to be modified to add additional kerb outstand on the northern side of Little Mulgrave Street junction with Main Street – in order to protect vehicles giving way at the junction.

The Department reserves the right to make a representation to the relevant Council in relation to any aspect of the proposed development relating to its road network and/or property.

Yours sincerely

Fiona McLeod
DIRECTOR ASSET MANAGEMENT

Delegate of
Minister for Infrastructure and Transport
Michael Ferguson MP

20 September 2023

cc: General Manager, Northern Midlands Council

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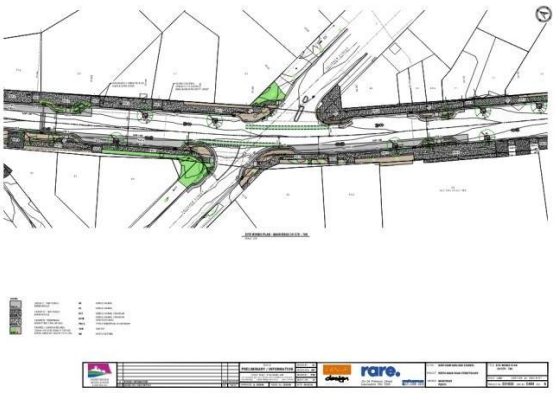
NORTHERN MIDLANDS COUNCIL

Planning Submission Statement

Perth Streetscape Improvements – Main Road Perth

Date – 13th September 2023 Revision B



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Contents

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1 Executive Summary

1.1 PROPOSAL SUMMARY

This submission is prepared to support the redevelopment of the Perth Main Road streetscape in Perth. The redevelopment is from the intersection of Mary Street to Old Bridge Road. The subject site is zoned utilities. This Application is made under section 57 of the Land Use Planning and Approvals Act 1993, which provides for the submission of an application for a discretionary planning permit. The proposal has been prepared in accordance with the Tasmanian Planning Scheme Northern Midlands.

2 Subject Land & Locality

2.1 SUBJECT LAND DESCRIPTION

The subject site is contained within a State Road Casement and is controlled by Department of State Growth. Maintenance and reconstruction of the drainage and shoulders is the responsibility of the local authority in accordance with Roads and Jetties Act 1935. The ownership is currently being transferred to Council as part of the Perth bypass project and is awaiting formalisation.

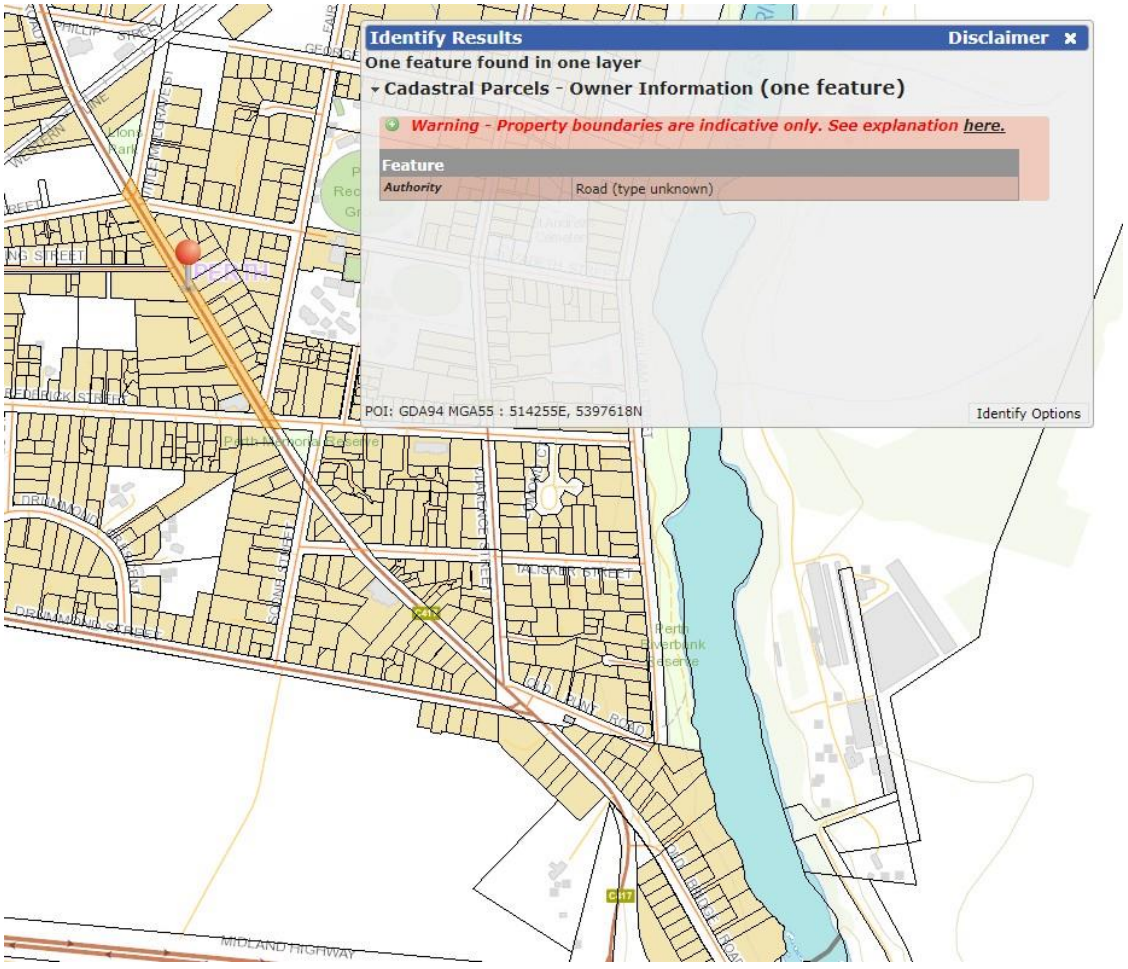

Figure 1 Subject site

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2.2 LOCALITY DESCRIPTION

The subject site is located within Heritage Precinct identified within the Tasmanian Planning Scheme - Northern Midlands and zoned Utilities.
Neighboring properties are zoned General Business, General Residential, Utilities and Open Space, with a number of heritage listed properties adjoining the subject site.

Figure 2 Planning Zones

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2.3 HERITAGE

The proposed development is located within the Heritage Precinct and has a number of heritage listed buildings adjoining the proposal.

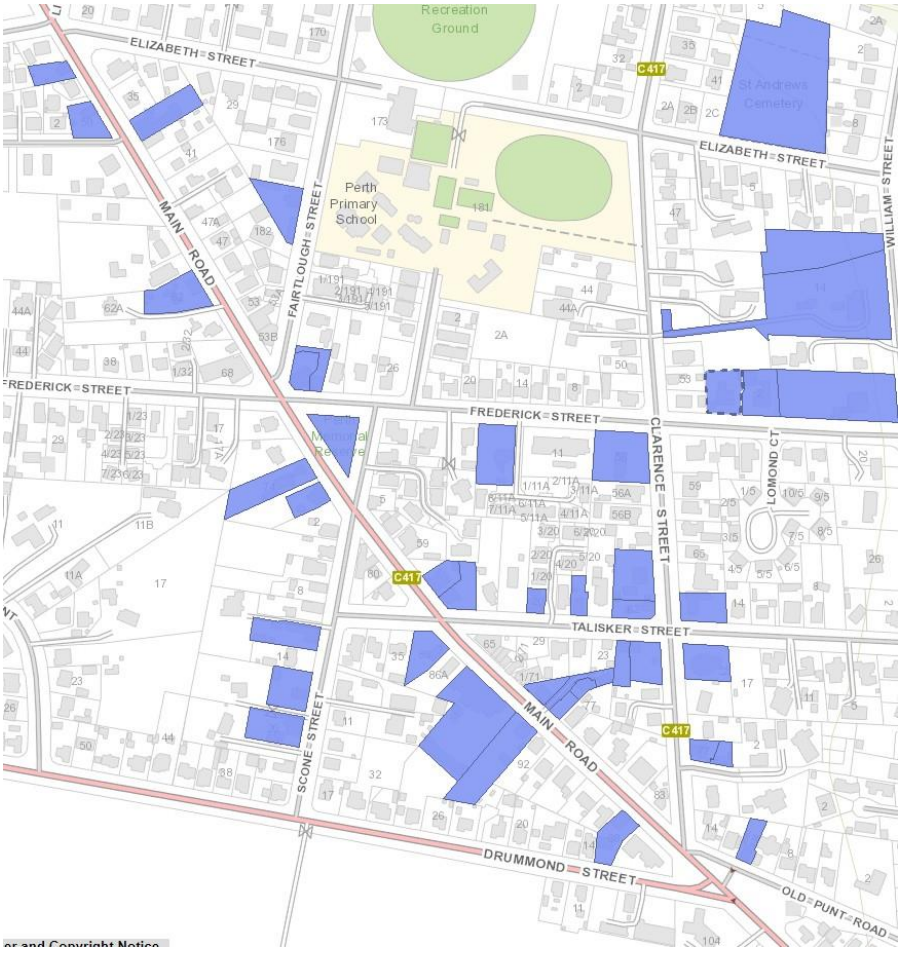

Figure 1 Heritage Listings

3 Proposal

3.1 DEVELOPMENT PROPOSAL

The proposed development consists of the following:

- Kerb Extension
- Bicycle treatments
- Pedestrian Barriers & Bollards
- Street furniture
- Rain Gardens for stormwater filtration
- Garden beds within kerb build-outs and along footpaths
- Interpretation signage

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- Replacement Kerb in areas
- Side street threshold surface treatments
- New concrete pavement to footpaths
- New pedestrian Nodes with island refuge
- Pavement drainage

Refer to plans attached with this planning submission for further details.

4 Planning Assessment / Design Statement

4.1 DEVELOPMENT PROPOSAL

Consideration of this proposal will be governed by the requirements set out within the Heritage Precinct Specific Area Plan.

Perth Main Road streetscape design is to enhance the visual amenity of the streetscape and to provide a safer environment for pedestrians of all ages and mobility. Key aspects of the design focus on reducing the amount of hardstand at each intersection by incorporating kerb build-outs, and to add greenery in the form of low planting and street furniture. Rain gardens are also proposed for the kerb build-outs to harvest stormwater and provide a low level of filtration before the run-off reenters the stormwater pipe network.

Proposed kerb build-outs will provide safer pedestrian crossing nodes by reducing the amount of exposed roadway that a person has to cross, without reducing the actual width of the carriageway. By reducing this hardstand area, and maintaining the existing carriageway width, drivers are encouraged to slow down to allow them to navigate safely through the intersections.

Other aspects of the design include upgrading damaged kerb and channeling and providing consistent and themed pedestrian concrete pavement treatments throughout.

Proposed street furniture will include custom made drink fountains, bollards, bike racks, pedestrian barriers, litter bins and interpretation signage frames. The general theme of the street furniture will be based on the post members that will feature a low pyramid chamfered top with a recessed band below. Satin black is the proposed colour to ensure the items are visible but do not clash with the heritage fabric of the adjoining buildings. Pedestrian barriers are proposed for kerb build-outs to clearly define the pedestrian crossing nodes to add to pedestrian safety, and to provide visual encouragement for drivers to slow down.

Interpretation signage is proposed for key areas and intersections along the streetscape that focus on the historical features, stories and characters of Perth. The actual graphic design and wording of these interpretation signs will be a project within itself.

As part of the proposal, Council applied to lower the speed limit from Fairtlouight Street to Drummond Street from 50km/h to 40km/h, this request was not supported by the Department of State Growth as the number of vehicles and pedestrians is modest, the Tasmanian Speed Zoning Guidelines refer to 40km/h speed limits being applied to Streets with exceptionally high amounts of pedestrian activity, school zones and local traffic areas (eg. streets with speed humps).

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4.2 DEVELOPMENT STANDARDS

Standards for development under the Tasmanian Planning Scheme - Northern Midlands are as follows:

ZONES

8.0 General Residential Zone

8.1 Zone purpose

The purpose of the General Residential Zone is:

8.1.1 To provide for residential use or development that accommodates a range of dwelling types where full infrastructure services are available or can be provided.

8.1.2 To provide for the efficient utilization of available social, transport and other service infrastructure.

8.1.3 To provide for non-residential use that:
(a) primary serves the local community; and
(b) does not cause an unreasonable loss of amenity through scale, intensity, noise, activity outside of business hours, traffic generation and movement, or other off site impacts.

8.1.4 To provide for Visitor Accommodation that is compatible with residential character.

8.2 Use Table

Use Class – Discretionary for Utilities if not listed as, No Permit Required.

The Application would meet all the requirements of the **Exemptions 4.0** (4.2.4, 4.2.5 & 4.2.7) The Heritage Precinct triggers the discretionary aspect of this application and will be addressed under section C6.0 Local Historic Heritage Code.

The use is existing and will remain the same.

15.0 General Business Zones

15.1 Zone Purpose

The purpose of the General Business Zone is:

15.1.1 To provide for business, retail, administrative, professional, community, and entertainment functions within the Tasmanian's main suburban and rural centres.

15.1.2 To ensure that the type and scale of use and development does not compromise or distort the activity centre hierarchy.

15.1.3 To encourage activity at pedestrian levels with active frontage and shop windows offering interest and engagement to shoppers.

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15.1.4 To encourage Residential and Visitor Accommodation use if it supports the viability of the activity centre and an active street frontage is maintained.

15.2 Use Table

Use Class – Discretionary for Utilities if not listed as, No Permit Required.

15.3 Use Standards

15.3.1 A1 – Not Applicable
A2 – Any proposed external lighting is for security and safety purposes.
A3 – Not applicable

15.3.2 The proposed development is designed to meet all the Zone Purposes and will not compromise or distort the activity Centre Hierarchy.

15.3.3 Not Applicable

15.4 Development Standards for Building and Works

15.4.1 Not Applicable
15.4.2 Not Applicable
15.4.3 Not Applicable
15.4.4 A1 - Pedestrian barriers are proposed and meet all requirements of P1
A2 – Not Applicable
15.4.5 Not Applicable
15.4.6 Not Applicable

15.5 Development Standards for Subdivision

15.5.1 Not Applicable
15.5.2 Not Applicable

26.0 Utilities Zone

26.1 Zone Purpose

The purpose of the utilities zone is:

26.1 To provide land for major utilities installation and corridors.

26.1.2 To provide other compatible uses where they do not adversely impact on the utility.

26.2 Use Table

Use Class – Permitted for Utilities

26.2 Use Standards

26.3.1 Not Applicable
26.3.2 Not Applicable

26.4 Development standards for Building and Works

26.4.1 Not Applicable
26.4.2 Not Applicable
26.4.3 Not Applicable
26.4.4 Not Applicable

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26.5 Development Standards for Subdivision

26.5.1 Not Applicable
26.5.2 Not Applicable

29.0 Open Space Zone

29.1 Zone Purpose

The purpose of the Open Space Zone is:
29.1.1 To provide land for open space purposes including for passive recreation and natural or landscape amenity.
29.1.2 To provide for use and development that supports the use of the land for open space purposes or for other uses.

29.2 Use Table

Use Class – Discretionary for Utilities if not listed as, No Permit Required.

The Application would meet all the requirements of the **Exemptions 4.0** (4.2.4, 4.2.5 & 4.2.7) The Heritage Precinct triggers the discretionary aspect of this application and will be addressed under section C6.0 Local Historic Heritage Code.

The use is existing and will remain the same.

CODES

C2.0 Parking and Sustainable Transport Code

It is questionable if the code applies to this proposal, However the proposal meets all the objectives of the code's purpose **C2.1**- C2.1.1 to C2.1.5. There are no parking precincts or pedestrian priority Streets so C2.1.6 is not applicable.

C6.0 Local Historic Heritage Code

C6.1 Code Purpose

The purpose of the Local Historic Heritage code is:
C6.1.1 To recognise and protect:
(a) The local historic heritage significance of local places, precincts, landscapes and areas of archaeological potential; and
(b) Significant trees.

C6.2 Application of this Code

C6.2.1 This code applies to:
(a) Development on land within any of the following, as defined in this code:

(ii) a local heritage precinct.

C6.6 Developments Standards for Local Places

C6.6.1 Not Applicable

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C6.6.2 Not Applicable
C6.6.3 Not Applicable
C6.6.4 Not Applicable
C6.6.5 Not Applicable
C6.6.6 Not Applicable
C6.6.7 Not Applicable
C6.6.8 Not Applicable
C6.6.9 Not Applicable
C6.6.10 Not Applicable

C6.7 Development Standards for Local Heritage Precincts and Local Historic Landscapes Precincts

C6.7.1 Not Applicable
C6.7.2 Not Applicable
C6.7.3 A1
P1.1 The Proposals design, colours and materials used are keeping within the character of the area and sympathetic with the local heritage precinct. Please refer to section 4.1 Design Statement and Lange Designs drawings for further details.
P1.2 Not Applicable
P1.3 Beautification is one part of the proposals desired goals, the design will enhance and retain the small-scale commercial centers heritage atmosphere. The colonial buildings within the precinct will remain the dominant feature with the proposed works complimenting them.
A2- No new fences are proposed, however pedestrian barriers at intersections have been proposed for added safety, these are black in colour and the design does not distract away from the precinct, refer to section 4.1 Design statement and Lange designs drawings for further details

C6.8 Development Standards for Places or Precincts of Archaeological Potential

C6.8.1 Not Applicable

C6.9 Significant Trees

C6.9.1 Not Applicable

C6.10 Develomnet Standards for Subdivision
C6.10.1 Not Applicable
C6.10.2 Not Applicable
C6.10.3 Not Applicable

C16.0 Safeguarding of Airports Code

The Proposal is under the 230mAHD and therefore complies with the Airport Obstacle Limitation areas requirements.

Specific Area Plan

Perth

There is no multiple buildings or subdivision proposed, so no provisions apply to this proposal.

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5 Conclusion

This proposal complies with the development standards set out by the Tasmanian Planning Scheme - Northern Midlands, provides a safer pedestrian environment and enhance the visual appearance, usability and enjoyment of the streetscape for residents and visitors. A Traffic Engineer was engaged to assess the proposal, some consideration within that report have been implemented and a further detailed design will incorporate/consider the remaining items as per his conclusion

Prepared by:

Name	Position, Department/Organisation
Trent Atkinson	Project Manager - Northern Midlands Council

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CLIENT:
NORTHERN MIDLAND COUNCIL

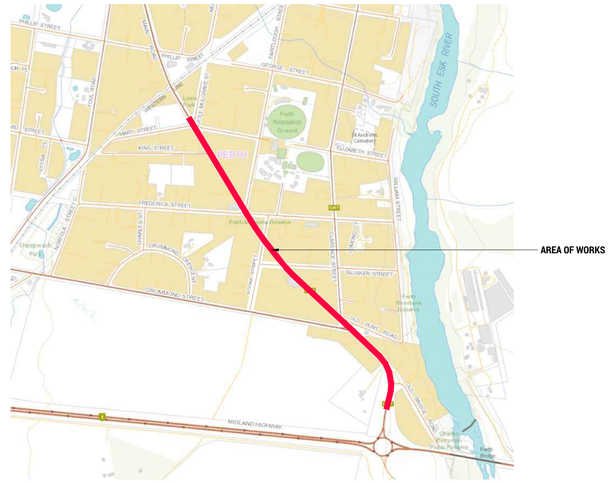
PROJECT:
PERTH MAIN ROAD STREETSCAPE

ADDRESS:
MAIN ROAD, PERTH

PROJECT No:
221032

STATUS:
PRELIMINARY / INFORMATION

ISSUED FOR / DESCRIPTION:
DEVELOPMENT APPROVAL



LOCALITY PLAN
SCALE N.T.S

DRAWINGS:

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DRAWN BY:	PVD
DRAFT CHK:	JF
DATE:	31-08-23

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SCALE: - SHEET SIZE: A1 DWGs IN SET: -
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STAGING & SHEET PLAN
SCALE 1:2000

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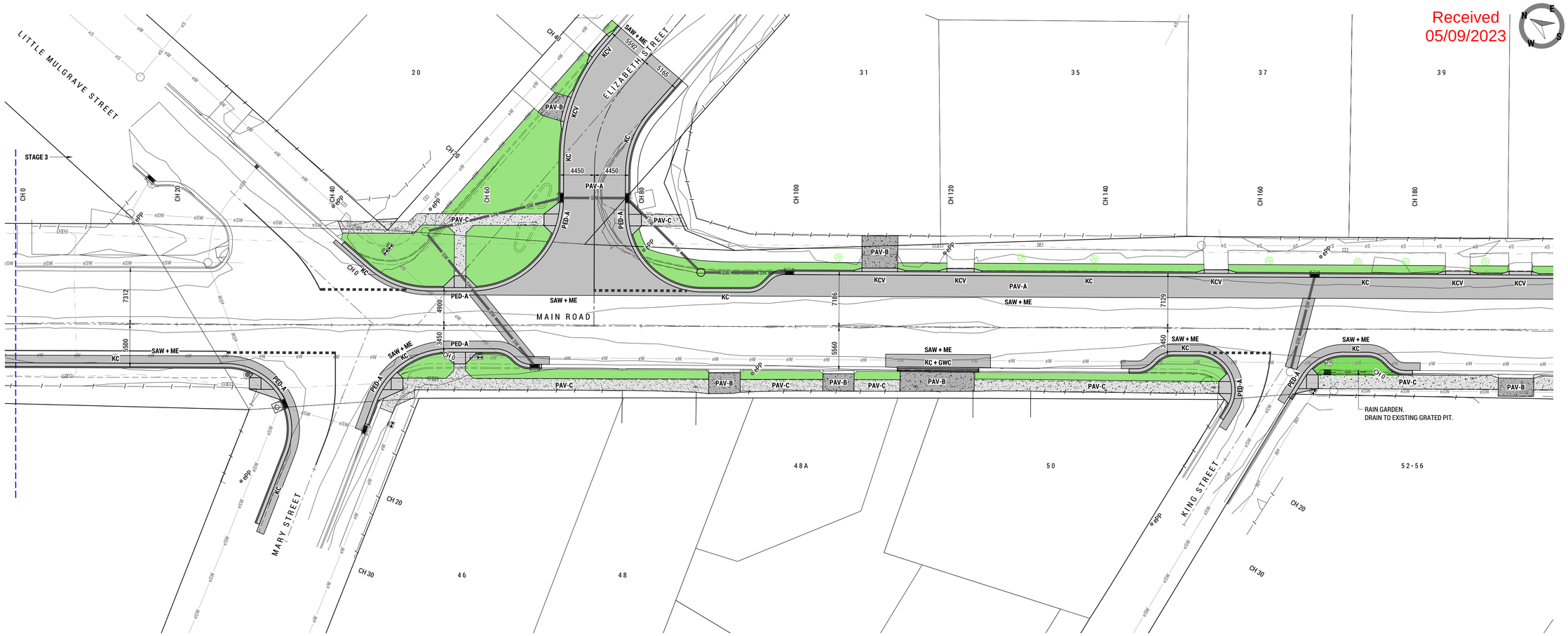

SITE WORKS PLAN - MAIN ROAD CH 0 - 190
SCALE 1:250

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PAV-B	CONCRETE - TRAFFICABLE REFER DETAILS	KC	KERB & CHANNEL
PAV-C	CONCRETE - PEDESTRIAN REFER STRUCTURAL DETAILS	KCV	KERB & CHANNEL VEHICULAR
SURF-A	GRASSED / LANDSCAPED AREA 200mm MIN GOOD QUALITY TOP SOIL REFER LANDSCAPE ARCHITECT PLANS	KCRB	KERB & CHANNEL VEHICULAR REINFORCED BASE
		PED-A	TYPE A PEDESTRIAN ACCESS RAMP
		SAW	SAW CUT
		ME	MATCH EXISTING

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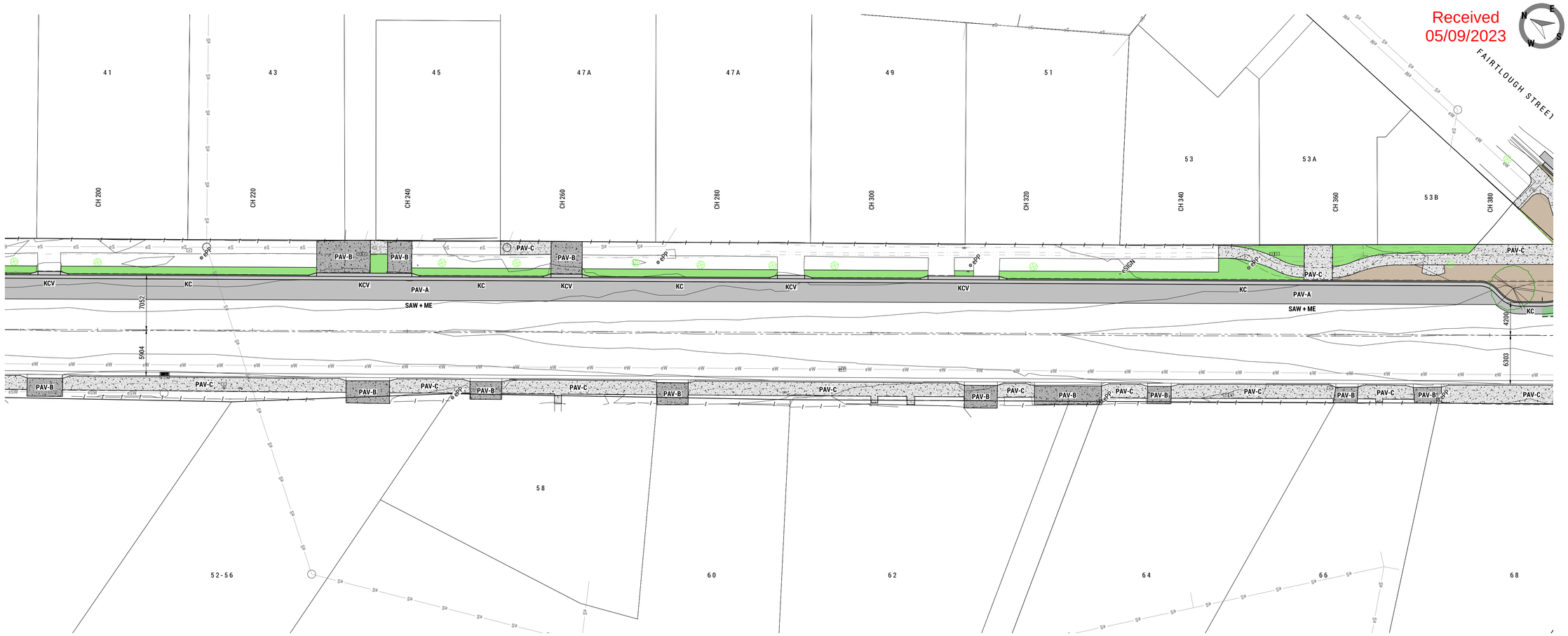

SITE WORKS PLAN - MAIN ROAD CH 190 - 380

SCALE 1:250

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PAV-C	CONCRETE - PEDESTRIAN REFER STRUCTURAL DETAILS	**KCV**	KERB & CHANNEL VEHICULAR
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PROJECT No: 221032 DWG No: C402 REV: A

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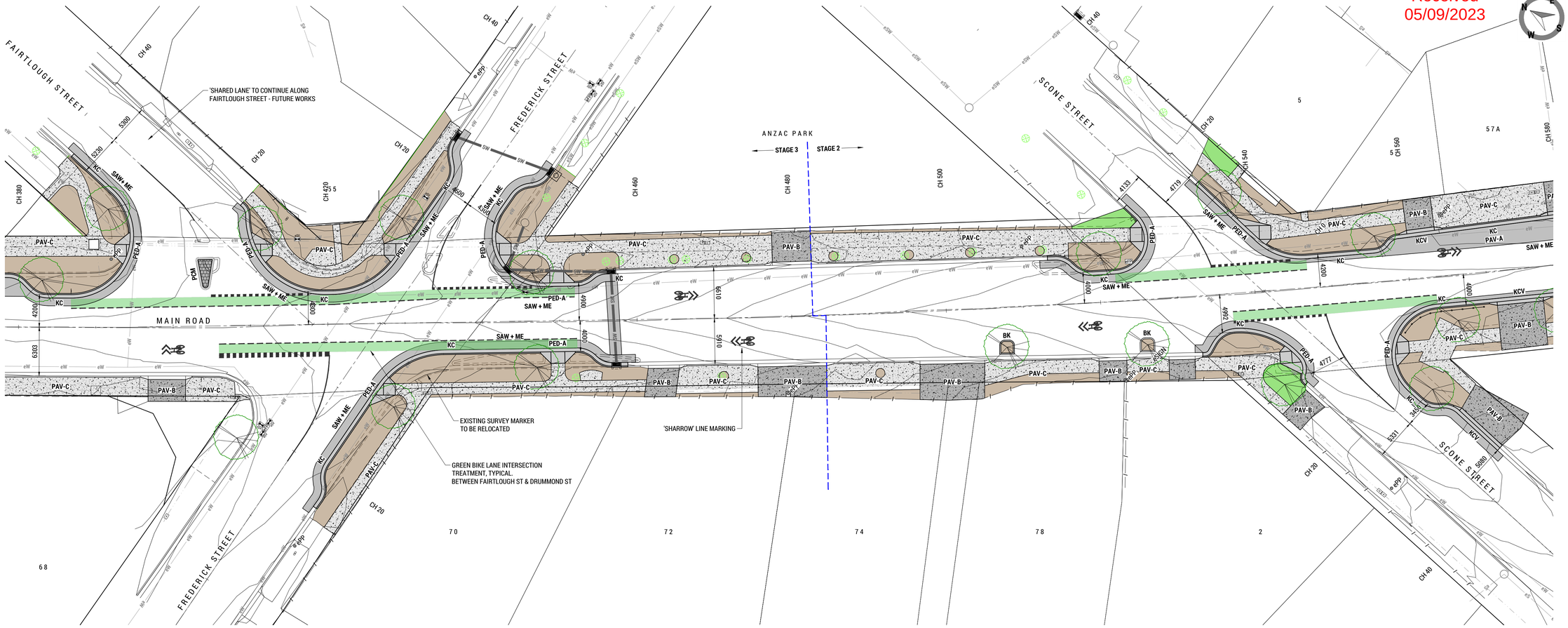

SITE WORKS PLAN - MAIN ROAD CH 380 - 570
SCALE 1:250

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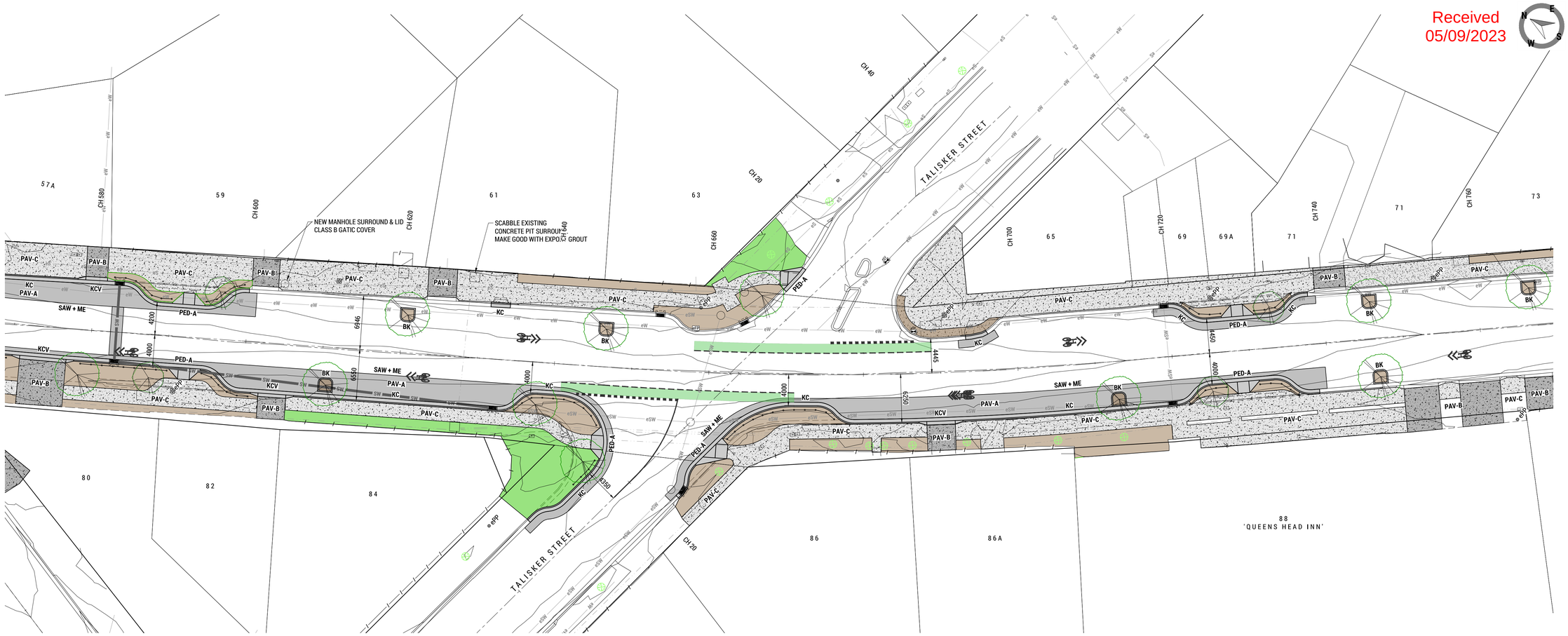

SITE WORKS PLAN - MAIN ROAD CH 570 - 760

SCALE 1:250

LEGEND

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SURF-A	GRASSED / LANDSCAPED AREA 200mm MIN GOOD QUALITY TOP SOIL REFER LANDSCAPE ARCHITECT PLANS	KCRB	KERB & CHANNEL VEHICULAR REINFORCED BASE
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ADDRESS: MAIN ROAD PERTH

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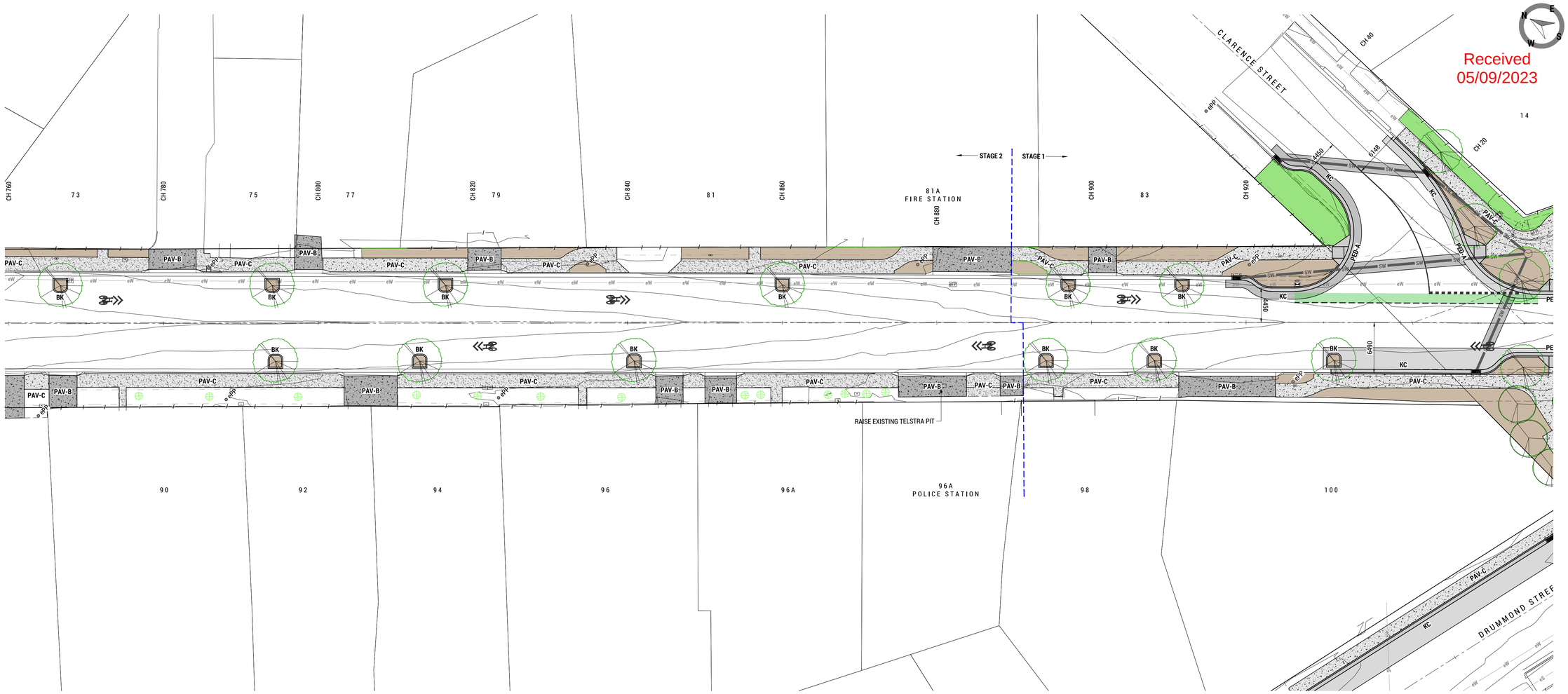

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SITE WORKS PLAN - MAIN ROAD CH 760 - 950

SCALE 1:250

LEGEND

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PAV-C	CONCRETE - PEDESTRIAN REFER STRUCTURAL DETAILS	KCV	KERB & CHANNEL VEHICULAR
SURF-A	GRASSED / LANDSCAPED AREA 200mm MIN GOOD QUALITY TOP SOIL REFER LANDSCAPE ARCHITECT PLANS	KCRB	KERB & CHANNEL VEHICULAR REINFORCED BASE
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		SAW	SAW CUT
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TITLE: SITE WORKS PLAN - MAIN ROAD CH 760 - 950

SCALE: 1:250 SHEET SIZE: A1 DWGs IN SET: -

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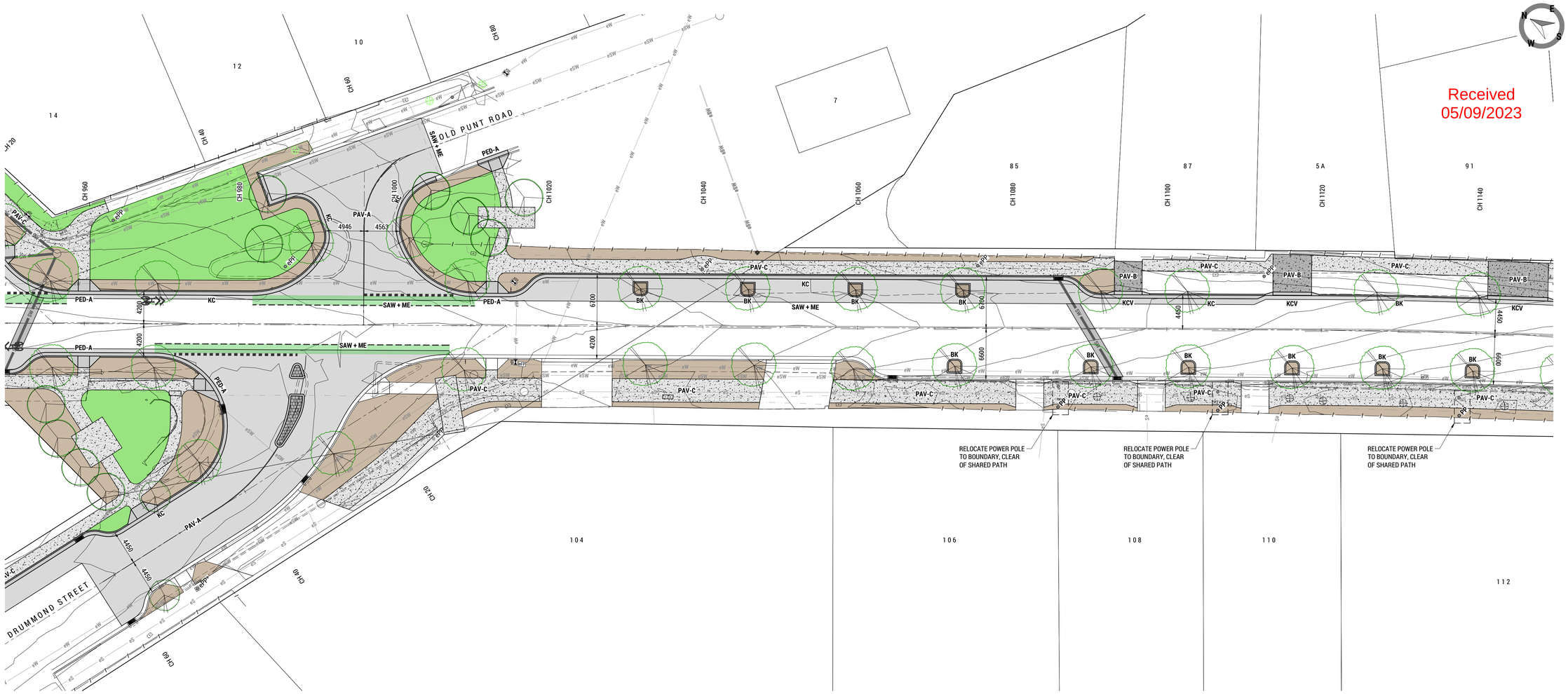

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SITE WORKS PLAN - MAIN ROAD CH 950 -1140

SCALE 1:250

LEGEND

PAV-A	ASPHALT - TRAFFICABLE REFER DETAILS	BK	KERB & CHANNEL
PAV-B	CONCRETE - TRAFFICABLE REFER DETAILS	KC	KERB & CHANNEL
PAV-C	CONCRETE - PEDESTRIAN REFER STRUCTURAL DETAILS	KCV	KERB & CHANNEL VEHICULAR
SURF-A	GRASSED / LANDSCAPED AREA 200mm MIN GOOD QUALITY TOP SOIL REFER LANDSCAPE ARCHITECT PLANS	KCRB	KERB & CHANNEL VEHICULAR REINFORCED BASE
		PED-A	TYPE A PEDESTRIAN ACCESS RAMP
		SAW	SAW CUT
		ME	MATCH EXISTING

NORTHERN MIDLANDS COUNCIL

REV:	ISSUED FOR / DESCRIPTION:	BY:	DATE:
A	DEVELOPMENT APPROVAL	PVD	31-08-23

STATUS: **PRELIMINARY / INFORMATION**

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DESIGN CHK:	JWS
DRAWN BY:	PVD
DRAFT CHK:	JF
DATE:	31-08-23

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CLIENT: NORTHERN MIDLAND COUNCIL

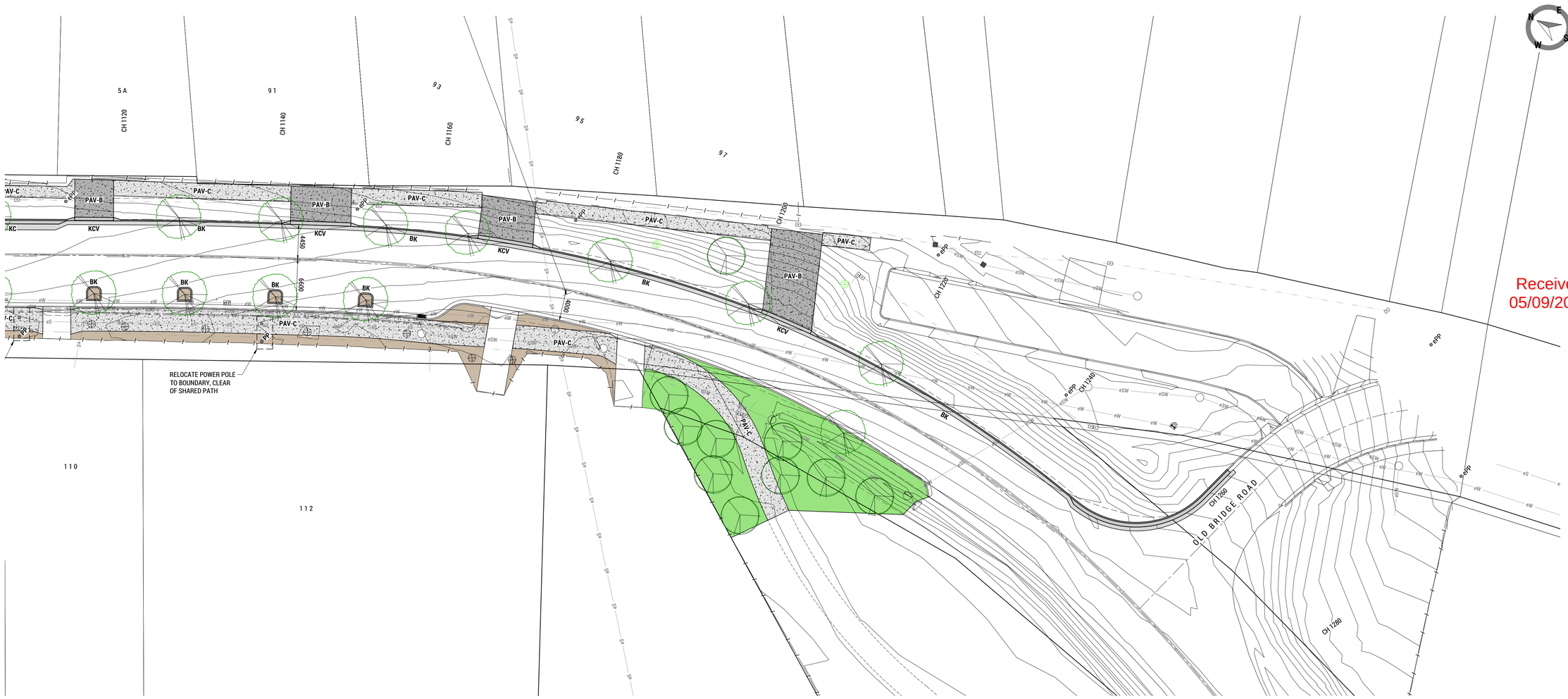
PROJECT: PERTH MAIN ROAD STREETSCAPE

ADDRESS: MAIN ROAD PERTH

TITLE: SITE WORKS PLAN - MAIN ROAD CH 950 - 1140

SCALE: 1:250 | SHEET SIZE: A1 | DWGs IN SET: -

PROJECT No: 221032 | DWG No: C406 | REV: A



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05/09/2023

SITE WORKS PLAN - MAIN ROAD CH 1140 - 1260
SCALE 1:250

LEGEND

PAV-A	ASPHALT - TRAFFICABLE REFER DETAILS	**BK**	KERB & CHANNEL
PAV-B	CONCRETE - TRAFFICABLE REFER DETAILS	**KC**	KERB & CHANNEL
PAV-C	CONCRETE - PEDESTRIAN REFER STRUCTURAL DETAILS	**KCV**	KERB & CHANNEL VEHICULAR
SURF-A	GRASSED / LANDSCAPED AREA 200mm MIN GOOD QUALITY TOP SOIL REFER LANDSCAPE ARCHITECT PLANS	**KCRB**	KERB & CHANNEL VEHICULAR REINFORCED BASE
		PED-A	TYPE A PEDESTRIAN ACCESS RAMP
		SAW	SAW CUT
		ME	MATCH EXISTING

NORTHERN MIDLANDS COUNCIL

REV:	ISSUED FOR / DESCRIPTION:	BY:	DATE:
A	DEVELOPMENT APPROVAL	PVD	31-08-23

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APPROVED: **R. JESSON** ACRED. No: **CC5848I**

DESIGN BY:	RJ
DESIGN CHK:	JWS
DRAWN BY:	PVD
DRAFT CHK:	JF
DATE:	31-08-23

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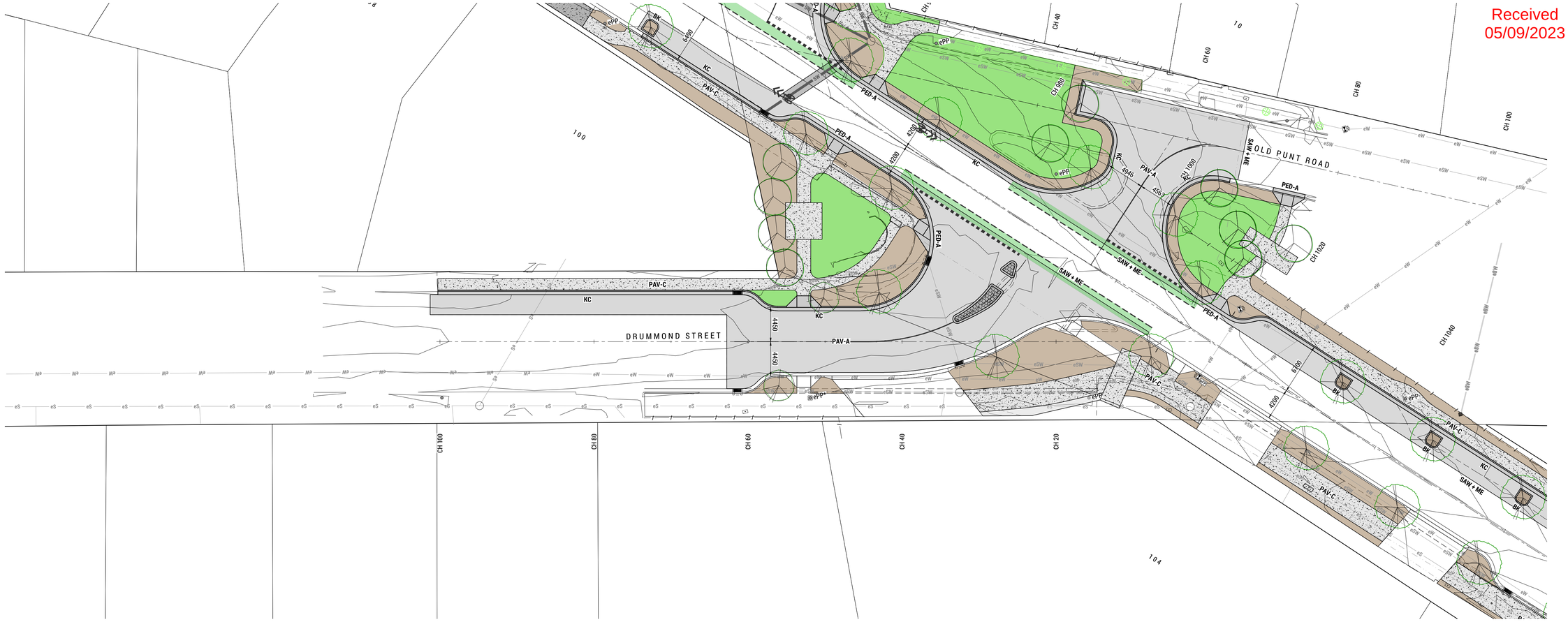
CLIENT: **NORTHERN MIDLAND COUNCIL**
PROJECT: **PERTH MAIN ROAD STREETSCAPE**
ADDRESS: **MAIN ROAD PERTH**

TITLE: **SITE WORKS PLAN - MAIN ROAD CH 1140 - 1260**
SCALE: **1:250** SHEET SIZE: **A1** DWGs IN SET: **-**
PROJECT No: **221032** DWG No: **C407** REV: **A**



SITE WORKS PLAN - DRUMMOND STREET CH 0 - 100
SCALE 1:250

LEGEND

PAV-A	ASPHALT - TRAFFICABLE REFER DETAILS	BK	KERB & CHANNEL
PAV-B	CONCRETE - TRAFFICABLE REFER DETAILS	KC	KERB & CHANNEL
PAV-C	CONCRETE - PEDESTRIAN REFER STRUCTURAL DETAILS	KCV	KERB & CHANNEL VEHICULAR
SURF-A	GRASSED / LANDSCAPED AREA 200mm MIN GOOD QUALITY TOP SOIL REFER LANDSCAPE ARCHITECT PLANS	KCRB	KERB & CHANNEL VEHICULAR REINFORCED BASE
		PED-A	TYPE A PEDESTRIAN ACCESS RAMP
		SAW	SAW CUT
		ME	MATCH EXISTING

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CLIENT: NORTHERN MIDLAND COUNCIL
PROJECT: PERTH MAIN ROAD STREETSCAPE
ADDRESS: MAIN ROAD PERTH

TITLE: SITE WORKS PLAN - DRUMMOND STREET CH 0 - 100
SCALE: 1:250 SHEET SIZE: A1 DWGs IN SET: -
PROJECT No: 221032 DWG No: C408 REV: A

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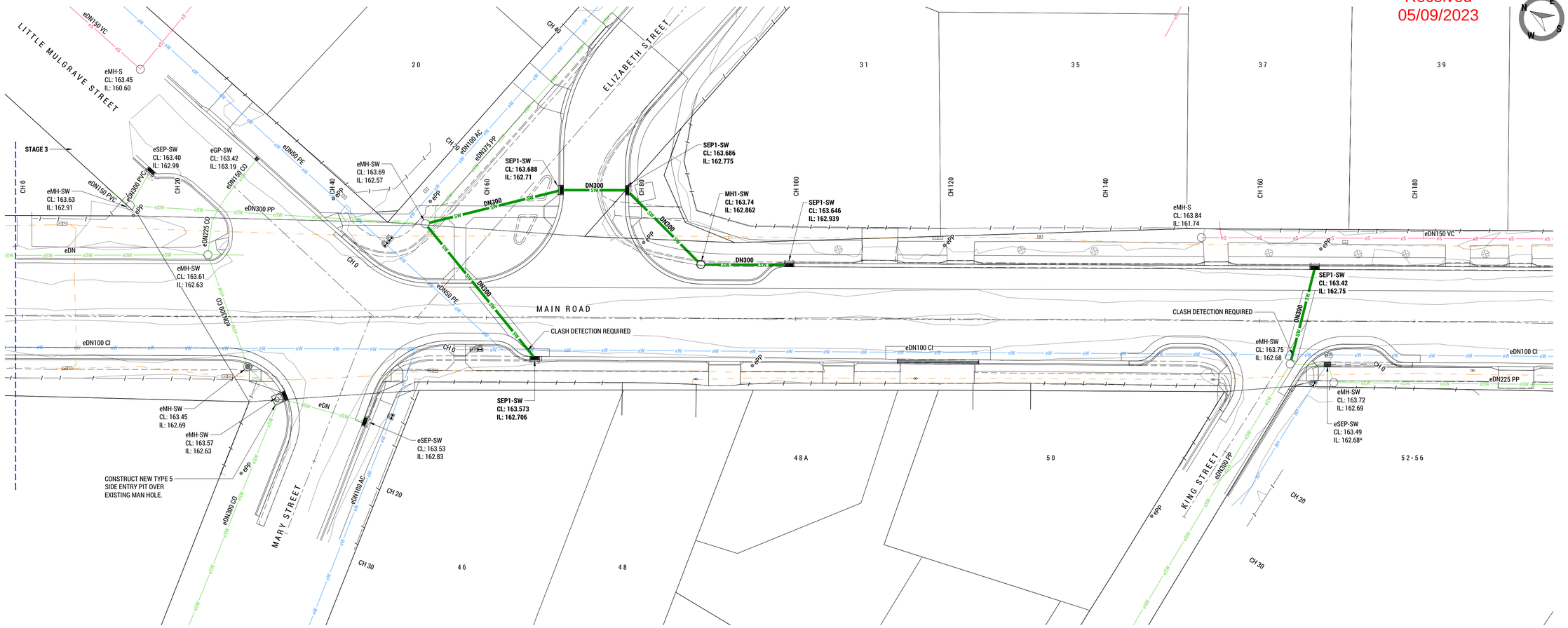

SERVICES PLAN - MAIN ROAD CH 0 - 190

SCALE 1:250

LEGEND

- EXISTING STORM WATER MAIN (eSW)
- PROPOSED STORMWATER MAIN (SW)
- EXISTING SEWER MAIN (eS)
- EXISTING WATER MAIN (eW)
- EXISTING COMMUNICATIONS LINE
- EXISTING FIRE PLUG (ePP)
- EXISTING STOP / ISOLATION VALVE

STORMWATER PIPE SCHEDULE

MARK	PIPE SIZE	TYPE	CLASS
DN300	300	BMAX - RRJ	SN8
DN375	375	BMAX - RRJ	SN8

STORMWATER PIT / MANHOLE SCHEDULE

MARK	SIZE	TYPE	ACCESSORIES
MH1-SW	1050	PRECAST CONC. MANHOLE	CLASS B LID - NON TRAFFICABLE CLASS D LID - TRAFFICABLE
SEP1-SW	1220	TYPE 1	REFER LGAT STD DWG TSD-SW07-v3
SEP2-SW	1250	TYPE 5	REFER LGAT STD DWG TSD-SW12-v3

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CLIENT: NORTHERN MIDLAND COUNCIL
PROJECT: PERTH MAIN ROAD STREETSCAPE
ADDRESS: MAIN ROAD PERTH

TITLE: SERVICES PLAN - MAIN ROAD CH 0 - 190
SCALE: 1:250 SHEET SIZE: A1 DWGs IN SET: -
PROJECT No: 221032 DWG No: C501 REV: A

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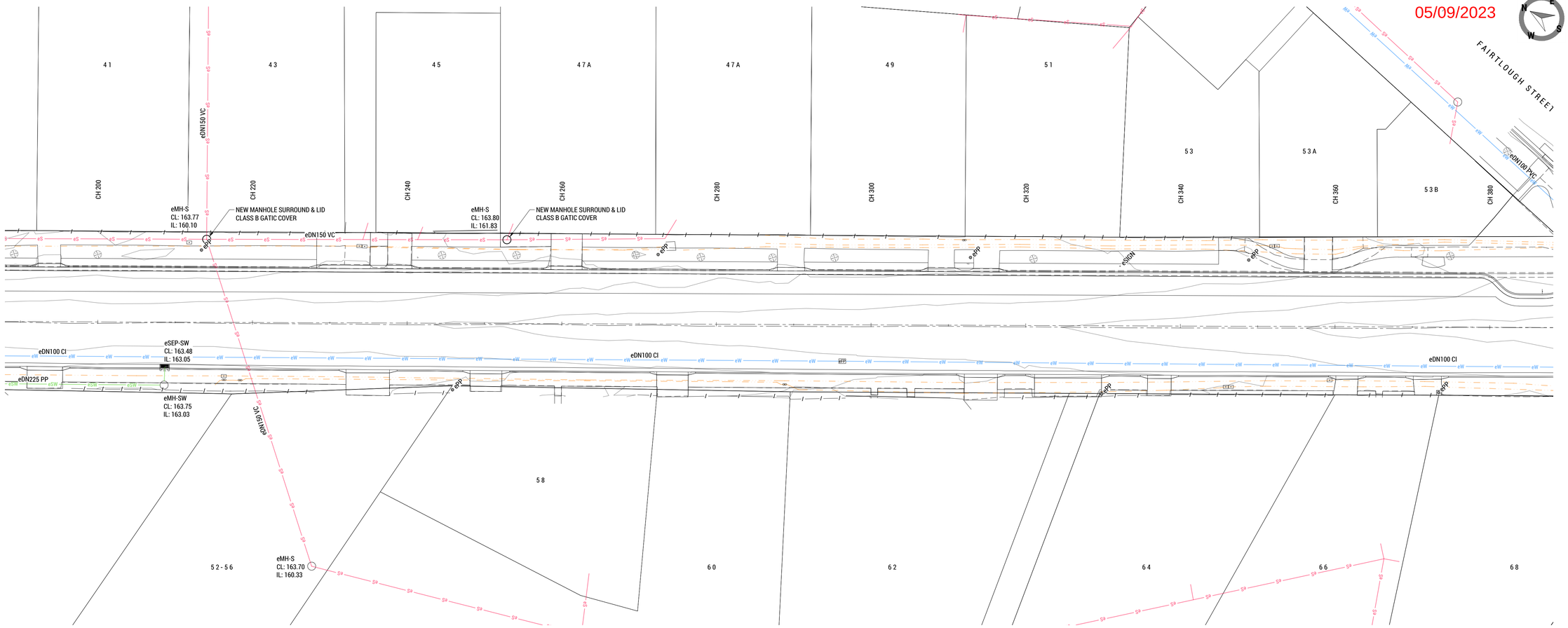

SERVICES PLAN - MAIN ROAD CH 190 - 380

SCALE 1:250

LEGEND

- eSW — EXISTING STORM WATER MAIN
- SW — PROPOSED STORMWATER MAIN
- eS — EXISTING SEWER MAIN
- eW — EXISTING WATER MAIN
- EXISTING COMMUNICATIONS LINE
- ePP — EXISTING FIRE PLUG
- EXISTING STOP / ISOLATION VALVE

STORMWATER PIPE SCHEDULE

MARK	PIPE SIZE	TYPE	CLASS
DN300	300	BMAX - RRJ	SN8
DN375	375	BMAX - RRJ	SN8

STORMWATER PIT / MANHOLE SCHEDULE

MARK	SIZE	TYPE	ACCESSORIES
MH1-SW	1050	PRECAST CONC. MANHOLE	CLASS B LID - NON TRAFFICABLE CLASS D LID - TRAFFICABLE
SEP1-SW	1220	TYPE 1	REFER LGAT STD DWG TSD-SW07-v3
SEP2-SW	1250	TYPE 5	REFER LGAT STD DWG TSD-SW12-v3

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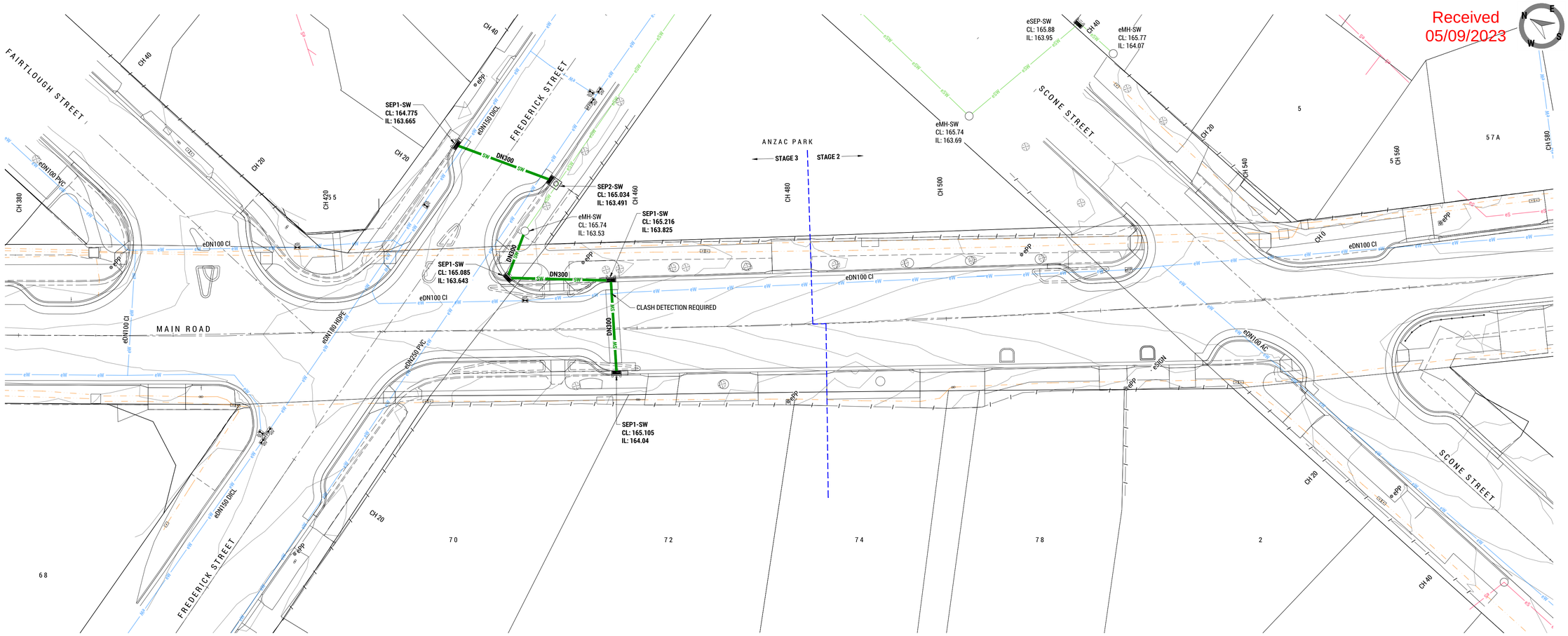
PROJECT: PERTH MAIN ROAD STREETSCAPE
ADDRESS: MAIN ROAD PERTH

TITLE: SERVICES PLAN - MAIN ROAD CH 190 - 380
SCALE: 1:250 SHEET SIZE: A1 DWGs IN SET: -
PROJECT No: 221032 DWG No: C502 REV: A



SERVICES PLAN - MAIN ROAD CH 380 - 570

SCALE 1:250

LEGEND

- eSW — EXISTING STORM WATER MAIN
- SW — PROPOSED STORMWATER MAIN
- eS — EXISTING SEWER MAIN
- eW — EXISTING WATER MAIN
- EXISTING COMMUNICATIONS LINE
- ePP — EXISTING FIRE PLUG
- EXISTING STOP / ISOLATION VALVE

STORMWATER PIPE SCHEDULE

MARK	PIPE SIZE	TYPE	CLASS
DN300	300	BMAX - RRJ	SN8
DN375	375	BMAX - RRJ	SN8

STORMWATER PIT / MANHOLE SCHEDULE

MARK	SIZE	TYPE	ACCESSORIES
MH1-SW	1050	PRECAST CONC. MANHOLE	CLASS B LID - NON TRAFFICABLE CLASS D LID - TRAFFICABLE
SEP1-SW	1220	TYPE 1	REFER LGAT STD DWG TSD-SW07-v3
SEP2-SW	1250	TYPE 5	REFER LGAT STD DWG TSD-SW12-v3

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CLIENT: NORTHERN MIDLAND COUNCIL

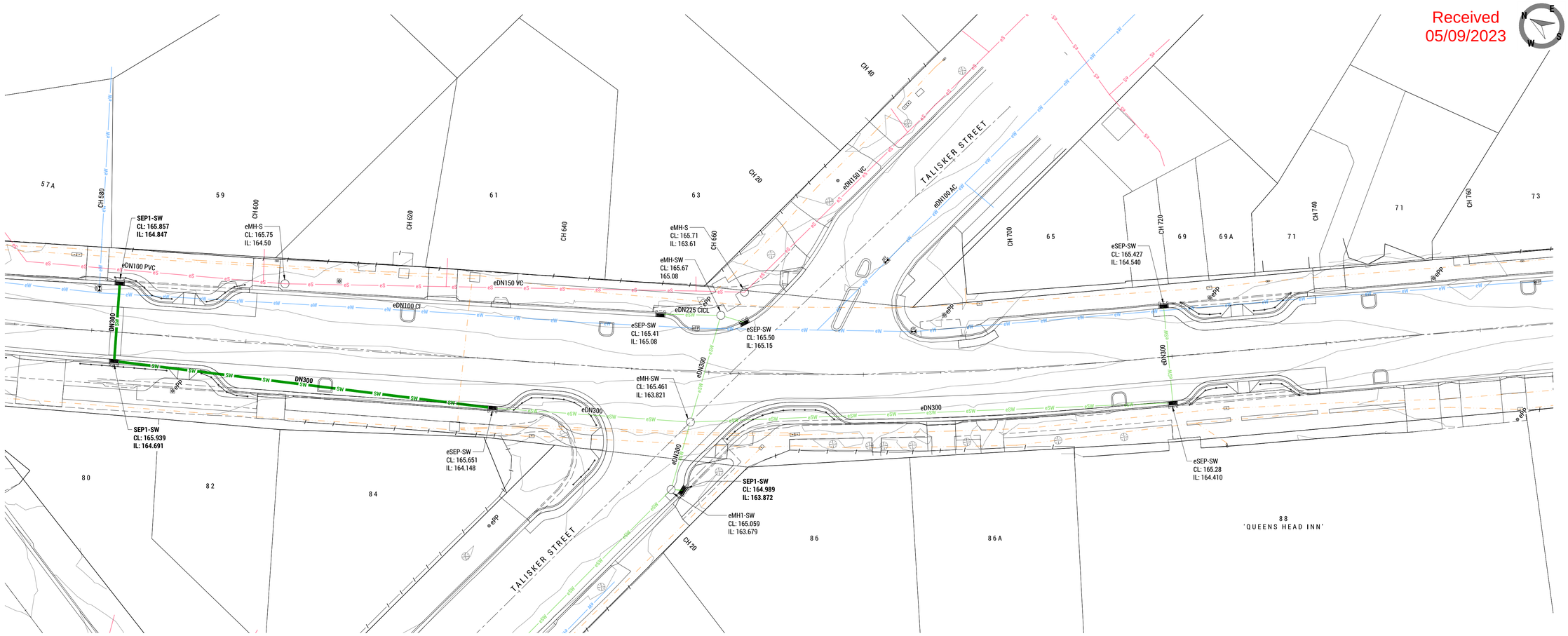
PROJECT: PERTH MAIN ROAD STREETSCAPE

ADDRESS: MAIN ROAD
PERTH

TITLE: SERVICES PLAN
- MAIN ROAD CH 380 - 570

SCALE: 1:250 | SHEET SIZE: A1 | DWGs IN SET: -

PROJECT No: 221032 | DWG No: C503 | REV: A



SERVICES PLAN - MAIN ROAD CH 570 - 760

SCALE 1:250

LEGEND

- EXISTING STORM WATER MAIN
- PROPOSED STORMWATER MAIN
- EXISTING SEWER MAIN
- EXISTING WATER MAIN
- EXISTING COMMUNICATIONS LINE
- EXISTING FIRE PLUG
- EXISTING STOP / ISOLATION VALVE

STORMWATER PIPE SCHEDULE

MARK	PIPE SIZE	TYPE	CLASS
DN300	300	BMAX - RRJ	SN8
DN375	375	BMAX - RRJ	SN8

STORMWATER PIT / MANHOLE SCHEDULE

MARK	SIZE	TYPE	ACCESSORIES
MH1-SW	1050	PRECAST CONC. MANHOLE	CLASS B LID - NON TRAFFICABLE CLASS D LID - TRAFFICABLE
SEP1-SW	1220	TYPE 1	REFER LGAT STD DWG TSD-SW07-v3
SEP2-SW	1250	TYPE 5	REFER LGAT STD DWG TSD-SW12-v3

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CLIENT: NORTHERN MIDLAND COUNCIL

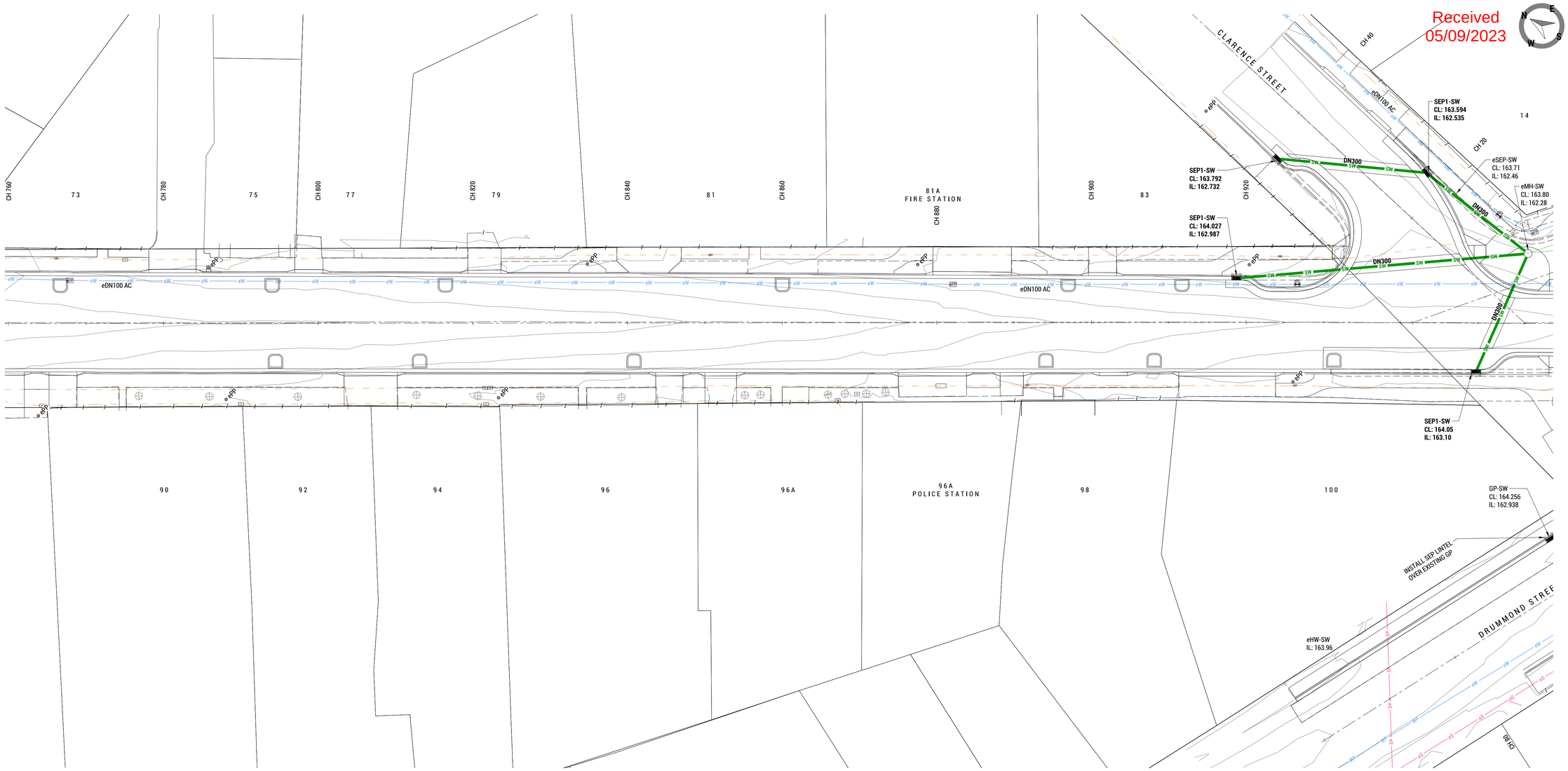
PROJECT: PERTH MAIN ROAD STREETSCAPE

ADDRESS: MAIN ROAD PERTH

TITLE: SERVICES PLAN - MAIN ROAD CH 570 - 760

SCALE: 1:250 | SHEET SIZE: A1 | DWGs IN SET: -

PROJECT No: 221032 | DWG No: C504 | REV: A



SERVICES PLAN - MAIN ROAD CH 760 - 950

SCALE 1:250

LEGEND

- eSW — EXISTING STORM WATER MAIN
- SW — PROPOSED STORMWATER MAIN
- eS — EXISTING SEWER MAIN
- eW — EXISTING WATER MAIN
- EXISTING COMMUNICATIONS LINE
- eFP — EXISTING FIRE PLUG
- EXISTING STOP / ISOLATION VALVE

STORMWATER PIPE SCHEDULE

MARK	PIPE SIZE	TYPE	CLASS
DN300	300	BMAX - RRJ	SN8
DN375	375	BMAX - RRJ	SN8

STORMWATER PIT / MANHOLE SCHEDULE

MARK	SIZE	TYPE	ACCESSORIES
MH1-SW	1050	PRECAST CONC. MANHOLE	CLASS B LID - NON TRAFFICABLE CLASS D LID - TRAFFICABLE
SEP1-SW	1220	TYPE 1	REFER LGAT STD DWG TSD-SW07-v3
SEP2-SW	1250	TYPE 5	REFER LGAT STD DWG TSD-SW12-v3

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DRAFT CHK:	JF
DATE:	31-08-23

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CLIENT: NORTHERN MIDLAND COUNCIL

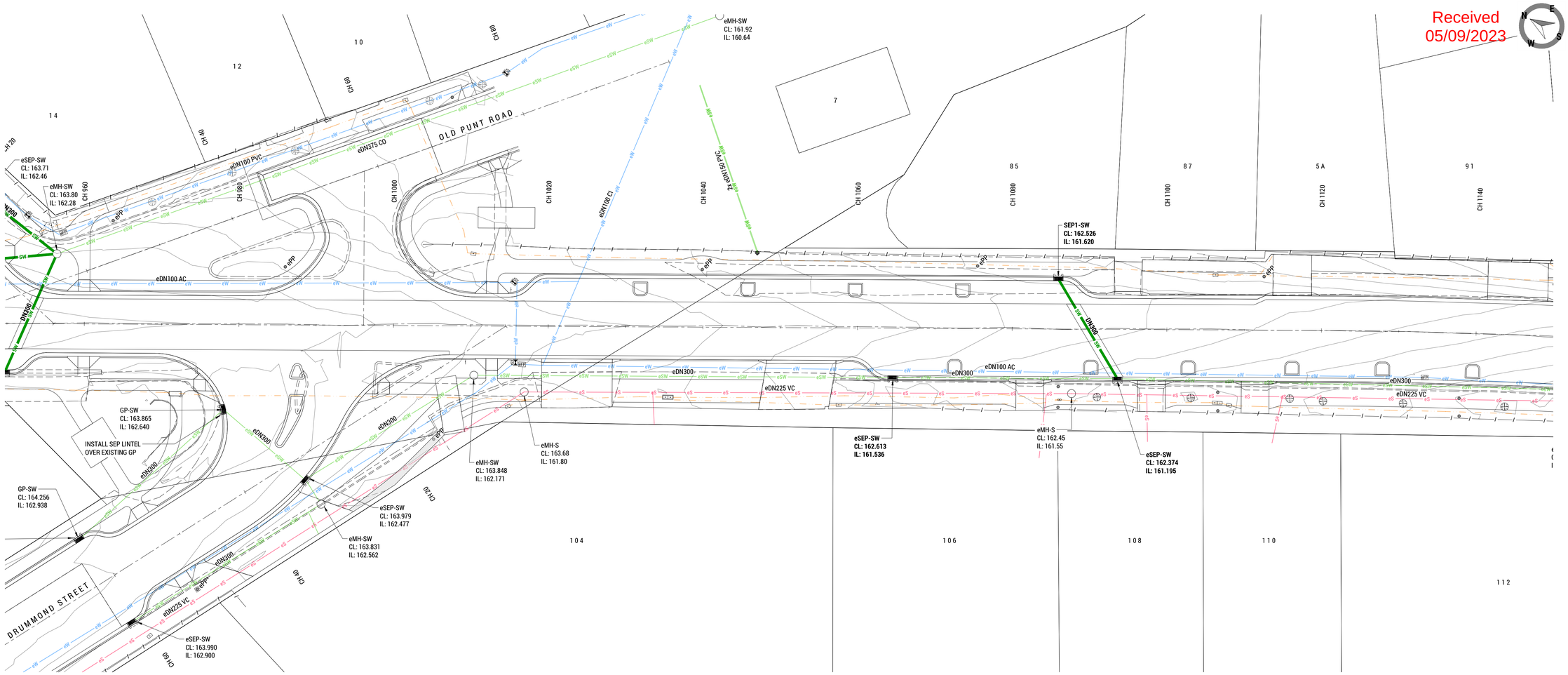
PROJECT: PERTH MAIN ROAD STREETSCAPE

ADDRESS: MAIN ROAD PERTH

TITLE: SERVICES PLAN - MAIN ROAD CH 760 - 950

SCALE: 1:250 SHEET SIZE: A1 DWGs IN SET: -

PROJECT No: 221032 DWG No: C505 REV: A



SERVICES PLAN - MAIN ROAD CH 950 - 1140

SCALE 1:250

LEGEND

- EXISTING STORM WATER MAIN
- PROPOSED STORMWATER MAIN
- EXISTING SEWER MAIN
- EXISTING WATER MAIN
- EXISTING COMMUNICATIONS LINE
- EXISTING FIRE PLUG
- EXISTING STOP / ISOLATION VALVE

STORMWATER PIPE SCHEDULE

MARK	PIPE SIZE	TYPE	CLASS
DN300	300	BMAX - RRJ	SN8
DN375	375	BMAX - RRJ	SN8

STORMWATER PIT / MANHOLE SCHEDULE

MARK	SIZE	TYPE	ACCESSORIES
MH1-SW	1050	PRECAST CONC. MANHOLE	CLASS B LID - NON TRAFFICABLE CLASS D LID - TRAFFICABLE
SEP1-SW	1220	TYPE 1	REFER LGAT STD DWG TSD-SW07-v3
SEP2-SW	1250	TYPE 5	REFER LGAT STD DWG TSD-SW12-v3

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DATE:	31-08-23

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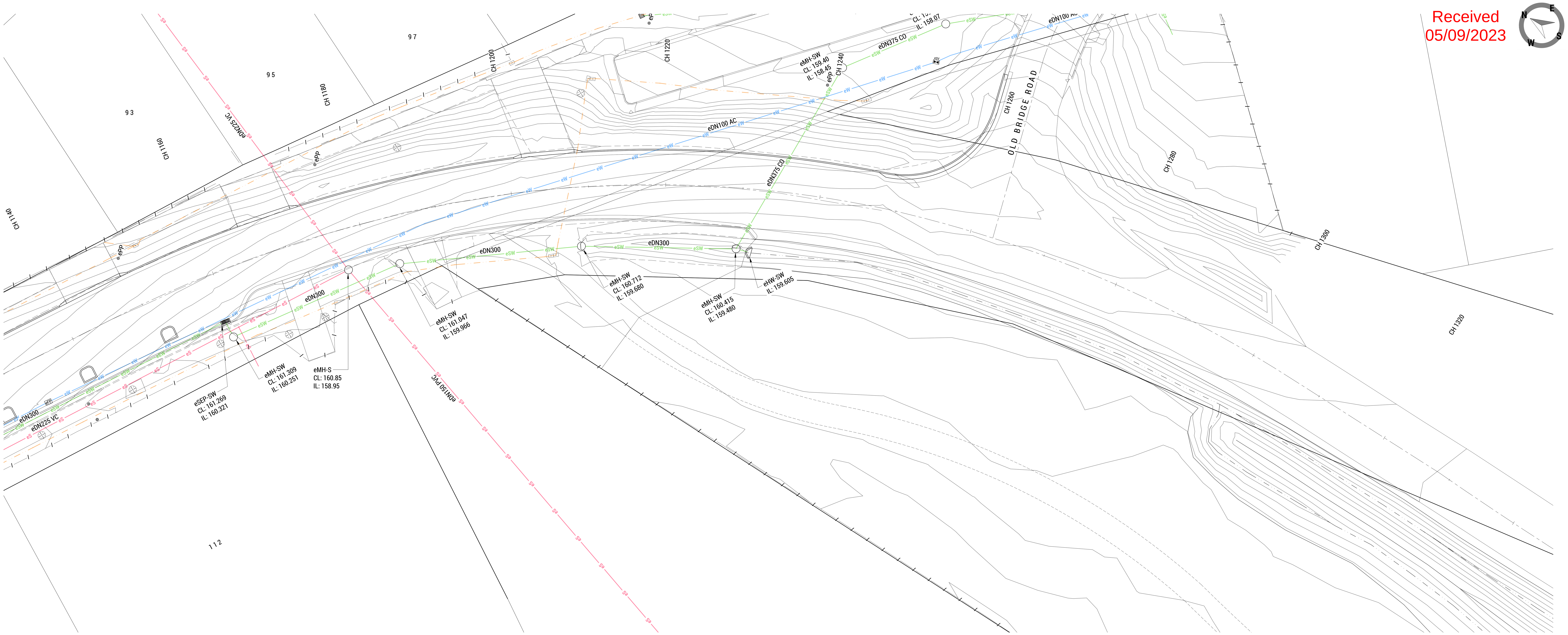
CLIENT: NORTHERN MIDLAND COUNCIL
PROJECT: PERTH MAIN ROAD STREETSCAPE
ADDRESS: MAIN ROAD PERTH

TITLE: SERVICES PLAN - MAIN ROAD CH 950 - 1140
SCALE: 1:250 SHEET SIZE: A1 DWGs IN SET: -
PROJECT No: 221032 DWG No: C506 REV: A



SERVICES PLAN - MAIN ROAD CH 1140 - 1260

SCALE 1:250

LEGEND

- eSW — EXISTING STORM WATER MAIN
- SW — PROPOSED STORMWATER MAIN
- eS — EXISTING SEWER MAIN
- eW — EXISTING WATER MAIN
- — · — EXISTING COMMUNICATIONS LINE
- eFP — EXISTING FIRE PLUG
- eSV — EXISTING STOP / ISOLATION VALVE

STORMWATER PIPE SCHEDULE

MARK	PIPE SIZE	TYPE	CLASS
DN300	300	BMAX - RRJ	SN8
DN375	375	BMAX - RRJ	SN8

STORMWATER PIT / MANHOLE SCHEDULE

MARK	SIZE	TYPE	ACCESSORIES
MH1-SW	1050	PRECAST CONC. MANHOLE	CLASS B LID - NON TRAFFICABLE CLASS D LID - TRAFFICABLE
SEP1-SW	1220	TYPE 1	REFER LGAT STD DWG TSD-SW07-v3
SEP2-SW	1250	TYPE 5	REFER LGAT STD DWG TSD-SW12-v3

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DESIGN BY: **RJ**
DESIGN CHK: **JWS**
DRAWN BY: **PVD**
DRAFT CHK: **JF**
DATE: **31-08-23**

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CLIENT: **NORTHERN MIDLAND COUNCIL**
PROJECT: **PERTH MAIN ROAD STREETSCAPE**
ADDRESS: **MAIN ROAD PERTH**

TITLE: **SERVICES PLAN - MAIN ROAD CH 1140 - 1260**
SCALE: **1:250** SHEET SIZE: **A1** DWGs IN SET: **-**
PROJECT No: **221032** DWG No: **C507** REV: **A**

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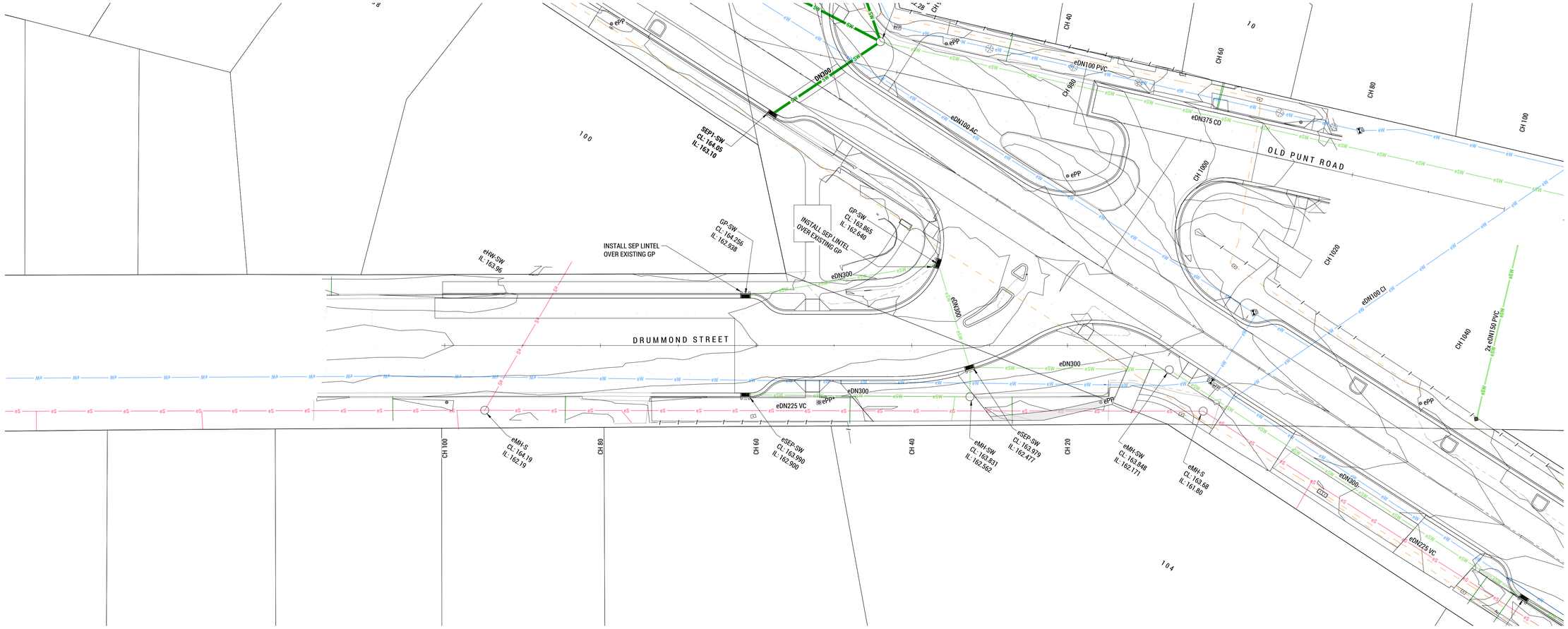

SERVICES PLAN - DRUMMOND STREET CH 0 - 100
SCALE 1:250

LEGEND

- eSW — EXISTING STORM WATER MAIN
- SW — PROPOSED STORMWATER MAIN
- eS — EXISTING SEWER MAIN
- eW — EXISTING WATER MAIN
- EXISTING COMMUNICATIONS LINE
- ePP — EXISTING FIRE PLUG
- EXISTING STOP / ISOLATION VALVE

STORMWATER PIPE SCHEDULE

MARK	PIPE SIZE	TYPE	CLASS
DN300	300	BMAX - RRJ	SN8
DN375	375	BMAX - RRJ	SN8

STORMWATER PIT / MANHOLE SCHEDULE

MARK	SIZE	TYPE	ACCESSORIES
MH1-SW	1050	PRECAST CONC. MANHOLE	CLASS B LID - NON TRAFFICABLE CLASS D LID - TRAFFICABLE
SEP1-SW	1220	TYPE 1	REFER LGAT STD DWG TSD-SW07-v3
SEP2-SW	1250	TYPE 5	REFER LGAT STD DWG TSD-SW12-v3

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DESIGN CHK: JWS
DRAWN BY: PVD
DRAFT CHK: JF
DATE: 31-08-23

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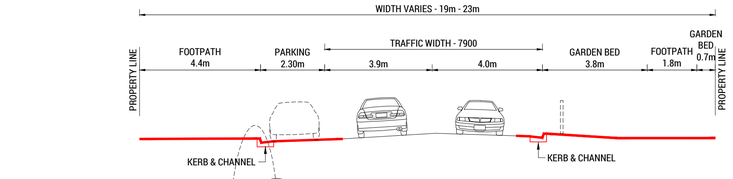
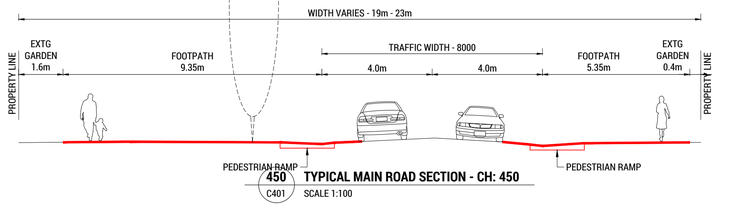
CLIENT: NORTHERN MIDLAND COUNCIL
PROJECT: PERTH MAIN ROAD STREETSCAPE
ADDRESS: MAIN ROAD PERTH

TITLE: SERVICES PLAN - DRUMMOND STREET CH 0 - 100
SCALE: 1:250 SHEET SIZE: A1 DWGs IN SET: -
PROJECT No: 221032 DWG No: C508 REV: A



570 C401 **TYPICAL MAIN ROAD SECTION - CH: 570**
SCALE 1:100



450 C401 **TYPICAL MAIN ROAD SECTION - CH: 450**
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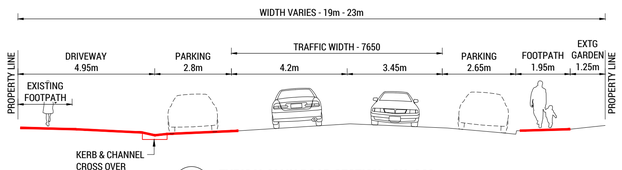

260 C401 **TYPICAL MAIN ROAD SECTION - CH: 260**
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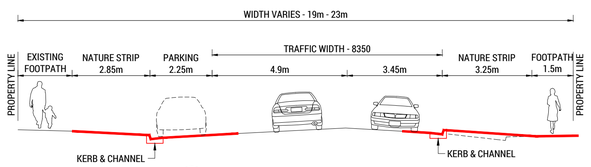

150 C401 **TYPICAL MAIN ROAD SECTION - CH: 150**
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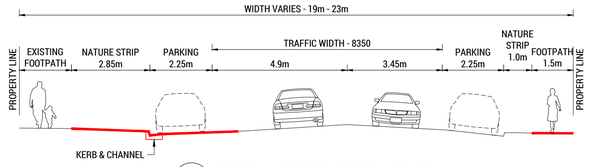
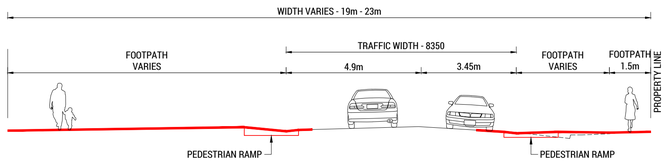
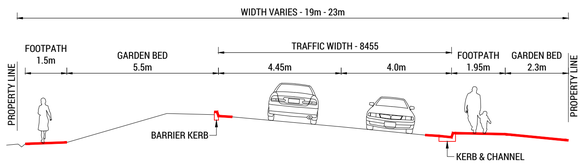


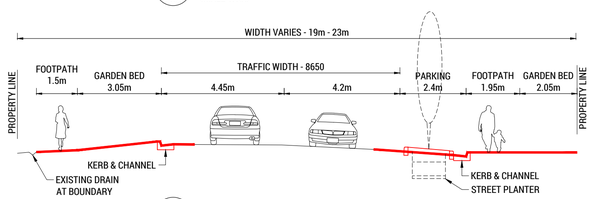
130 C401 **TYPICAL MAIN ROAD SECTION - CH: 130**
SCALE 1:100



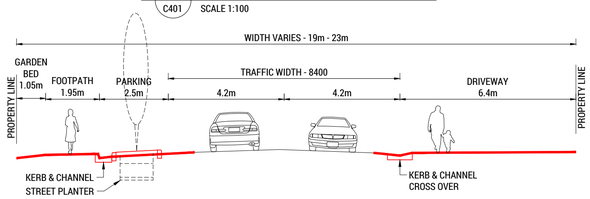
55 C401 **TYPICAL MAIN ROAD SECTION - CH: 55**
SCALE 1:100



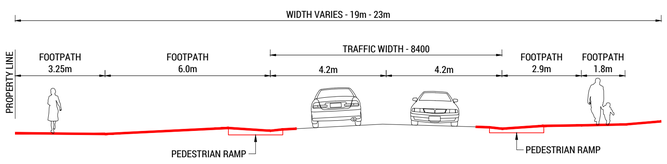
1180 C401 **TYPICAL MAIN ROAD SECTION - CH: 1180**
SCALE 1:100



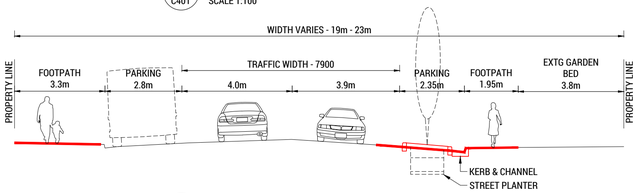
1100 C401 **TYPICAL MAIN ROAD SECTION - CH: 1100**
SCALE 1:100



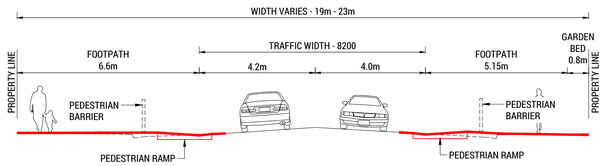
1050 C401 **TYPICAL MAIN ROAD SECTION - CH: 1050**
SCALE 1:100



960 C401 **TYPICAL MAIN ROAD SECTION - CH: 960**
SCALE 1:100



710 C401 **TYPICAL MAIN ROAD SECTION - CH: 710**
SCALE 1:100



590 C401 **TYPICAL MAIN ROAD SECTION - CH: 590**
SCALE 1:100

NORTHERN MIDLANDS COUNCIL

REV:	ISSUED FOR / DESCRIPTION:	BY:	DATE:
A	DEVELOPMENT APPROVAL	PVD	31-08-23

STATUS: **PRELIMINARY / INFORMATION**

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APPROVED: **R. JESSON** ACRED. No: **CC5848I** DATE: **31-08-23**

DESIGN BY:	RJ
DESIGN CHK:	JWS
DRAWN BY:	PVD
DRAFT CHK:	JF

LANGE design landscape architecture

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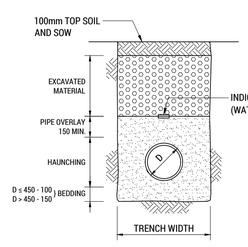
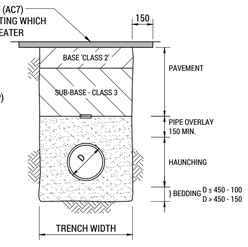
CLIENT: **NORTHERN MIDLAND COUNCIL**
PROJECT: **PERTH MAIN ROAD STREETSCAPE**
ADDRESS: **MAIN ROAD PERTH**

TITLE: **TYPICAL SECTIONS**
SCALE: **1:100** SHEET SIZE: **A1** DWGs IN SET: **-**
PROJECT No: **221032** DWG No: **C701** REV: **A**

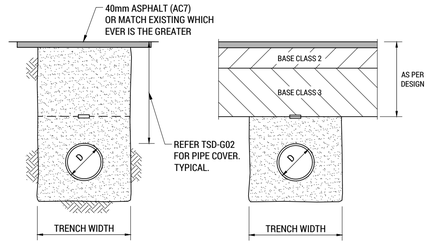


D01 - **TRENCHES - NON-TRAFFICABLE**
SCALE 1:20



CLASS 1, 2 AND 3 ROADS

D02 - **TRENCHES - EXISTING ROADS**
SCALE 1:20



CLASS 4 LOCAL ROADS
PARKING LANES - ALL ROADS
FOOTPATHS / DRIVEWAYS

D03 - **TRENCHES - NEW ROADS**
SCALE 1:20

TRENCH WIDTH		
PIPE TYPE	**NOM. DIA (D)**	**TRENCH WIDTH**
CONCRETE	≤ 1500	D + 300
	> 1500	DESIGN REQ.
OTHER PIPES	100	300
	150	450
	225-300	600
	450	750
	450-1500	D + 600
	> 1500	DESIGN REQ.

MINIMUM TRENCH WIDTHS MAY BE VARIED ABOVE THE PIPE OVERLAY ZONE TO MEET 'WORKPLACE STANDARDS' REQUIREMENTS.
ie EXCAVATIONS OVER 1.5m MAY REQUIRE RISK ASSESSMENT.

COMPACTION OF BEDDING, HAUNCHING & OVERLAY
REFER TO AS 1289-5.5
CONCRETE PIPES = MIN. DENSITY INDEX = 60% (85% STD. COMPACTION)
uPVC PIPES = DENSITY INDEX = 65% (90% STD. COMPACTION)
DICL PIPES = DENSITY INDEX = 65% (90% STD. COMPACTION)

BEDDING, HAUNCHING AND OVERLAY MATERIAL
BEDDING , HAUNCHING AND PIPE OVERLAY MATERIAL SHALL CONTAIN NO DELETERIOUS MATERIAL OR CLAY LUMPS AND SHALL COMPLY WITH THE FOLLOWING GRADINGS:

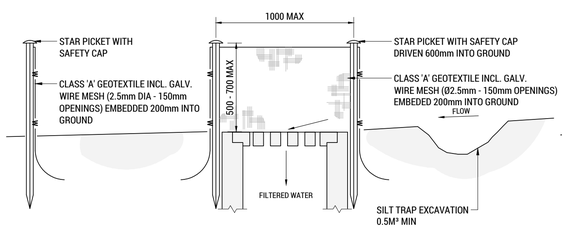
FOR uPVC AND DUCTILE IRON PIPES
SAND OR CRUSHED ROCK (STONE DUST)

SIEVE APERTURE (mm) TO AS 1152	% PASSING (BY MASS)
6.7	100
2.36	70-100
0.6	20-90
0.3	8-50
0.15	0-20
0.075	0-10

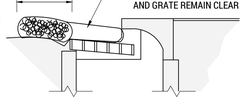
FOR CONCRETE PIPES
CRUSHED ROCK

SIEVE APERTURE (mm) TO AS 1152	% PASSING (BY MASS)
19	100
2.36	50-100
0.6	20-90
0.3	10-60
0.15	0-25
0.075	0-10

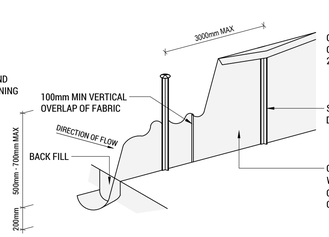
ALL MATERIAL SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH AS 3725 AND TO THE SATISFACTION OF THE SUPERINTENDENT.



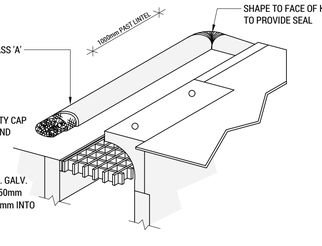
D04 - **SILT FENCE AT GRATED PIT**
SCALE N.T.S



D05 - **SILT FENCE AT GULLY PIT**
SCALE N.T.S



D06 - **SILT FENCE DETAIL**
SCALE N.T.S



D07 - **SILT FENCE AT GULLY PIT**
SCALE N.T.S

SILT FENCE
CONSTRUCT AS DETAILED AND INSTALL CLASS 'A' GEOTEXTILE OR USE PROPRIETARY SILT FENCE. EG; MACCAFERRI 'SILT LOK'.

OMIT SANDBAG WALL AND SILTTRAP WHEN PIT IS IN A LOW POINT.

GULLY PIT
GALVANIZED WIRE MESH 2mm DIA x 12mm OPENING.

GENERAL
SEDIMENT FENCES ARE TO BE CLEANED DAILY TO PREVENT BREAKAGE/OVERTOPPING.

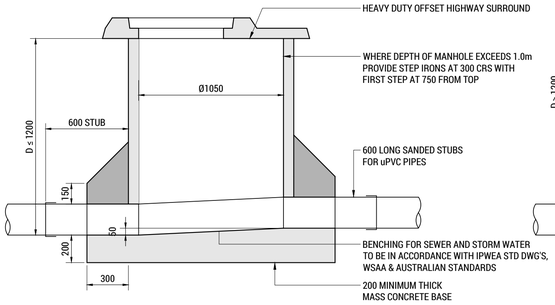
IT IS THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL, MAINTAIN AND (UPON COMPLETION) REMOVE ALL TEMPORARY SEDIMENT CONTROL MEASURES.

IT IS STRONGLY RECOMMENDED THAT THE DEVELOPER RE-COVERS ANY DISTURBED AREAS WITH TOPSOIL AS QUICKLY AS POSSIBLE AFTER BULK EARTHWORKS ARE COMPLETED, TO PREVENT SOIL DISPERSION.

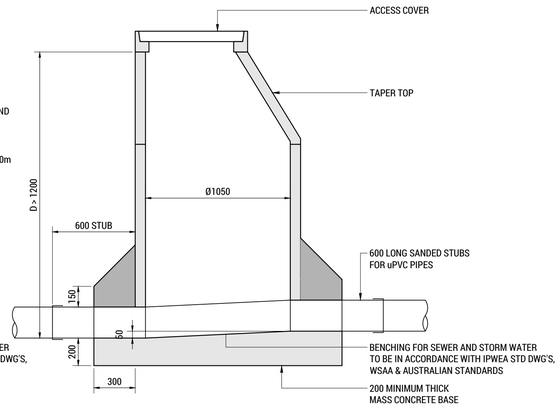
NOTE:
INSTALL SILT MANAGEMENT AS REQUIRED. LOCATIONS TO BE CONFIRMED ON SITE. ENSURE SILT MANAGEMENT COMPLIES WITH CURRENT COUNCIL STANDARDS AND REQUIREMENTS.

MANHOLE LIDS TO BE 'GATIC' TYPE OR SIMILAR
- HEAVY DUTY 'CLASS D' FOR TRAFFIC AREAS
- MEDIUM DUTY 'CLASS B' FOR ALL OTHER AREAS

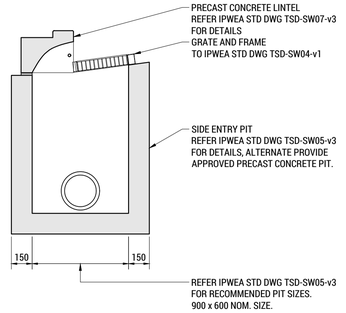
ALL STORM WATER MANHOLES TO HAVE 'SW' CAST INTO LIDS. SEWER MANHOLES TO HAVE 'S' CAST IN.



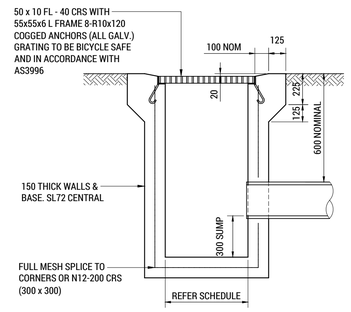
D08 - **DETAIL OF MANHOLE - D ≤ 1200**
SCALE 1:20
REFER IPWEA STD DWG TSD-SW02-v3 FOR STORMWATER MANHOLE DETAILS
REFER WSAA STD DWG'S FOR SEWER MANHOLE DETAILS



D09 - **DETAIL OF MANHOLE - D > 1200**
SCALE 1:20



D10 - **SECTION DETAIL - SIDE ENTRY PIT 'TYPE 1'**
SCALE 1:20
REFER IPWEA STANDARD DRAWINGS FOR ADDITIONAL SIDE ENTRY PIT DETAILS



D11 - **GRATED PIT - TRAFFICABLE**
SCALE 1:20
REFER IPWEA STANDARD DRAWINGS FOR ALTERNATE PIT CONSTRUCTION DETAILS.
APPROVED PRECAST UNIT MAYBE SUBSTITUTED.

NORTHERN MIDLANDS COUNCIL

REV:	ISSUED FOR / DESCRIPTION:	BY:	DATE:
A	DEVELOPMENT APPROVAL	PVD	31-08-23

STATUS: **PRELIMINARY / INFORMATION**

APPROVED: **R. JESSON** ACRED. No: **CC5848I**

DESIGN BY:	RJ
DESIGN CHK:	JWS
DRAWN BY:	PVD
DRAFT CHK:	JF
DATE:	31-08-23

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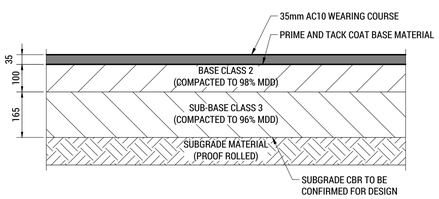
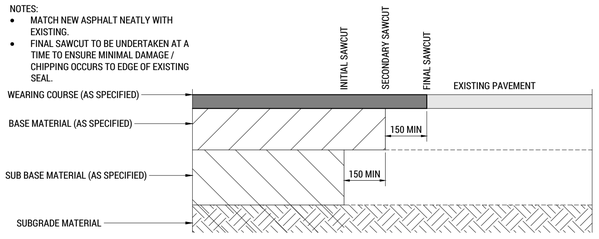
CLIENT: **NORTHERN MIDLAND COUNCIL**
PROJECT: **PERTH MAIN ROAD STREETSCAPE**
ADDRESS: **MAIN ROAD PERTH**

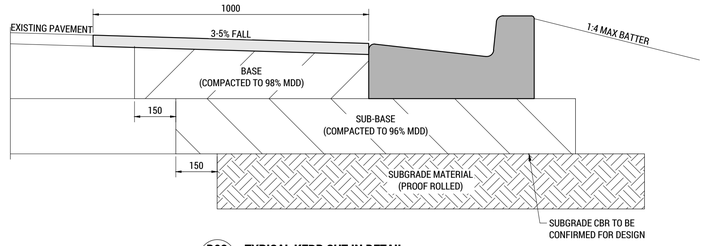
TITLE: **CIVIL SECTIONS & DETAILS - SHEET 1**
SCALE: **1:10, 1:20** SHEET SIZE: **A1** DWGs IN SET: **-**
PROJECT No: **221032** DWG No: **C711** REV: **A**



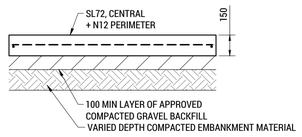
D01 **HOT MIX PAVEMENT - ROADWAYS - PAV-A**
SCALE 1:10
MIN CBR 4% (CONTRACTOR TO CONFIRM ONSITE)



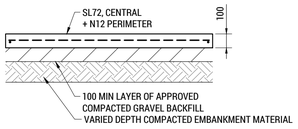
D02 **NEW TO EXISTING HOT MIX TRANSITION**
SCALE 1:10
NOTE - HOTMIX PAVEMENT - ROADWAYS FOR BASE MATERIAL TYPES & DEPTHS



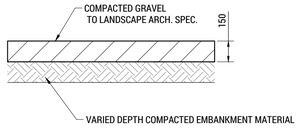
D03 **TYPICAL KERB CUT IN DETAIL**
SCALE 1:10
NOTE - HOTMIX PAVEMENT - ROADWAYS FOR BASE MATERIAL TYPES & DEPTHS



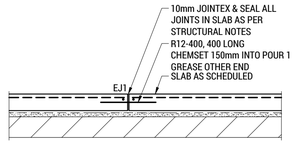
D04 **SECTION - PAVEMENT 'B' DRIVEWAY (TYP.)**
SCALE 1:20
REFER IPWEA STD DWG TSD-R09-v3 FOR ADDITIONAL DRIVEWAY DETAILS



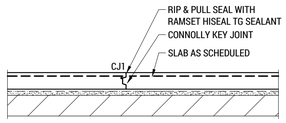
D05 **SECTION DETAIL - PAVEMENT 'C' (TYP.)**
SCALE 1:20
REFER IPWEA STD DWG TSD-R11-v3 FOR ADDITIONAL FOOTPATH DETAILS



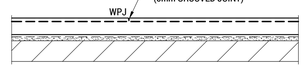
D06 **SECTION - PAVEMENT 'D' GRAVEL (TYP.)**
SCALE 1:20



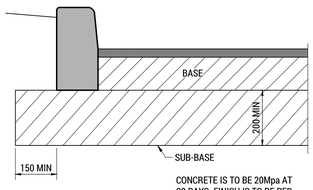
D07 **DETAIL - CONSTRUCTION JOINT EJ1 (TYP.)**
SCALE 1:20
PROVIDE EXPANSION JOINTS EACH SIDE DRIVEWAYS AND AT 18.0m MAX CRS
REFER IPWEA STD DWG TSD-R09-v3 & TSD-R11-v3 FOR DETAILS



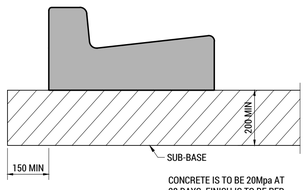
D08 **DETAIL - CONSTRUCTION JOINT CJ1 (TYP.)**
SCALE 1:20
PROVIDE CONSTRUCTION JOINTS AT 6.0m MAX CRS
REFER IPWEA STD DWG TSD-R11-v3 FOR DETAILS



D09 **DETAIL - WEAKENED PLANE JOINT WPJ (TYP.)**
SCALE 1:20
PROVIDE WEAKENED PLANE JOINTS AT 2.0m MAX CRS
REFER IPWEA STD DWG TSD-R11-v3 FOR DETAILS

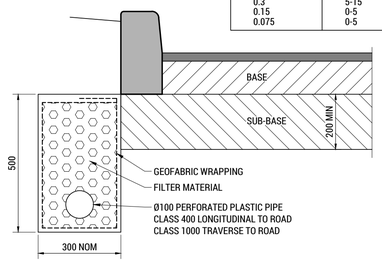


D10 **TYPE BK KERB**
SCALE 1:10
REFER IPWEA STD DWG TSD-R14-v3
FOR APPROVED KERB & CHANNEL
PROFILES & DIMENSIONS

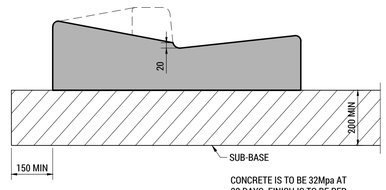


D11 **TYPE KC KERB**
SCALE 1:10
REFER IPWEA STD DWG TSD-R14-v3
FOR APPROVED KERB & CHANNEL
PROFILES & DIMENSIONS

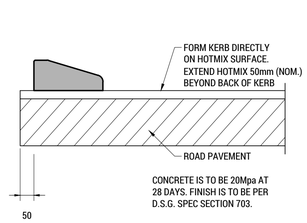
FIN DRAIN BACKFILL QUARTZ PAVING SAND	
SIEVE APERTURE (mm) TO AS 1152	% PASSING (BY MASS)
4.75	95-100
2.36	65-95
0.6	15-65
0.3	5-15
0.15	0-5
0.075	0-5



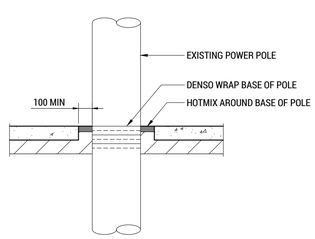
D12 **SUB-SOIL DRAIN DETAIL**
SCALE 1:10
INSTALL TO DSG SPEC ON DWG 3401-3/P17-4



D13 **TYPE KCV KERB - VEHICULAR CROSSING**
SCALE 1:10
REFER IPWEA STD DWG TSD-R14-v3
FOR APPROVED KERB & CHANNEL
PROFILES & DIMENSIONS



D14 **TYPE CM KERB**
SCALE 1:10
REFER IPWEA STD DWG TSD-R14-v2
FOR APPROVED KERB & CHANNEL
PROFILES & DIMENSIONS



D15 **TYPICAL POWER POLE BASE TREATEMENT**
SCALE 1:20

NORTHERN MIDLANDS COUNCIL				STATUS: PRELIMINARY / INFORMATION	DESIGN BY: RJ	CLIENT: NORTHERN MIDLAND COUNCIL	TITLE: CIVIL SECTIONS & DETAILS - SHEET 2
				DO NOT SCALE - IF IN DOUBT, ASK	DESIGN CHK: JWS	PROJECT: PERTH MAIN ROAD STREETSCAPE	
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	A	DEVELOPMENT APPROVAL	PVD	31-08-23			
	REV:	ISSUED FOR / DESCRIPTION:	BY:	DATE:	APPROVED: R. JESSON ACRED. No: CC5848I	DATE: 31-08-23	

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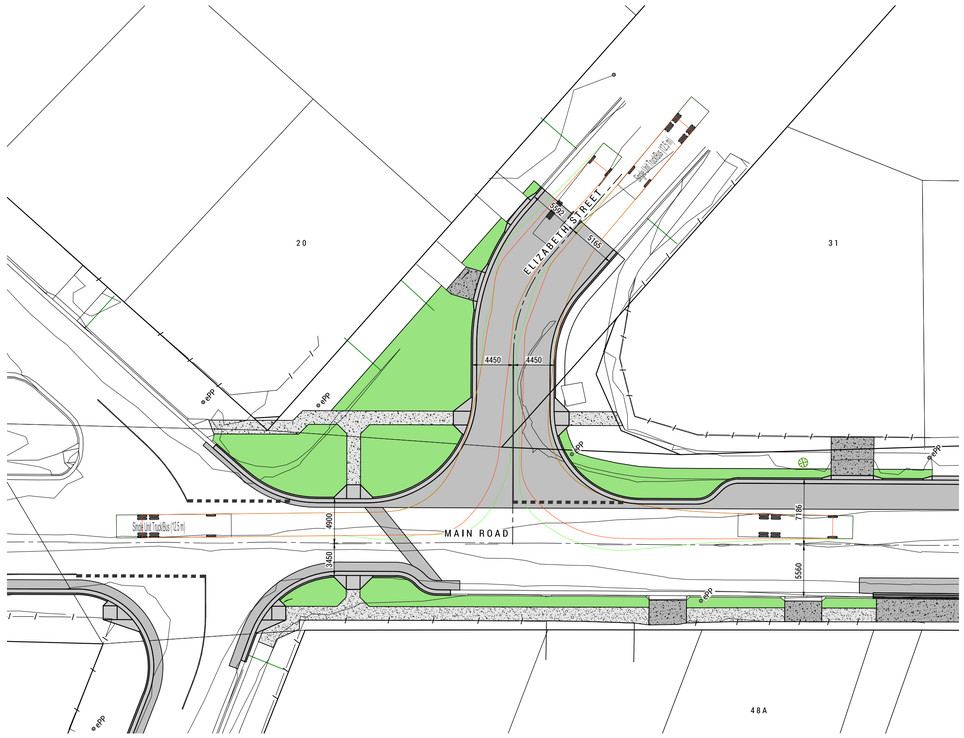
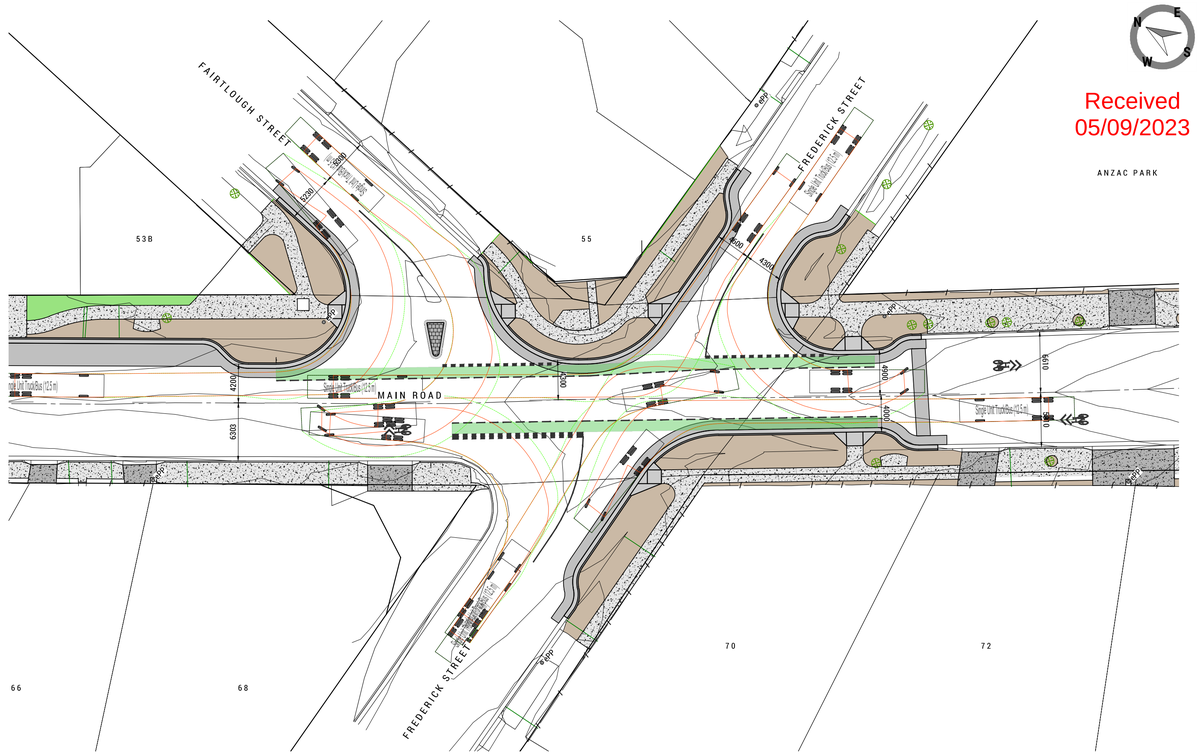


SWEEP PATH - 12.5m BUS - ELIZABETH ST

SCALE N.T.S



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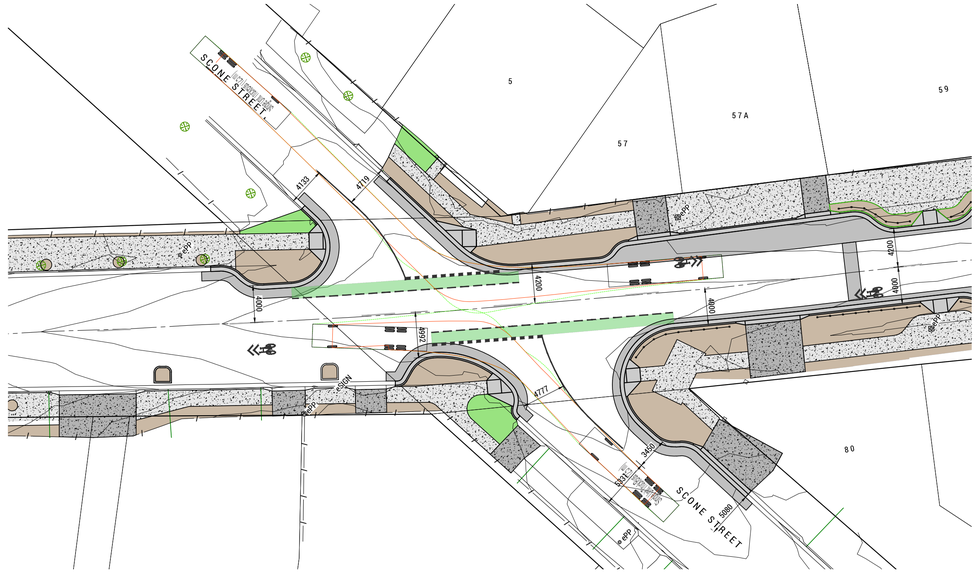
05/09/2023

SWEEP PATH - 12.5m BUS - FAIRTLOUGH ST / FREDERICK ST

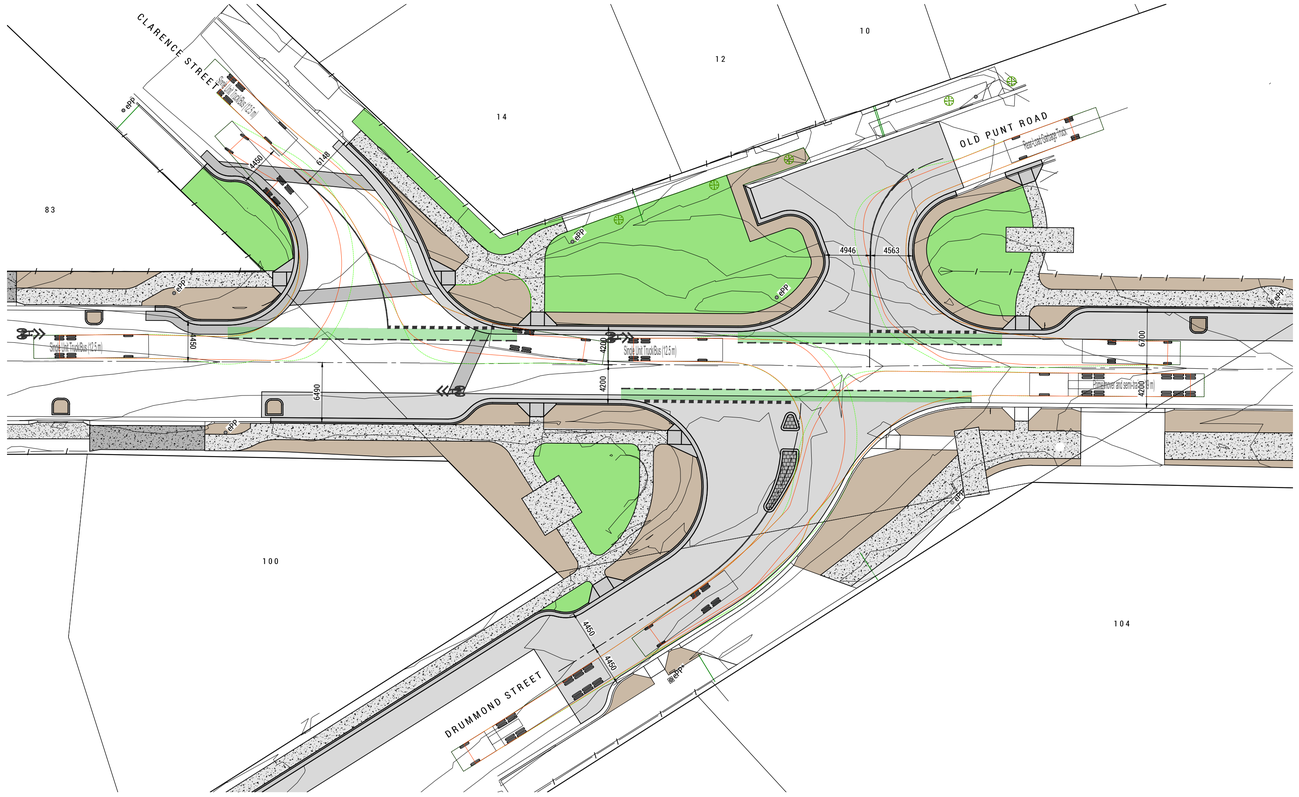
SCALE N.T.S



SWEEP PATH - 12.5m BUS - SCONE ST

SCALE N.T.S

NORTHERN MIDLANDS COUNCIL				STATUS: PRELIMINARY / INFORMATION	DESIGN BY: RJ	CLIENT: NORTHERN MIDLAND COUNCIL	TITLE: TURN PATH PLANS - SHEET 1
	A	DEVELOPMENT APPROVAL	PVD 31-08-23	DO NOT SCALE - IF IN DOUBT, ASK. THIS DOCUMENT MAY ONLY BE USED FOR THE PURPOSE FOR WHICH IT WAS PREPARED. © RARE INNOVATION PTY LTD. ABN 51 619 598 257	DESIGN CHK: JWS	PROJECT: PERTH MAIN ROAD STREETSCAPE	
	REV:	ISSUED FOR / DESCRIPTION:	BY: DATE:		DRAWN BY: PVD		SCALE: N.T.S SHEET SIZE: A1 DWGs IN SET: -
				APPROVED: R. JESSON ACRED. No: CC5848I	DRAFT CHK: JF	ADDRESS: MAIN ROAD PERTH	PROJECT No: 221032 DWG No: C801 REV: A
					DATE: 31-08-23	LANGE design landscape architecture; rare. 22-24 Paterson Street Launceston TAS 7250 rarein.com.au P. 03 6388 9200	



SWEEP PATH - CLARENCE ST, OLD PUNT RD, DRUMMOND ST
SCALE N.T.S

NORTHERN MIDLANDS COUNCIL

REV:	ISSUED FOR / DESCRIPTION:	BY:	DATE:
A	DEVELOPMENT APPROVAL	PVD	31-08-23

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DESIGN CHK:	JWS
DRAWN BY:	PVD
DRAFT CHK:	JF
DATE:	31-08-23

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CLIENT: NORTHERN MIDLAND COUNCIL
PROJECT: PERTH MAIN ROAD STREETSCAPE
ADDRESS: MAIN ROAD PERTH

TITLE: SWEEP PATH PLANS - SHEET 2
SCALE: N.T.S | SHEET SIZE: A1 | DWGs IN SET: -
PROJECT No: 221032 | DWG No: C802 | REV: A

CONTEXT PLAN

LEGEND

- Existing driveway kerb crossover with concrete driveway pavement.
- Existing / renewed concrete footpath.
- Existing street trees.
- New pedestrian kerb ramps.
- New gardens with low growing groundcovers and shrubs.

NUMBER LEGEND

1. New garden beds with low growing hardy groundcover species and low shrubs to provide greenery to the streetscape.
2. New kerb an channel to assist with stormwater management and to provide a defined edge to the streetscape.
3. New kerb extensions to assist in vehicle and pedestrian management between Main Street and adjoining streets.
4. Potential for interpretation signage to showcase the history of Perth.
5. Potential for rain gardens to assist with harvesting and managing stormwater flows from the road, as well as providing passive irrigation for the surrounding planting.
6. Realigned intersection to provide a safer vehicle and pedestrian movements between Elizabeth Street and main Street.
7. Existing grassed verges to be retained.
8. New hardy tussock planting along the narrow verge to the northern side of King Street.
9. New planting beds between existing boundary fences and the new concrete footpath to add greenery to the streetscape.
10. Existing asphalt footpath to be replaced with concrete pavement.

CHARACTER IMAGES


Rain gardens to kerb buildouts.

Interpretation signage ndes.


New gardens with low growing plants.

PERTH STREETSCAPE REDEVELOPMENT
Main Street Perth Tasmania

CONCEPT PLAN

0 1 2 5 10m
30 August 2023
Sheet 1 of 6 Issue A

NORTHERN MIDLANDS COUNCIL

loop architecture

LANGE design landscape architecture

CONTEXT PLAN

LEGEND

- Driveway kerb crossover with concrete driveway pavement.
- Pedestrian kerb ramps.
- Line marking and green surfacing to highlight bike lanes across intersections.
- Shared bike lane and vehicle movement symbol with directional arrows.
- 1800mm (w) Min. concrete footpath.
- Concrete pavement with feature saw cut grid to add interest to the streetscape.
- Feature pavement to highlight point of interest nodes.
- Hardy colourful groundcovers to a height of 500mm max.
- Existing trees to be retained.
- New ornamental street trees to allow shade in summer and solar access in winter.

NUMBER LEGEND

1. Existing concrete footpaths realigned to increase pedestrian safety and to suit proposed streetscape works.
2. New planting beds with low growing hardy shrubs and groundcovers to provide greenery to the streetscape.
3. New street trees to add color, form and texture to the streetscape as well a shade in summer.
4. New kerb extensions to assist in vehicle and pedestrian management between Main Street and adjoining streets.
5. Kerb extensions allow intersections to be realigned to achieve a 90 degree approach to Main Street for vehicle traffic.
6. Potential to link bicycle treatments with the Breadalbane to Longford cycle network.
7. Potential for seating for rest stop and interpretation signage to showcase the history of Perth.
8. Potential for rain gardens to assist with harvesting and managing stormwater flows from the road, as well as providing passive irrigation for the surrounding planting.
9. Existing crossing point with new durable textured road surface to highlight the crossing for motorists.
10. Opportunity for seating.
11. Existing trees with tree grates to be retained, with new pavements constructed around them to allow pedestrian movements.
12. Line marked parking bays ensure spaces are maximised throughout the central business area.
13. Street trees in raised kerb planters adapted to allow stormwater access to provide passive irrigation.
14. New concrete driveway crossovers to be provided to allow customers of the adjoining business to drive-through.
15. Pedestrian barriers within gardens to provide additional pedestrian safety and to highlight the shopping area.

Artist Impression - Main Street and Fairtlough Street intersection kerb build-outs with planting.

Feature Tree - Quercus palustris 'Pringreen'

Street Tree - Zelkova serrata 'Green Vase'

Rain gardens to kerb buildouts.

Interpretation signage nides.

PERTH STREETSCAPE REDEVELOPMENT

Main Street Perth Tasmania

CONCEPT PLAN

0 1 2 5 10m

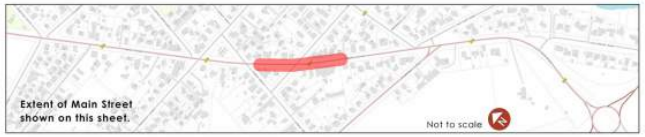
30 August 2023
Sheet 2 of 6 Issue F

NORTHERN MIDLANDS COUNCIL

loop architecture

LANGE design landscape architecture

CONTEXT PLAN



LEGEND

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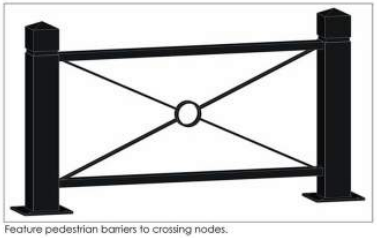
- Concrete pavement with feature saw cut grid to add interest to the streetscape.
- Feature pavement to highlight point of interest nodes.
- Hardy colourful groundcovers to a height of 500mm max.
- Existing trees to be retained.
- New ornamental street trees to allow shade in summer and solar access in winter.

NUMBER LEGEND

1. Designated pedestrian crossing node centrally located to provide maximum safety and accessibility for people to cross Main Street. The node will include larger pavement areas for street furniture, planting and interpretation signage. Contrasting pavement will also be included to highlight the pedestrian link across to street.
2. Existing shop awning over the footpath.
3. Tall and narrow ornamental street trees highlight the pedestrian crossing node, and to add seasonal colour to the streetscape.
4. Formalised footpath widths provide areas for planting along existing fence lines to add colour, texture and interest to the streetscape.
5. Line marked parking bays ensure spaces are maximised throughout the central business area.
6. Street trees in raised kerb planters adapted to allow stormwater access to provide passive irrigation.
7. New planting beds with low growing hardy shrubs and groundcovers to provide greenery to the streetscape.
8. Potential for seating for rest stops and interpretation signage to showcase the history of Perth.

9. New kerb extensions to assist in vehicle and pedestrian management between Main Street and adjoining streets.
10. Kerb extensions allow intersections to be realigned to achieve a 90 degree approach to Main Street for vehicle traffic.
11. Pedestrian barriers within gardens to provide additional pedestrian safety and to highlight the shopping area.
12. Potential for rain gardens to assist with harvesting and managing stormwater flows from the road, as well as providing passive irrigation for the surrounding planting.
13. Existing kerb build-outs to Talisker Street to be retained.
14. Existing pavement adjoining the IGA building to be refurbished to maintain continuity throughout the central business area of the streetscape.
15. Pedestrian barriers with a narrow garden bed on the street side separates the Queens Head Inn outdoor dining area from pedestrian movements along the streetscape.

Artists impression - View south down Main Street of the pedestrian crossing node.



Feature pedestrian barriers to crossing nodes.

Seating style.

Interpretation signage ndes.

PERTH STREETSCAPE REDEVELOPMENT

Main Street Perth Tasmania

CONCEPT PLAN

0 1 2 5 10m

30 August 2023

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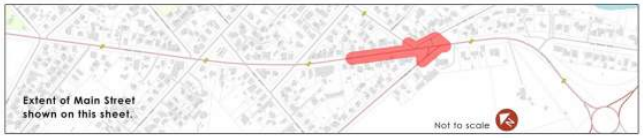
NORTHERN MIDLANDS COUNCIL

loop architecture

LANGE design landscape architecture

CONTEXT PLAN



LEGEND

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- Shared bike lane and vehicle movement symbol with directional arrows.
- 1800mm (w) Min. concrete footpath.
- Concrete pavement with feature saw cut grid to add interest to the streetscape.
- Feature pavement to highlight point of interest nodes.
- Hardy colourful groundcovers to a height of 500mm max.
- Existing trees to be retained.
- New ornamental street trees to allow shade in summer and solar access in winter.

NUMBER LEGEND

1 Street trees in raised kerb planters adapted to allow stormwater access to provide passive irrigation.

2 Line marked parking bays ensure spaces are maximised throughout the central business area.

3 Bus zone to be kept clear of parking bays.

4 Existing bus stop facilities to be retained.

5 Formalised footpath widths provide areas for planting along existing fence lines to add colour, texture and interest to the streetscape.

6 Reduced driveway access along the abandoned service station frontage to allow for more parking.

7 New planting beds with low growing hardy shrubs and groundcovers to provide greenery to the streetscape.

8 Kerb build-outs also provide the opportunity to realign the vehicle approach to Main Street from the adjoining streets.

9 Rain gardens to assist with harvesting and managing stormwater flows from the road, as well as providing passive irrigation for the surrounding planting.

10 Kerb extensions allow intersections to be realigned to achieve a 90 degree approach to Main Street for vehicle traffic.

11 Seating opportunities positioned throughout the streetscape for resting.

12 Tall and narrow ornamental street trees highlight the pedestrian crossing node, and to add seasonal colour to the streetscape.

13 The existing intersection to Old Punt Road to be reorganised to provide a safer access point to maximise safety for traffic and pedestrians. This opportunity also creates an open space to further add to the gateway leading into Perth from the south.

14 Reversing bay for the adjoining residence to allow the to safely enter Old Punt Road.

15 The existing corner adjoining the abandoned service station to be reorganised to enhance the visual presentation leading into Perth from the south. The area shall include low colourful planting, and feature lawn with ornamental trees for seasonal change, and a feature pavement area with seating and interpretation signage.

16 The existing intersection to Drummond Street to be reorganised to provide a safer access point to maximise safety for traffic and pedestrians.

17 Large street tree plantings down the center of Drummond Street to provide passive traffic calming, shade during summer and solar access in winter.

CHARACTER IMAGES


Feature Tree - Quercus palustris 'Pringreen'


Street Tree - Zelkova serrata 'Green Vase'


Rain gardens to kerb buildouts.


Saw cut joins to footpath pavement.


Contrasting driveway crossovers pavement.


Feature concrete pavement.


Seating style.


Interpretation signage ndes.

PERTH STREETSCAPE REDEVELOPMENT
Main Street Perth Tasmania

CONCEPT PLAN

0 1 2 5 10m
30 August 2023
Sheet 4 of 6 Issue D

NORTHERN MIDLANDS COUNCIL
loop architecture
LANGE design landscape architecture

CONTEXT PLAN

LEGEND

- Driveway kerb crossover with concrete driveway pavement.
- Pedestrian kerb ramps.
- Line marking and green surfacing to highlight bike lanes across intersections.
- Shared bike lane and vehicle movement symbol with directional arrows.
- 1800mm (w) Min. concrete footpath.
- Feature pavement to highlight point of interest nodes.
- Hardy colourful groundcovers to a height of 500mm max.
- Existing trees to be retained.
- New ornamental street trees to allow shade in summer and solar access in winter.

NUMBER LEGEND

1. Kerb build-outs provide a safer intersections for pedestrians and motorists. Build-outs will also include hardy groundcovers to add colour, texture and interest to the streetscape.
2. Feature pavement area with seating and interpretation signage showcasing the history of Perth.
3. Existing park to be refurbished with historic markers refurbished, gardens and pathways upgraded and the existing hedge removed to add to the gateway area.
4. New kerb and channeling to formalise parking bays, and to provide a structured pathway connection to Old Bridge Road.
5. Bike lanes within the roadway transition to the shared pedestrian and cycle pathway along the southern side of Main Street.
6. Tall and narrow ornamental street trees highlight the pedestrian crossing node, and to add seasonal colour to the streetscape.
7. New planting beds with low growing hardy shrubs and groundcovers to provide greenery to the streetscape.
8. Pathway barriers to ensure cyclist slow down prior to entering the bike lane along Main Street, and to indicate the end/start of 3m (w) shared pedestrian & cycle pathway.
9. Street trees in raised kerb planters adapted to allow storm water access to provide passive irrigation.
10. Formalised footpath widths provide areas for planting along existing fence lines and property boundaries to add colour, texture and interest to the streetscape.
11. New barrier kerb to formalise the edge of the road bend and to preserve the existing grassed verge.
12. Realigned kerb & channeling to provide a 3m (w) path.
13. Realigned kerb & channeling allows for a 3m (w) shared pedestrian and cycle pathway to connected the greater Perth open space loop back the the central business area.
14. Existing open stormwater side drain to be retained.
15. New asphalt driveway access to adjoining residences.
16. Kerb build-out to provide the illusion of an narrow entry road (lane width remains at 3.5m), to reduce traffic speed leading into the southern gateway of Perth.
17. Pathway barriers to ensure cyclist slow down prior to entering the residential zone.
18. 3m (w) Shared pedestrian and cycle pathway to continue on and link up with the open space corridor of the adjoining residential precinct and beyond.

CHARACTER IMAGES


Feature Tree - Quercus palustris 'Pringreen'


Street Tree - Zelkova serrata 'Green Vase'


Rain gardens to kerb buildouts.


Saw cut joins to footpath pavement.


Contrasting driveway crossovers pavement.


Feature concrete pavement.


Seating style.


Interpretation signage ndes.

PERTH STREETSCAPE REDEVELOPMENT
Main Street Perth Tasmania

CONCEPT PLAN

0 1 2 5 10m
30 August 2023
Sheet 5 of 6 Issue E

NORTHERN MIDLANDS COUNCIL
loop architecture
LANGE design landscape architecture

Acer rubrum var. 'Fairview Flame'

Zelkova serrata var. 'Green Vase'

CONTEXT PLAN

NUMBER LEGEND

1 Buffer planting between future open space and adjoining residential property, to link in with new buffer planting along the western boundary of the public reserve.

2 New Tasmanian native tree and understory planting a long the western boundary of the public reserve. understory planting shall consist of medium and small shrubs, native grasses and groundcovers.

3 New Tasmanian native trees in open grass.

4 Open grass areas to provide a broad parkland environment.

5 Low mass planted hardy native and exotic groundcover species provide colour and texture to the ground plain adding to the structure and enjoyability of the parkland.

6 Living landscape art in the form of a meandering line of signature Trees *Acer rubrum var.* 'Fairview Flame', to form a decorative element to highlight the entry of Perth and to provide a backdrop to the Midlands Highway roundabout.

7 Feature trees *Zelkova serrata var.* 'Green Vase', to continue on from the signature trees along the streetscape.

8 Existing exposed earth bank fronting the Midlands Highway roundabout to be mass planted out with low hardy native and exotic groundcover species to provide colour and texture to the roundabout backdrop.

9 3m (w) Shared concrete pathway meanders through the parkland and links up with the greater Perth open space corridor to Main Street, and the cycle lanes to Breadalbane and Longford.

10 Low planting to extend to the other side of the pathway to add interest to the journey.

11 Existing Council Reserve with mature trees to be retained to maintain a vegetated backdrop to the roundabout.

12 Existing open roadside stormwater drain to be widened and grassed and provide a more visually pleasing foreground to the parkland.

13 New Tasmanian native trees to increase the tree canopy cover along the western boundary, with understory planting consisting of low shrubs, native grasses and groundcovers to allow for passive surveillance.

14 Low mass planted hardy native and exotic groundcover species provide colour and texture to the ground plain and transition the parkland into the streetscape.

15 Barrier rail point to slow cyclists down before entering the streetscape precinct.

16 The concrete pathway shall continue on through to the Drummond Street intersection.

PUBLIC RESERVE REDEVELOPMENT

Property No: 6744916, Main Street Perth Tasmania

CONCEPT PLAN

0 5 10m

30 August 2023
Sheet 6 of 6 Issue E

NORTHERN MIDLANDS COUNCIL

loop architecture

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Received
19/09/2023

Midlands Council. Frederick Street carries some smaller volume of traffic however Main Street has priority, with give way signage for Frederick Street either side plus holding lines etc. if in place.

Sight distance at the Frederick Street intersection is currently sound, and proposals for modification to these junctions present as opportunities to provide more protection for vehicles through the use of outstands and revised kerb lines, to increase sight distance for entering traffic, and for pedestrian visibility. Some modifications to outstands and potential consideration of centre medians at junctions is suggested could be considered, subject to turning paths being reviewed.

It is noted that the Frederick and Fairtlough Street junctions have some acute angles in their connection to Main Street, which is typically undesirable for entering traffic visibility. It is reocmme4nded that these be reviewed for turning path and possible geometry changes where possible, and if unable to be resolved consideration be given to turn limiting signage for vehicles unable to safely negotiate these junctions for any particular movements.,

- **Drummond Street / Clarence Street**

A section of Main Street in this proposal to the Southwest has a junction crossing with Drummond Street (and nearby junctions Old Punt Road and Clarence Street). This is a major connection and was historically a significant junction used for Illawarra road traffic to turn on and off from Midland highway – meaning Heavy Vehicles were a major feature of the layout design previously. Clarence Street similarly is a higher function connection, for through traffic towards Mill Road.
Revisions appear sound and appear to take into consideration the use of the nearby service station facility adjacent, and provide improved pedestrian access and safety at this junction zone. Geometry changes for vehicle movements appear as improvements.

Likely pedestrian desire lines and limited crossing options at these junctions due to the complex/multi-street junction arrangement, suggests that consideration of options for barrier fencing or other elements to delineate pedestrian zones, crossings and vehicle paths may be an opportunity at this point, particularly for raised platform for NW of the junction as well as to and from Clarence Street areas.

- **Old Punt Road**

Junction of Old Punt Road in this proposal has a junction with Main Street – the objective of bringing this street at a more perpendicular angle is a worthwhile goal, however the challenge of heavy vehicles turning into the road defined by turning path on design requires consideration. The use of incorrect lane for HV turning movements

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Traffic Comment

Street Improvement Works Proposal
Main Street, PERTH, Tasmania

Author: Andrew Howell,
BEng(Hons), MEngSci

Sept 2023
RevB

Andrew Howell
BEng (Hons), MEngSci

Received
19/09/2023

Contents

Limitations

This report has been completed based on information provided by the client and available in the public domain, additional information beyond this has not been considered.
Based on the nature of the development, this report has considered general arrangements for this development only, and has not considered in detail the wider impacts beyond the site (upstream network impacts), nor been provided with detailed design plans in order to undertake a full assessment of all aspects of the development in relation to specific regulatory requirements, Australian Standards or further design related requirements, this being beyond the scope of this report providing general comment only.
Any subsequent changes to configuration or arrangements relating to the development which may impact on the content or recommendations of this report must be reviewed and approved by the author.

Received
19/09/2023

1. Introduction

Northern Midlands Council have developed a proposal for street improvement works in Main Street, Perth, after recent changes to the function of this main street zone following the Perth Bypass construction and the reduction in traffic and heavy vehicle use of the Main Street which was associated.

This proposal plan has been developed by Council with assistance of engineering designers *RARE Consulting* to provide various improvements to junctions, medians, crossings, kerbs and outstands and add design elements such as street trees and signage/line marking for revised lane and parking arrangements. This work is intended to create a more attractive updated streetscape with traffic calming and pedestrian friendly infrastructure to suit the revised function of this road link.

Prior to further development of the proposal a traffic report has been requested by the Northern Midlands Council, to review the arrangements with regard to traffic safety and service generally. This report, prepared by Andrew Howell, an engineer with experience in traffic and transport systems, preparing traffic impact assessments, and undertaking general road safety review, is provided for that purpose.

The review and report is not a road safety audit nor a traffic impact assessment (believed not required under Planning Scheme), but instead provides general overview and comment on the proposed arrangements for further design consideration and revision of design plans where appropriate.

Preparation of the report has included recent site visits and a long-term historical association with the street area and surrounds, with a review of the proposal plans (draft design plans) and discussions with NMC Engineering Officer and DSG staff on specific elements of the proposal.

2. The Site

The site is a section of Main Street. Perth, running from the Perth train park/Rail crossing South to a point just South of the main residential area, towards the Southern entrance roundabout from Midland Highway. Main Street runs generally North West-South East.

Several side street/through road junctions are also noted crossing Main Street in this zone, including Mary, Elizabeth, King, Fairtlough, Frederick, Scone, Talisker. Drummond Streets and OId Punt Road.

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19/09/2023

The Street is typically around 12.5-13m wide, with centre line markings and generally free range parking along its length, other than some small areas of time-limited parking in key zones around existing shops and services, which is designated by some limited linemarking but generally signage only. Kerb and Channel is provided either side, as are sealed or concrete footpaths throughout.

Junction markings indicate priority for Main Street over all minor cross streets, with associated give way signage and holding lines on these junctions.

Some limited raised median strips at junction approaches, and pram ramps to designate pedestrian crossings, currently exist along Main Street in this zone- at various locations. Some crossing points are not clearly defined and may not be considered best practise for management of pedestrians in this type of precinct/zone.

A school crossing point exists near to the Frederick Street junction but provides somewhat limited arrangements for pedestrian refuge and management of desire lines and may not meet all requirements of contemporary school crossing arrangements (lighting, signage, etc).

Main Street is generally level and the street is straight horizontally for majority of length of this zone with sound sight lines in general, and based on function should be considered a lower speed environment. Some curvature horizontally exists at the Southern end of the site (with some sight distance limitations for several private driveways to consider as noted in specific drawing comments below).

Cross street junctions currently appear generally sound, with suitable sight distance and general geometry arrangements, noting that the acute angles of some side streets approaching Main Street presents some issues for driver visibility when exiting side streets, having to look over shoulders for vehicles on Main Street. Such approach angles are noted as less than desirable under most geometric requirements for traffic design under Austroads guidance, and it is noted there are several improvements to these angles proposed as part of the upgrade design, which is considered appropriate.

Existing Development in proximity to the site includes:

- Shopping precinct and services, fuel station and pub all having frontage
- Police station and fire station in Main Street
- Residences on all frontages to streets
- Perth Recreation Ground / Recreational precinct to the East
- The Perth Primary School site to the East (and related school crossings various nearby)
- Anzac park adjacent to the Main Street

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19/09/2023

Some of these destinations provide for increased pedestrian traffic, and with less mobile, elderly, and juvenile pedestrians associated with these sites, indicate this Main Street zone generally should be a low vehicle speed environment.

Safety improvements including traffic calming and crossing improvements as well as speed restrictions, and delineation using a range of different means are all supported in principle. (delineation using landscaping, line marking, signage, pavement and surface types etc. as proposed are all supported methods for increasing safety and amenity, when used appropriately).

3. Design Proposal

The proposal is to create traffic calming and improvements to improve amenity and safety in the higher use Main Street zone by constructing revised junctions and crossings, and areas of median strip/traffic islands (consisting of some areas of raised/kerbed medians and nature strip zones with street trees/plantings), and some local barrier kerb changes, throughout the Main Street zone
Similar individual barrier kerb/outstands and median/traffic island changes including with use of pavement surfaces / pedestrian zones and use of landscaping/street trees has been used elsewhere in the municipality and neighbouring councils successfully and generally results in improvements to amenity and delineation of main street spaces to make these more pedestrian friendly and attractive.

Council has requested general consideration of suitability of the design proposal as attached from a traffic perspective (*REFER ATTACHMENT A* for *RARE Consulting* design plans), including consideration of traffic related aspects including layout, signage, parking etc in the street following these works, and comment upon any other traffic/ safety related concerns that may be considered through the upgrade works, where these can be identified.

4. Street Network

- **Main Street**

This street is currently a DSG (Department of State Growth) road and was previously part of the highway link from Launceston to Hobart (and node for Illawarra Road). Following the Perth Bypass works as part of National Highway improvements, the road now only carries a small percentage of historical traffic volumes (including major reduction in heavy vehicles (HV)), and is mostly used by local traffic. No current vehicle volumes are available (only pre-Bypass volumes)

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It is understood that future plans are considered for a transfer of this road asset from DSG to the local Council, but this has not yet occurred. Informal discussions with DSG (Senior Traffic Officer Garry Hills, *pers comms Jul23*) note that on this basis of a future road transfer to be formalized, DSG have no significant issues with the proposed traffic calming works as proposed and would likely seek comment generally from NMC on the proposal and suitability to meet Council and local community needs in the first instance.

Based on the revision to Road function following Perth Bypass works, Main Street is probably considered as a Link (3) within the Perth street network (Local Govt Road Hierarchy 2015) on assessment of typical function and construction standards. A "Link road" has a metric of 1000-3000VPD – noting road volumes are assumed to be at the lower end of this range based on general observation.

The street provides both local property access and start point for connection of through traffic to nearby residential areas of Perth and through to Evandale/Western Junction (via Mill Road to the East). The Street contains the Shopping Precinct and access to other local services and facilities as well as the nearby School and sports precinct, amongst other destination frontage and intersecting side street residents, with a component of through traffic travelling via the Main Street.

A Link (3) under the LGAT Local Govt Roads Hierarchy is noted to be two lane, sealed, and has capacity for through traffic, HV, and public transport. Current road width is approx. 12.5-13m typically with two lanes (two-way traffic) plus parking either side being provided.

The street is straight and travels Northwest - Southeast, with little practical change in vertical alignment along its length. No significant sight distance issues along the street or for the majority of existing accesses are immediately obvious on inspection, other than some horizontal curvature at the Southern end.

The urban street 50 km/h default speed limit could likely be applicable to the street based on Function (TBC by design plans not yet noted), and based on the likely traffic and profile of destination traffic using this street (schools, shopping precinct, police station, nearby recreational precincts and residences, etc.), is likely considered to be a lower speed environment and should consider possible "shared zone" principles in design development.

- **Frederick Street**

A section of Main Street in this proposal to the Northeast has a junction crossing with Frederick Street (and partial connection at this point with Fairtlough). This is a typical Perth thoroughfare connection for cross streets, and the road is managed by Northern

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is not supported and should be reconsidered as per other sites - designers to confirm suitability or treatments.

- **Mary, King, Elizabeth, Scone Talisker Streets**

The sections of these streets intersect Main Street, with some through traffic arising from the local grid and other minor destinations.

Most are considered through streets of a lower priority, and are considered local residential streets in general, although some with higher levels of through traffic, and the priority of Main Street indicates their generally lower use likely anticipated. All to have noted give way signage, holding lines, etc.

The geometry changes noted on these links to bring connections in as close to perpendicular to Main Street as possible appears sound, as well as offset to opposite junctions to enhance movements that avoid “straight through” alignments and risk of vehicles failing to give way (working within existing street alignments where possible – reference Elizabeth and Scone Street junctions for example). All junctions on this basis appear to have enhancements that are provided, within limits of existing infrastructure connections.

The urban street 50 km/h default speed limit is understood to be applicable to all the side streets and is appropriate where noted.

Current sight distance at all cross streets is considered generally appropriate and likely improved by realignment closer to perpendicular to Main Street where possible.

- **Scone/Drummond Street Junction**

Limited change, and improvement to SW and pedestrian facilities does not appear to alter traffic arrangements materially.

5. Traffic & Crash Data

NA – no change in traffic volumes or trip generation is expected through the implementation of this proposal.

Traffic Volume data from the DSG publicly available data set was sought, however available information only relates to volumes from pre-Perth Bypass period (2018/19) and so is not considered relevant to the revised lower volumes now identified on this road link with the bypass in operation.

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Traffic Crash data from DSG for the general area was requested, to identify any existing issues. No major issues were identified, which was likely expected, based on site inspection, low volumes, and local appreciation of the site under revised conditions post-bypass. The DSG Crash Statistics data is however attached to the report for reference, with noted comment from DSG as follows as to the four (4) minor crashes noted from the data set:

Hi Andrew,

I've attached an extract for Perth Main St from the train line to the new southern roundabout.
Covers the period 2-013 to 2023 (YTD).
Only four crashes since the opening of the bypass in mid-2020.

Cheers
Simon Buddle
Manager, Crash Data | Department of State Growth

6. Applicable Planning Scheme

The Tasmanian Planning Scheme applies to consider new developments, which provides specific requirements for the need or otherwise for traffic assessment under a planning scheme. Based on the requirements of *Code C3.0* it appears that the proposal does not trigger any formal requirements for traffic assessment, nor the provision of a TIA (refer notes below from C3.0 extract).

C3.0 Road and Railway Assets Code
C3.1 Code Purpose
The purpose of the Road and Railway Assets Code is:
C3.1.1 To protect the safety and efficiency of the road and railway networks; and
C3.1.2 To reduce conflicts between sensitive uses and major roads and the rail network.
C3.2 Application of this Code
C3.2.1 This code applies to a use or development that:
(a) will increase the amount of vehicular traffic or the number of movements of vehicles longer than 5.5m using an existing vehicle crossing or private level crossing; No specific traffic increases are anticipated.
(b) will require a new vehicle crossing, junction or level crossing; or No new crossings, junctions or level crossings are proposed to be created
(c) involves a subdivision or habitable building within a road or railway attenuation area if for a sensitive use not applicable

This proposal does not appear to trigger any items for the application of *C3.0 Road and Railway Assets Code* items as highlighted above, and on this basis a formal TIA does not appear required.