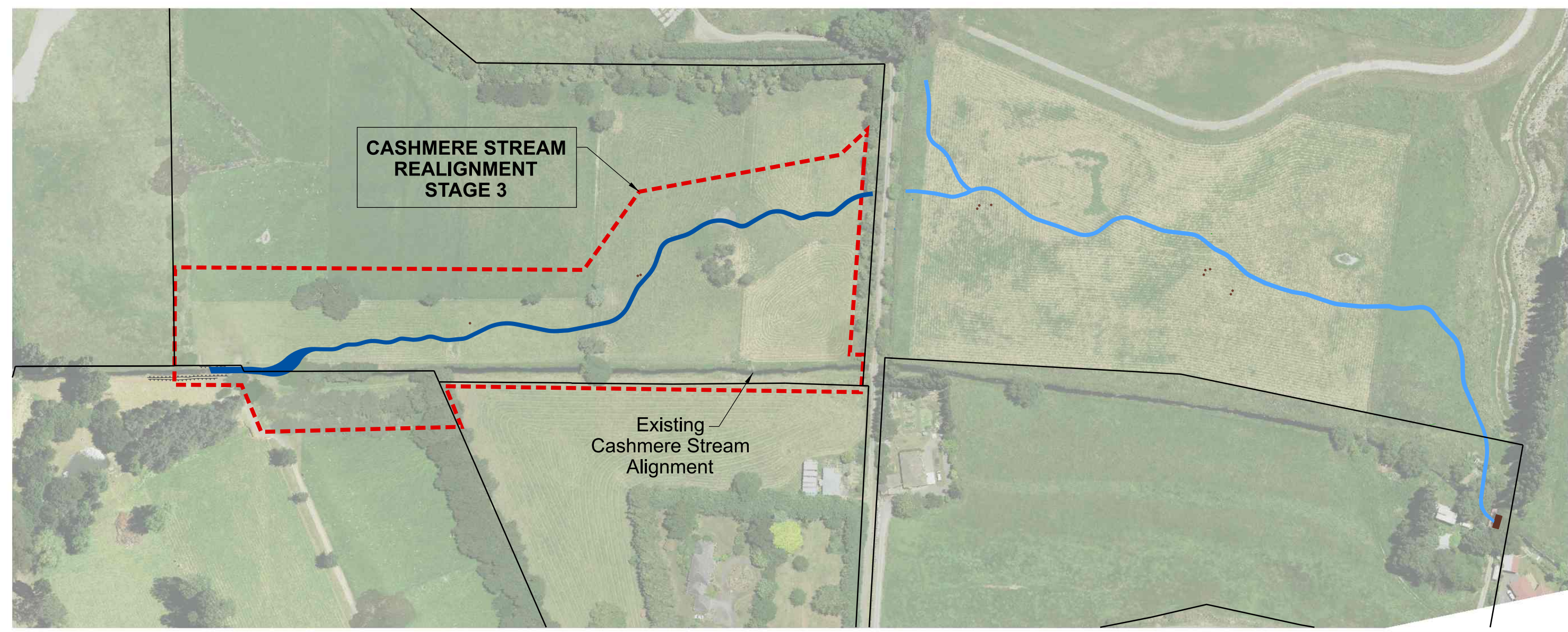
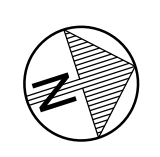


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LOCALITY PLAN
not to scale

A	Tender
1	Construction
	Current / Latest

DRAWING INDEX

CONSTRUCTION		STATUS	ISSUE	COMMENTS
No.	DRAWING TITLE	CAD No	DAY : MONTH : YEAR :	
C01	Cover Sheet & Locality Plan	DD135001	4 11 22	
D01	Site Extent and Site Access Plan	DD135001	For Pricing	A
D02	Overall Stage 3 Realignment Plan	DD135001	For Pricing	A
D03	Demolition and Tree Removal Plan	DD135001	For Pricing	A
D04	Construction Plan 1: Chainage 0-50	DD135001	For Pricing	A
D05	Construction Plan 2: Chainage 50-140	DD135001	For Pricing	A
D06	Construction Plan 3: Chainage 140-250	DD135001	For Pricing	A
D07	Construction Plan 4: Chainage 250-340	DD135001	For Pricing	A
D08	Construction Plan 5: Backfill of existing stream and Fence Layout	DD135001	For Pricing	A
D09	Cross sections 1	DD135001	For Pricing	A
D10	Cross sections 2	DD135001	For Pricing	A
D11	Typical In-stream Features : Details A-B	DD135001	For Pricing	A
D12	Typical In-stream Features : Details C-D	DD135001	For Pricing	A
D13	Typical In-stream Features : Detail E	DD135001	For Pricing	A
D14	Typical In-stream Features : Details F-G	DD135001	For Pricing	A
D15	Typical Bank and Invert Details : Details H-I	DD135001	For Pricing	A
D16	Typical Bank and Invert Details : Details J-K	DD135001	For Pricing	A
D17	Typical Details : Detail L	DD135001	For Pricing	A
D18	Typical Details : Details M-N	DD135001	For Pricing	A
D19	Typical Details : Details O-P	DD135001	For Pricing	A
D20	Detail 1	DD135001	For Pricing	A
D21	Details 2-5	DD135001	For Pricing	A
D22	Pipework Longitudinal Profiles and Detail	DD135001	For Pricing	A
LANDSCAPING		ISSUE	COMMENTS	
L01	Planting Plan 1	LP404701	A	
L02	Planting Plan 2	LP404701	A	
L03	Planting Plan 3	LP404701	A	
L04	Planting Plan 4	LP404701	A	
L05	Overall Plant List	LP404701	A	

NOT PROVIDED FOR PRICING

DRAFT NOT FOR CONSTRUCTION

A	FOR PRICING		11/2022
ISSUE	AMENDMENTS	SIGNED	DATE



DATUM	C.D.D.	DESIGNED	A SMITH	SIGNED	DATE
BENCH MK.	Bench Mark	DES. REVIEW	M PENTECOST		08/2022
RL	Bench Mark RL	DRAWN	G WILLIAMS		10/2022
SURVEY	Survey	DRW. CHECK	M DUGGAN		08/2022
SURVEY LB	Level Book	FILE LOCATION			11/2022
DRAIN. REF.	16717 & 16718	FILENAMES			
SAP WBS	562/3873	PRINTED ON \$DATES	BY \$USERNAMES		

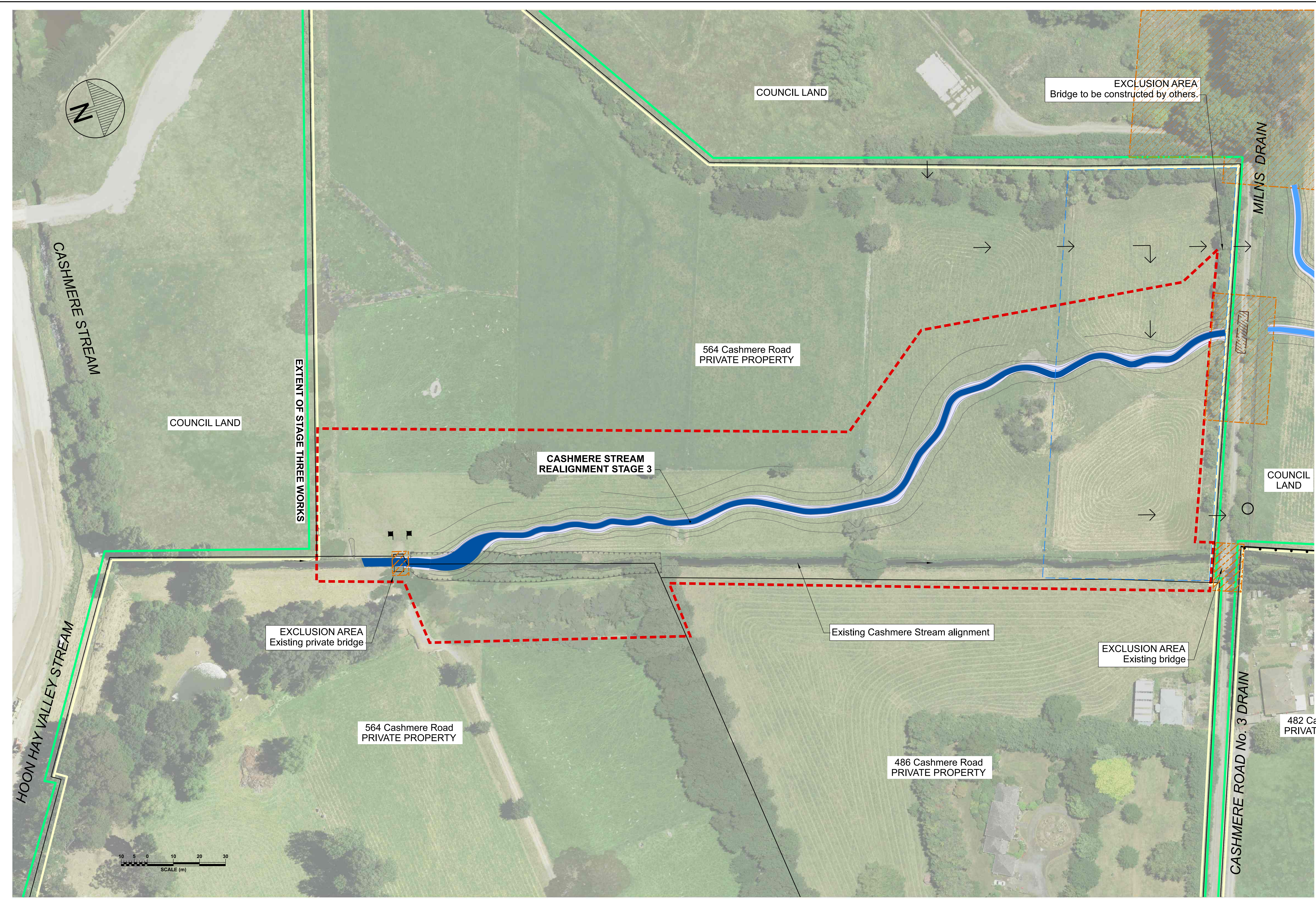
APPROVED FOR TENDER		DATE	SIGNED
APPROVED FOR CONSTRUCTION		DATE	SIGNED
CONSULTANT PROJECT REF.	CONSULTANT FILE REF.		

CASHMERE STREAM REALIGNMENT STAGE 3

COVER SHEET AND LOCALITY PLAN

DOCUMENT NUMBER	TD	ORIGINAL SHEET SIZE	A1	SCALES	N.T.S.
CAD DRAWING FILE REF.	DD135001.DGN	TSD PROJECT FILE NUMBER	CP503560	SHEET	C01 OF 01

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- LEGEND**
- Legal boundary
 - Christchurch City Council owned land
 - Land in Private Ownership
 - Cashmere Stream realignment
 - ▭ Extent of Stage 3 Works
 - ▭ Temporary Lease Area by Christchurch City Council (including stockpile area)
 - Site access by contractor via Eastman Wetlands
 - Temporary culvert required for Milns Drain
 - ▨ Exclusion Areas : (no access by Contractor)

SITE PLAN
SCALE 1:750 A1
1:1500 A3

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CONSTRUCTION



DATUM	C.D.D.	DESIGNED	A SMITH	SIGNED	DATE
BENCH MK.	Bench Mark	DES. REVIEW	M PENTECOST		08/2022
RL	Bench Mark RL	DRAWN	G WILLIAMS		10/2022
SURVEY	Survey	DRW. CHECK	M DUGGAN		08/2022
SURVEY LB	Level Book	FILE LOCATION			
DRAIN REF.	16717 & 16718	PRINTED ON \$DATES	BY \$USERSNAMES		
SAP WBS	562/3873	Constr Date			

APPROVED		CONSULTANT
FOR TENDER		
DATE	SIGNED	PROJECT TITLE
FOR CONSTRUCTION		CONSULTANT PROJECT REF.
DATE	SIGNED	
		CONSULTANT FILE REF.

**CASHMERE STREAM REALIGNMENT
STAGE 3**

**SITE EXTENT AND
SITE ACCESS PLAN**

DOCUMENT NUMBER	TD	ORIGINAL SHEET SIZE	A1	SCALES	1:750 A1 1:1500 A1
CAD DRAWING FILE REF.	DD135001.DGN	TSD PROJECT FILE NUMBER	CP503560	SHEET	D01 OF 22

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LEGEND

GENERAL

- Legal boundary
- - - Approximate location of existing irrigation lines
- Trees
- - - Fence

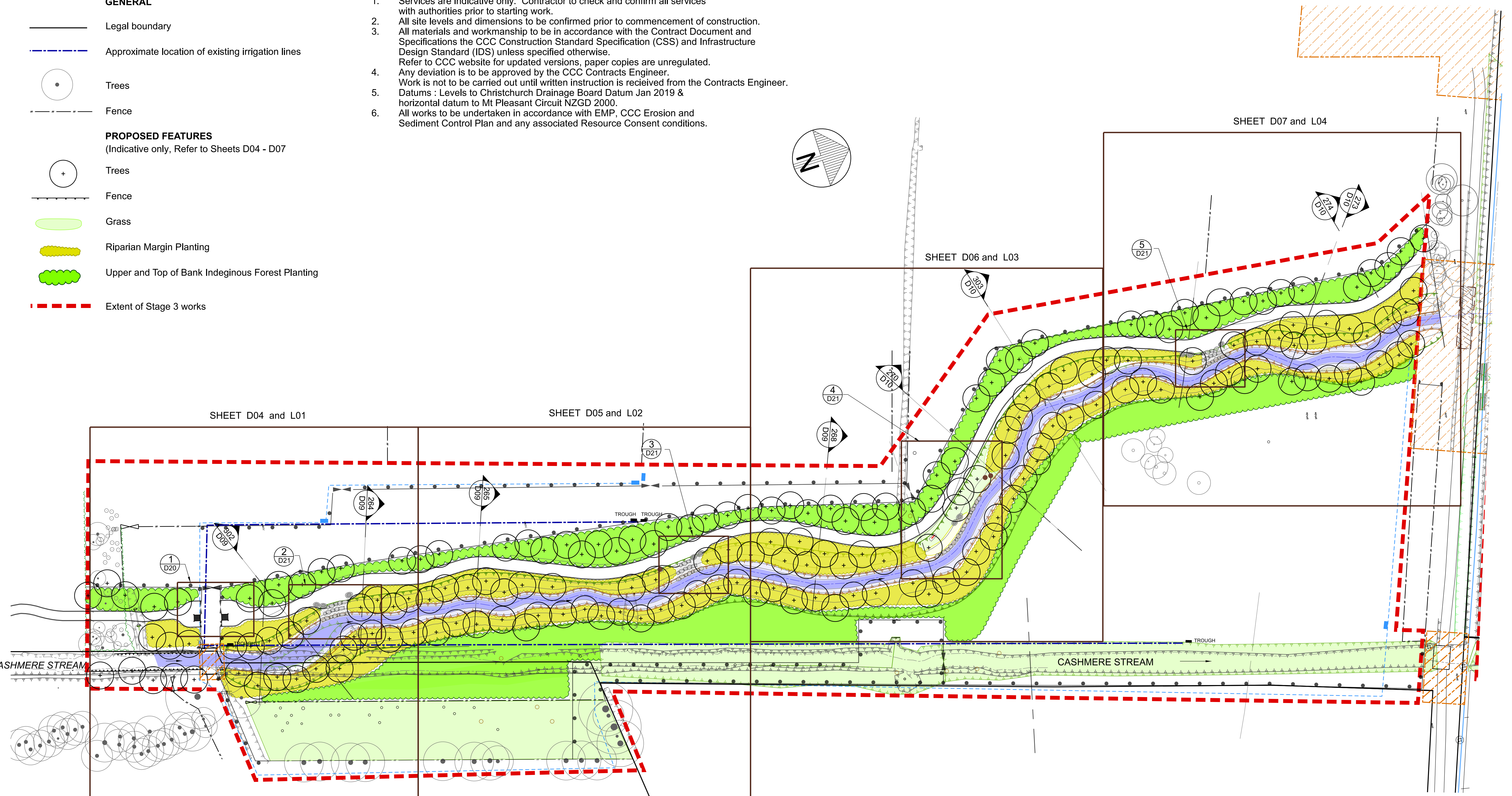
PROPOSED FEATURES

(Indicative only, Refer to Sheets D04 - D07)

- Trees
- - - Fence
- Grass
- Riparian Margin Planting
- Upper and Top of Bank Indigenous Forest Planting
- - - Extent of Stage 3 works

GENERAL NOTES

1. Services are indicative only. Contractor to check and confirm all services with authorities prior to starting work.
2. All site levels and dimensions to be confirmed prior to commencement of construction.
3. All materials and workmanship to be in accordance with the Contract Document and Specifications the CCC Construction Standard Specification (CSS) and Infrastructure Design Standard (IDS) unless specified otherwise. Refer to CCC website for updated versions, paper copies are unregulated.
4. Any deviation is to be approved by the CCC Contracts Engineer. Work is not to be carried out until written instruction is received from the Contracts Engineer.
5. Datums : Levels to Christchurch Drainage Board Datum Jan 2019 & horizontal datum to Mt Pleasant Circuit NZGD 2000.
6. All works to be undertaken in accordance with EMP, CCC Erosion and Sediment Control Plan and any associated Resource Consent conditions.



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P L A N
SCALE 1:500 A1
1:1000 A3



DATUM	C.D.D.	DESIGNED	A SMITH	SIGNED	DATE	APPROVED		CONSULTANT
BENCH MK.	Bench Mark	DES. REVIEW	M PENTECOST		08/2022	FOR TENDER		
RL	Bench Mark RL				Review Date	DATE	SIGNED	
SURVEY	Survey	DRAWN	G WILLIAMS		08/2022	FOR CONSTRUCTION		
SURVEY LB	Level Book	DRW. CHECK	M DUGGAN		11/2022	DATE	SIGNED	
		FILE LOCATION				DATE	SIGNED	
DRAIN. REF.	16717	FILENAME\$				CONSULTANT PROJECT REF.		CONSULTANT FILE REF.
SAP WBS	562/3873	PRINTED ON \$DATES	BY \$USERNAMES		Constn Date			

**CASHMERE STREAM REALIGNMENT
STAGE 3**

**OVERALL STAGE 3
REALIGNMENT PLAN**

A	FOR PRICING		SIGNED	11/2022
ISSUE	AMENDMENTS		DATE	
DOCUMENT NUMBER	TD	ORIGINAL SHEET SIZE	SCALES	
CAD DRAWING FILE REF.	DD135001.DGN	A1	1:500 A1	1:1000 A3
TSD PROJECT FILE NUMBER	CP503560	SHEET	D02 OF 22	

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LEGEND

GENERAL

- Legal boundary
- Land in private ownership
- Approximate location of existing irrigation lines

- TROUGH
- Existing water trough

EXISTING FEATURES TO BE RETAINED

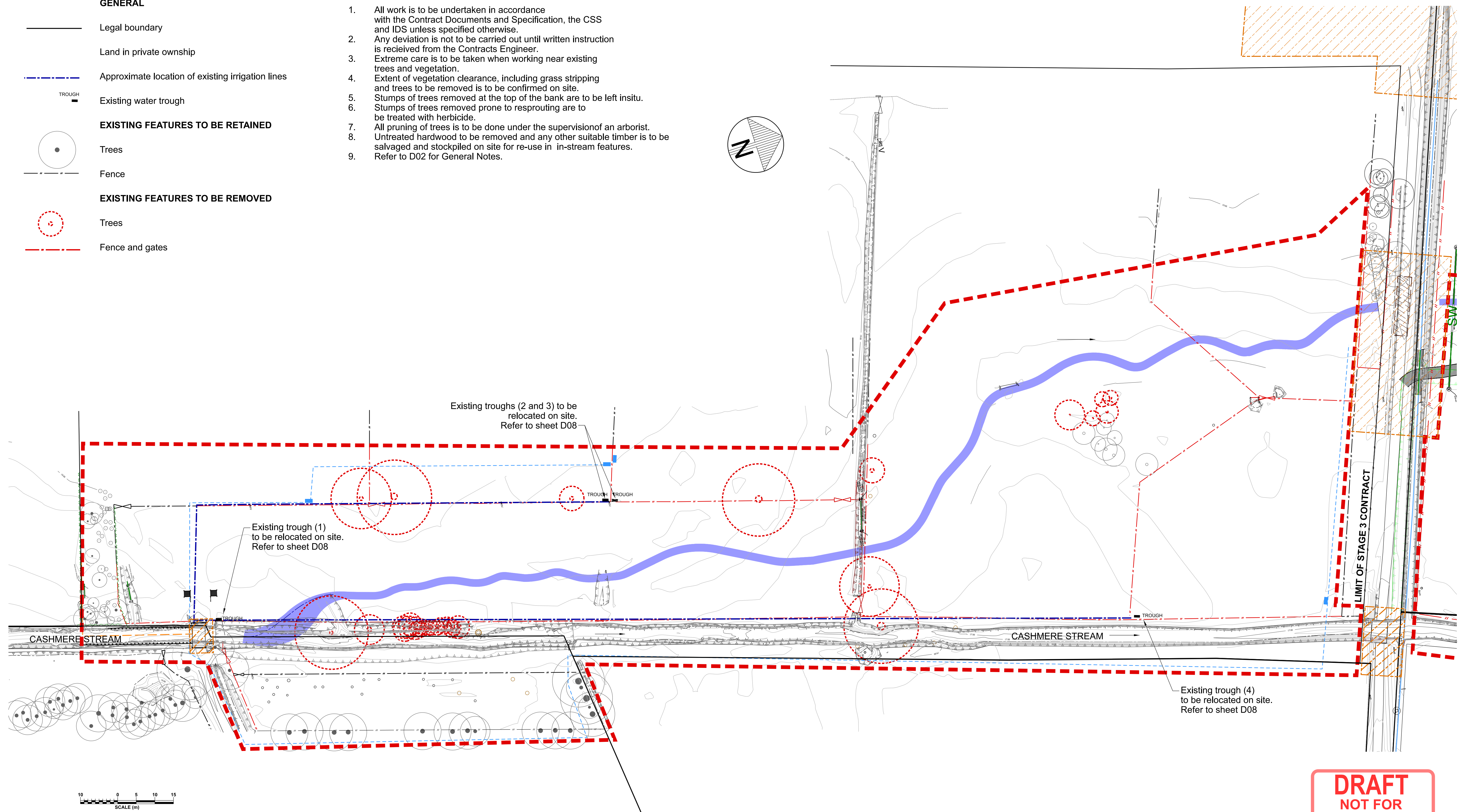
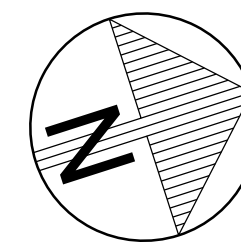
- Trees
- Fence

EXISTING FEATURES TO BE REMOVED

- Trees
- - - Fence and gates

NOTES

1. All work is to be undertaken in accordance with the Contract Documents and Specification, the CSS and IDS unless specified otherwise.
2. Any deviation is not to be carried out until written instruction is received from the Contracts Engineer.
3. Extreme care is to be taken when working near existing trees and vegetation.
4. Extent of vegetation clearance, including grass stripping and trees to be removed is to be confirmed on site.
5. Stumps of trees removed at the top of the bank are to be left insitu.
6. Stumps of trees removed prone to resprouting are to be treated with herbicide.
7. All pruning of trees is to be done under the supervision of an arborist.
8. Untreated hardwood to be removed and any other suitable timber is to be salvaged and stockpiled on site for re-use in in-stream features.
9. Refer to D02 for General Notes.



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P L A N
SCALE 1:500 A1
1:1000 A3

A FOR PRICING	SIGNED	11/2022
ISSUE	AMENDMENTS	DATE

Christchurch City Council
TECHNICAL SERVICES & DESIGN

DATUM	C.D.D.	DESIGNED	NAME	SIGNED	DATE
BENCH MK.	Bench Mark	DESIGNED	A SMITH		08/2022
RL	Bench Mark RL	DES. REVIEW	M PENTECOST		Review Date
SURVEY	Survey	DRAWN	G WILLIAMS		08/2022
SURVEY LB	Level Book	DRW. CHECK	M DUGGAN		11/2022
FILE LOCATION		FILE NAMES			
DRAIN. REF.	16717	PRINTED ON \$DATES\$ BY \$USERNAMES\$			
SAP WBS	562/3873	Constn Date			

APPROVED		CONSULTANT
FOR TENDER		
DATE	SIGNED	
FOR CONSTRUCTION		
DATE	SIGNED	
		CONSULTANT PROJECT REF.
		CONSULTANT FILE REF.

**CASHMERE STREAM REALIGNMENT
STAGE 3**






**DEMOLITION AND
TREE REMOVAL PLAN**

DOCUMENT NUMBER	TD	ORIGINAL SHEET SIZE	A1	SCALES	1:500 A1 1:1000 A3
CAD DRAWING FILE REF.	DD135001.DGN				
TSD PROJECT FILE NUMBER	CP503560	SHEET	D03	OF	22










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LEGEND








GENERAL

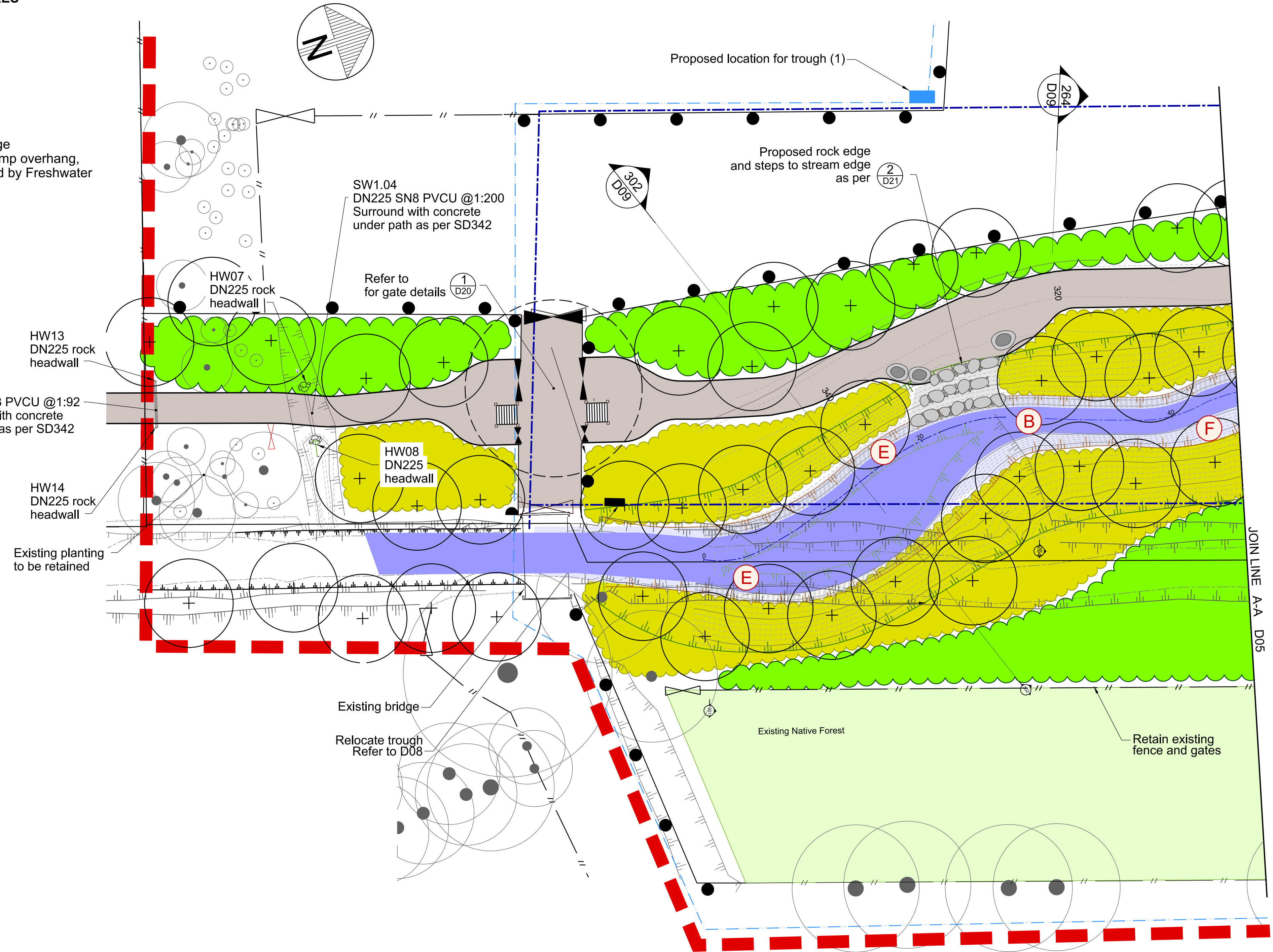
-  Legal boundary
-  Top of bank (existing stream alignment)
-  Approximate location of existing irrigation lines
-  Existing tree
-  Existing fence

PROPOSED FEATURES

-  Top of bank
-  Stream invert and lower bank
-  3.0m wide shared grit path (as per Detail R Sheet D19)
-  Fence (refer Sheet D08)
-  Specimen trees (refer Sheet L01)
-  Riparian Margin Planting (refer Sheet L01)
-  Upper and Top of Bank Indigenous Forest Planting (refer Sheet L01)
-  Grass
-  Approximate location of new irrigation line (28mm LP pipe)

IN-STREAM FEATURES

-  - Rock Edge
-  - Riffle
-  - Timber Edge
-  - Log Edge
-  - Root Wad Edge (Option 2: Stump overhang, unless advised by Freshwater Ecologist)
-  - Post Snag
-  - Log Snag



NOTES

1. All work is to be undertaken in accordance with the Contract Document and Specifications, the CSS and IDS unless specified otherwise.
2. Any deviation is not to be carried out until written instruction is received from the Contracts Engineer.
3. Drawing is indicative only, do not scale from drawing. All measurements to be confirmed on site prior to commencement of work.
4. The locations shown for the in-stream features detailed in Sheets D11-D14 are indicative only and are subject to on-site approval by the CCC Contracts Engineer.
5. The contractor is to ensure that in the construction of all details with in-bank features all exposed soil surfaces are to be covered by mulch matting.
6. Planting is to be as per Sheet L01.
7. Refer to Sheet D02 for General Notes.
8. Refer to Sheet D22 for Pipework longitudinal profiles and detail.

PLAN CHAINAGE 0 - 50
 scale 1:200 A1
 1:400 A3

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DATUM		C.D.D.		DESIGNED		NAME		SIGNED		DATE	
BENCH MK.	Bench Mark	DESIGNED	A SMITH	SIGNED		DATE	08/2022				
RL	Bench Mark RL	DES. REVIEW	M PENTECOST	SIGNED		DATE	10/2022				
SURVEY	Survey	DRAWN	G WILLIAMS	SIGNED		DATE	08/2022				
SURVEY LB	Level Book	DRW. CHECK	M DUGGAN	SIGNED		DATE	11/2022				
FILE LOCATION											
DRAIN. REF.	16717	FILENAME\$									
SAP WBS	562/3873	PRINTED ON \$DATES	BY \$USERNAMES								

APPROVED FOR TENDER		APPROVED FOR CONSTRUCTION	
DATE	SIGNED	DATE	SIGNED
CONSULTANT PROJECT REF.		CONSULTANT FILE REF.	

**CASHMERE STREAM REALIGNMENT
STAGE 3**

**CONSTRUCTION PLAN 1
CHAINAGE 0 - 50**

DOCUMENT NUMBER		ORIGINAL SHEET SIZE		SCALES	
TD		A1		1:200 A1	
CAD DRAWING FILE REF. DD135001.DGN				1:400 A3	
TSD PROJECT FILE NUMBER CP503560		SHEET		D04 OF 22	

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LEGEND

GENERAL

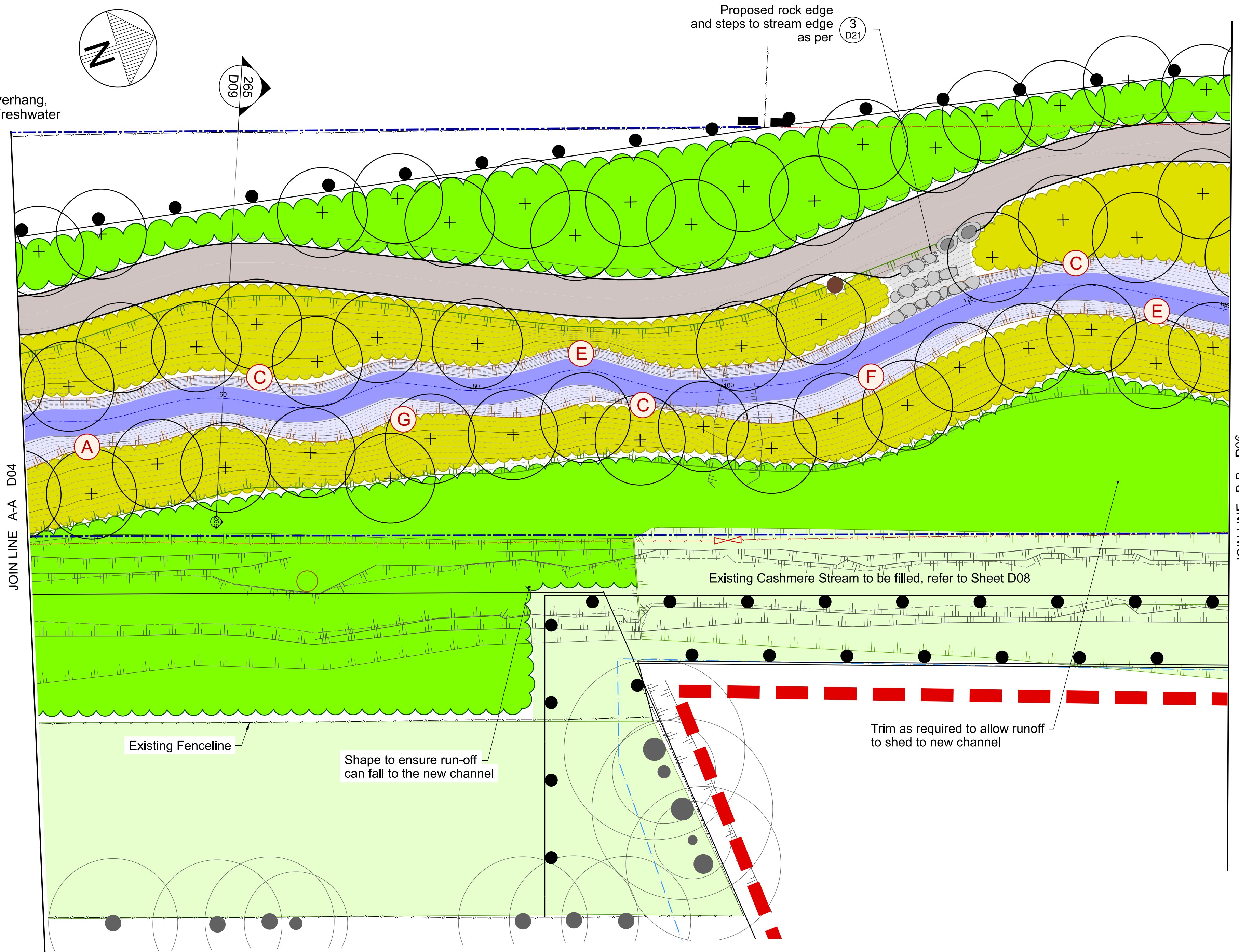
- Legal boundary
- Top of bank (existing stream alignment)
- - - Approximate location of existing irrigation lines
- Existing tree
- Existing fence

PROPOSED FEATURES

- Top of bank
- Stream invert and lower bank
- 3.0m wide shared grit path (as per Detail R Sheet D19)
- Fence (refer Sheet D08)
- Specimen trees (refer Sheet L02)
- Riparian Margin Planting (refer Sheet L02)
- Upper and Top of Bank Indigenous Forest Planting (refer Sheet L02)
- Grass
- - - Approximate location of new irrigation line (28mm LP pipe)

IN-STREAM FEATURES

- (A) - Rock Edge
- (B) - Riffle
- (C) - Timber Edge
- (D) - Log Edge
- (E) - Root Wad Edge (Option 2: Stump overhang, unless advised by Freshwater Ecologist)
- (F) - Post Snag
- (G) - Log Snag



NOTES

1. All work is to be undertaken in accordance with the Contract Document and Specifications, the CSS and IDS unless specified otherwise.
2. Any deviation is not to be carried out until written instruction is received from the Contracts Engineer.
3. Drawing is indicative only, do not scale from drawing. All measurements to be confirmed on site prior to commencement of work.
4. The locations shown for the in-stream features detailed in Sheets D11-D14 are indicative only and are subject to on-site approval by the CCC Contracts Engineer.
5. The contractor is to ensure that in the construction of all details with in-bank features all exposed soil surfaces are to be covered by mulch matting.
6. Planting is to be as per Sheet L02.
7. Refer to Sheet D02 for General Notes.

PLAN CHAINAGE 50 - 140
 scale 1:200 A1
 1:400 A3

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DATUM	C.D.D.	DESIGNED	NAME	SIGNED	DATE
BENCH MK.	Bench Mark		A SMITH		08/2022
RL	Bench Mark RL	DES. REVIEW	M PENTECOST		10/2022
SURVEY	Survey	DRAWN	G WILLIAMS		08/2022
SURVEY LB	Level Book	DRW. CHECK	M DUGGAN		11/2022
FILE LOCATION					
DRAIN. REF.	16717	FILENAME\$			
SAP WBS	562/3873	PRINTED ON \$DATES	BY \$USERNAMES		

APPROVED		CONSULTANT
FOR TENDER	DATE SIGNED	
FOR CONSTRUCTION	DATE SIGNED	CONSULTANT PROJECT REF.
		CONSULTANT FILE REF.

PROJECT TITLE

CASHMERE STREAM REALIGNMENT
STAGE 3

DRAWING TITLE






CONSTRUCTION PLAN 2
CHAINAGE 50 - 140

DOCUMENT NUMBER	TD	ORIGINAL SHEET SIZE	A1	SCALES	1:200 A1 1:400 A3
CAD DRAWING FILE REF.	DD135001.DGN	TSD PROJECT FILE NUMBER	CP503560	SHEET	D05 OF 22









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LEGEND








GENERAL

-  Legal boundary
-  Top of bank (existing stream alignment)
-  Approximate location of existing irrigation lines
-  Existing tree
-  Existing fence

PROPOSED FEATURES

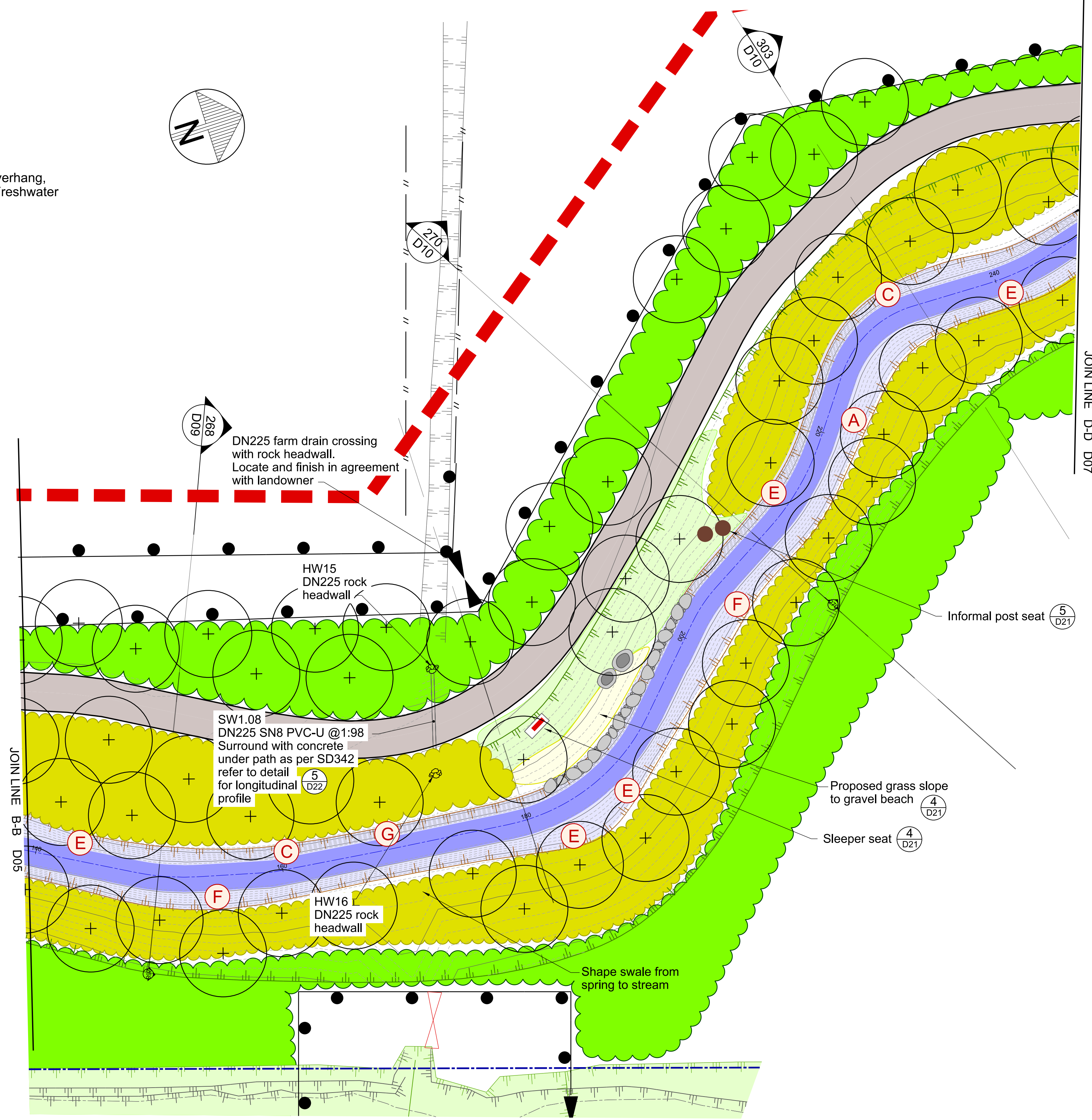
-  Top of bank
-  Stream invert and lower bank
-  3.0m wide shared grit path (as per Detail R Sheet D19)
-  Fence (refer Sheet D08)
-  Specimen trees (refer Sheet L03)
-  Riparian Margin Planting (refer Sheet L03)
-  Upper and Top of Bank Indigenous Forest Planting (refer Sheet L03)
-  Grass

IN-STREAM FEATURES

-  - Rock Edge
-  - Riffle
-  - Timber Edge
-  - Log Edge
-  - Root Wad Edge (Option 2: Stump overhang, unless advised by Freshwater Ecologist)
-  - Post Snag
-  - Log Snag

NOTES

1. All work is to be undertaken in accordance with the Contract Document and Specifications, the CSS and IDS unless specified otherwise.
2. Any deviation is not to be carried out until written instruction is received from the Contracts Engineer.
3. Drawing is indicative only, do not scale from drawing. All measurements to be confirmed on site prior to commencement of work.
4. The locations shown for the in-stream features detailed in Sheets D11-D14 are indicative only and are subject to on-site approval by the CCC Contracts Engineer.
5. The contractor is to ensure that in the construction of all details with in-bank features all exposed soil surfaces are to be covered by mulch matting.
6. Planting is to be as per Sheet L03.
7. Refer to Sheet D02 for General Notes.
8. Refer to Sheet D22 for Pipework longitudinal profiles and detail.



PLAN CHAINAGE 140 - 250
scale 1:200 A1
1:400 A3

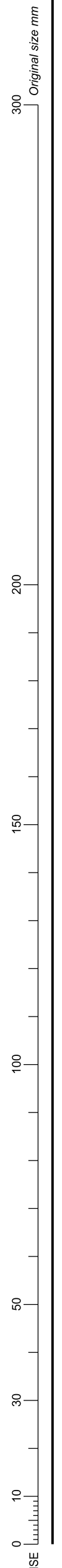
DRAFT
NOT FOR
CONSTRUCTION

DATUM	C.D.D.	DESIGNED	NAME	SIGNED	DATE
BENCH MK.	Bench Mark	A SMITH			08/2022
RL	Bench Mark RL	M PENTECOST			10/2022
SURVEY	Survey	G WILLIAMS			08/2022
SURVEY LB	Level Book	M DUGGAN			11/2022
FILE LOCATION					
DRAIN REF.	16717	FILENAME\$			
SAP WBS	562/3873	PRINTED ON \$DATES BY \$USERNAMES			

APPROVED		CONSULTANT
FOR TENDER		
DATE	SIGNED	
Tender Date		
FOR CONSTRUCTION		
DATE	SIGNED	
Constn Date		
CONSULTANT PROJECT REF.		CONSULTANT FILE REF.

DOCUMENT NUMBER	TD	ORIGINAL SHEET SIZE	A1	SCALES	1:200 A1 1:400 A3
CAD DRAWING FILE REF.	DD135001.DGN	TSD PROJECT FILE NUMBER	CP503560	SHEET	D06 OF 22

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LEGEND

GENERAL

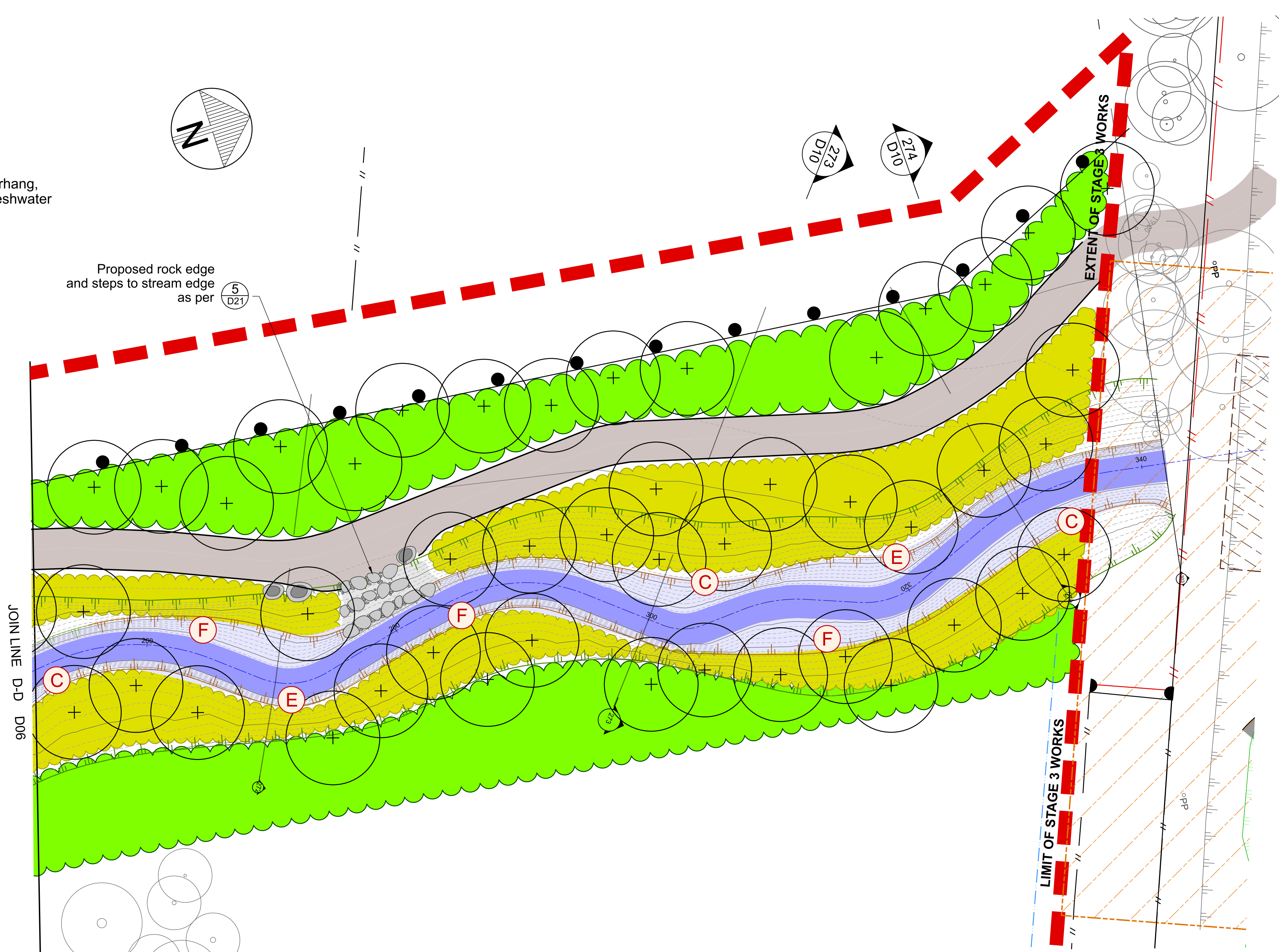
- Legal boundary
- Existing tree
- Existing fence

PROPOSED FEATURES

- Top of bank
- Stream invert and lower bank
- 3.0m wide shared grit path (as per Detail R Sheet D19)
- Fence (refer Sheet D08)
- Specimen trees (refer Sheet L04)
- Riparian Margin Planting (refer Sheet L04)
- Upper and Top of Bank Indigenous Forest Planting (refer Sheet L04)
- Grass
- Approximate location of new irrigation line (28mm ID pipe)

IN-STREAM FEATURES

- Rock Edge
- Riffle
- Timber Edge
- Log Edge
- Root Wad Edge (Option 2: Stump overhang, unless advised by Freshwater Ecologist)
- Post Snag
- Log Snag



NOTES

1. All is work to be undertaken in accordance with the Contract Document and Specifications, the CSS and IDS unless specified otherwise.
2. Any deviation is not to be carried out until written instruction is received from the Contracts Engineer.
3. Drawing is indicative only, do not scale from drawing. All measurements to be confirmed on site prior to commencement of work.
4. The locations shown for the in-stream features detailed in Sheets D11-D14 are indicative only and are subject to on-site approval by the CCC Contracts Engineer.
5. The contractor is to ensure that in the construction of all details with in-bank features all exposed soil surfaces are to be covered by mulch matting.
6. Planting is to be as per Sheet L04.
7. Refer to Sheet D02 for General Notes.

PLAN CHAINAGE 250 - 340
 SCALE 1:200 A1
 1:400 A3

DRAFT
NOT FOR
CONSTRUCTION



DATUM	C.D.D.	DESIGNED	NAME	SIGNED	DATE
BENCH MK.	Bench Mark		A SMITH		08/2022
RL	Bench Mark RL	DES. REVIEW	M PENTECOST		10/2022
SURVEY	Survey	DRAWN	G WILLIAMS		08/2022
SURVEY LB	Level Book	DRW. CHECK	M DUGGAN		11/2022
FILE LOCATION					
DRAIN. REF.	16717	SAP WBS			
SAP WBS	562/3873	PRINTED ON \$DATES BY \$USERNAMES			

APPROVED		CONSULTANT
FOR TENDER	FOR CONSTRUCTION	
DATE	SIGNED	CONSULTANT PROJECT REF.
DATE	SIGNED	
DATE	SIGNED	CONSULTANT FILE REF.

PROJECT TITLE
**CASHMERE STREAM REALIGNMENT
 STAGE 3**



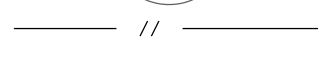
DRAWING TITLE
**CONSTRUCTION PLAN 4
 CHAINAGE 250 - 340**

A	FOR PRICING	ISSUE	11/2022
	AMENDMENTS	SIGNED	DATE
DOCUMENT NUMBER	TD	ORIGINAL SHEET SIZE	1:200 A1
CAD DRAWING FILE REF.	DD135001.DGN	A1	1:400 A3
TSD PROJECT FILE NUMBER	CP503560	SHEET	D07 OF 22

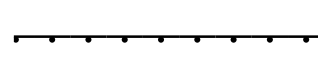
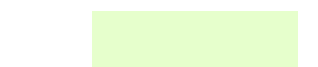

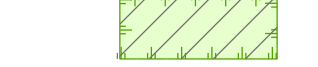
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LEGEND

GENERAL

-  Legal boundary
-  Existing trees
-  Existing fence

PROPOSED FEATURES

-  Fence (refer Sheet D08)
-  Grass
-  Approximate location of new irrigation line (28mm ID pipe)
-  Filled Channel - as per 296

NOTE: WHERE SPRINGS ARE ENCOUNTERED, REFER TO SPECIFICATION

SUPPLY AND PLACE IMPORTED TOPSOIL TO A COMPACTED DEPTH OF 300mm
 SUPPLY AND PLACE COMPACTED AP65 BACKFILL UP TO 300mm BELOW FINISHED LEVEL

CONTRACTOR MAY INSTALL DRAINAGE AP40 AT BOTTOM OF CHANNEL IF REQUIRED REFER TO SPECIFICATION

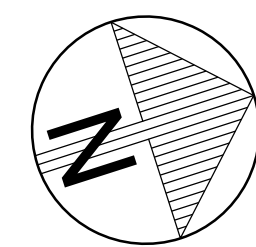
Existing ground level

CCC land

Private property

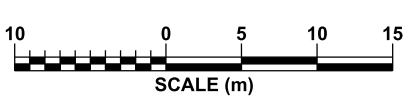
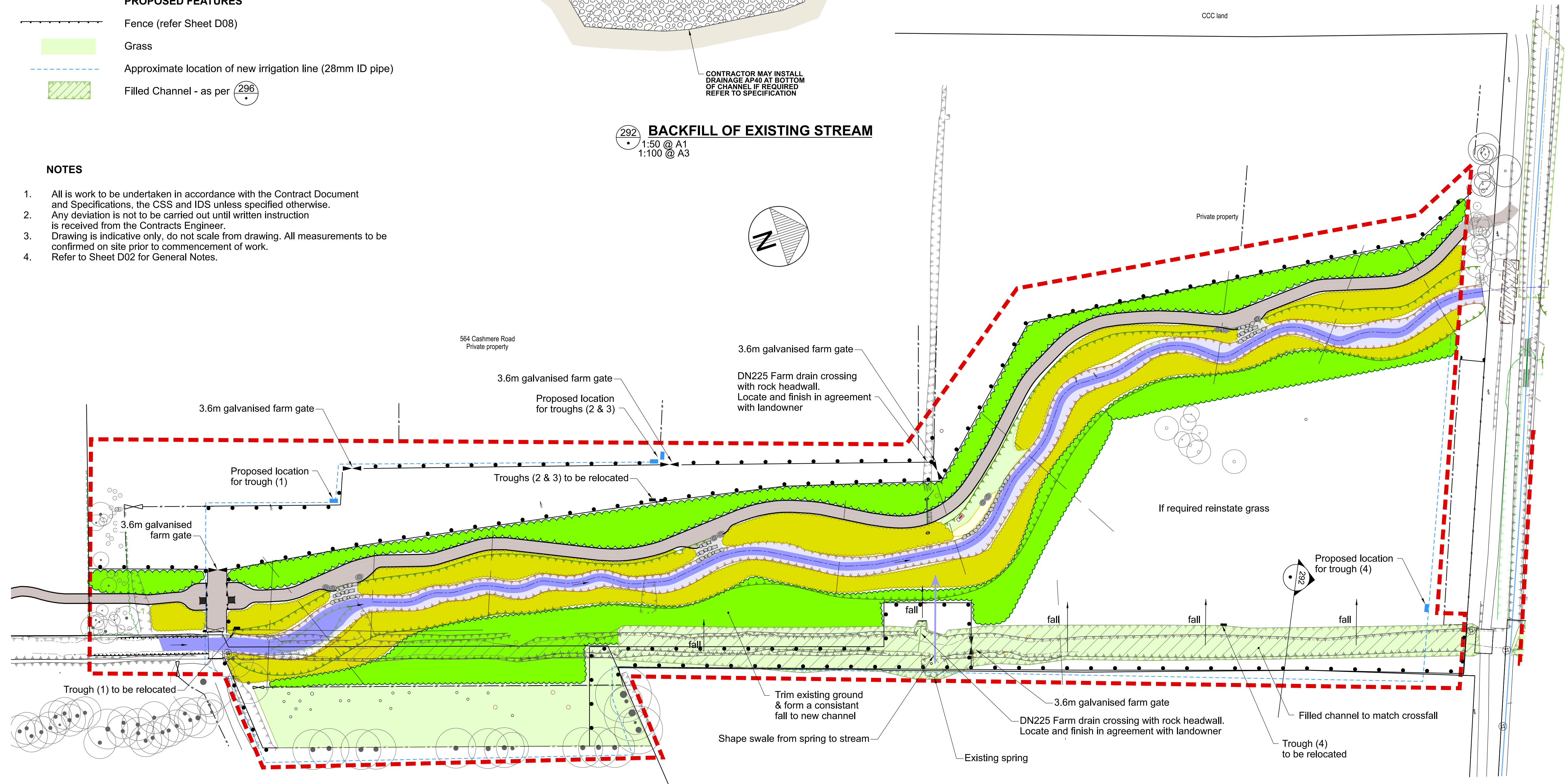
564 Cashmere Road Private property

292 BACKFILL OF EXISTING STREAM
 1:50 @ A1
 1:100 @ A3



NOTES

1. All is work to be undertaken in accordance with the Contract Document and Specifications, the CSS and IDS unless specified otherwise.
2. Any deviation is not to be carried out until written instruction is received from the Contracts Engineer.
3. Drawing is indicative only, do not scale from drawing. All measurements to be confirmed on site prior to commencement of work.
4. Refer to Sheet D02 for General Notes.



PLAN
 SCALE 1:500 A1
 1:1000 A3

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Christchurch City Council
 TECHNICAL SERVICES & DESIGN

DATUM	C.D.D.	DESIGNED	A SMITH	SIGNED	DATE	APPROVED	
BENCH MK.	Bench Mark	DES. REVIEW	M PENTECOST		08/2022	FOR TENDER	
RL	Bench Mark RL	DRAWN	G WILLIAMS		08/2022	DATE	SIGNED
SURVEY	Survey	DRW. CHECK	M DUGGAN		11/2022	DATE	SIGNED
SURVEY LB	Level Book	FILE LOCATION					
DRAIN REF.	16717	PRINTED ON	\$DATES	BY	\$USERNAMES	DATE	SIGNED
SAP WBS	562/3873	Constr Date					

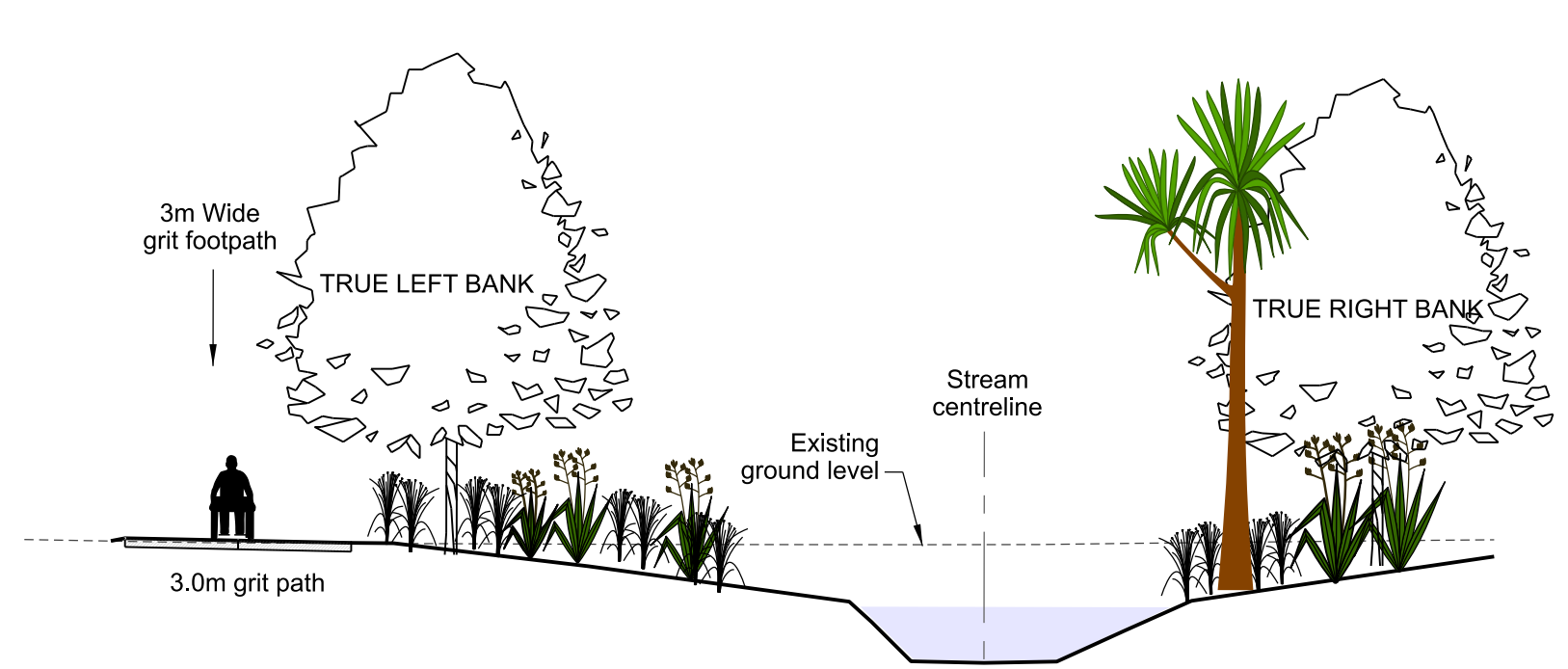
CONSULTANT	PROJECT TITLE
CONSULTANT PROJECT REF.	CONSULTANT FILE REF.

**CASHMERE STREAM REALIGNMENT
 STAGE 3**

**CONSTRUCTION PLAN 5:
 BACKFILL OF EXISTING
 STREAM & FENCE LAYOUT**

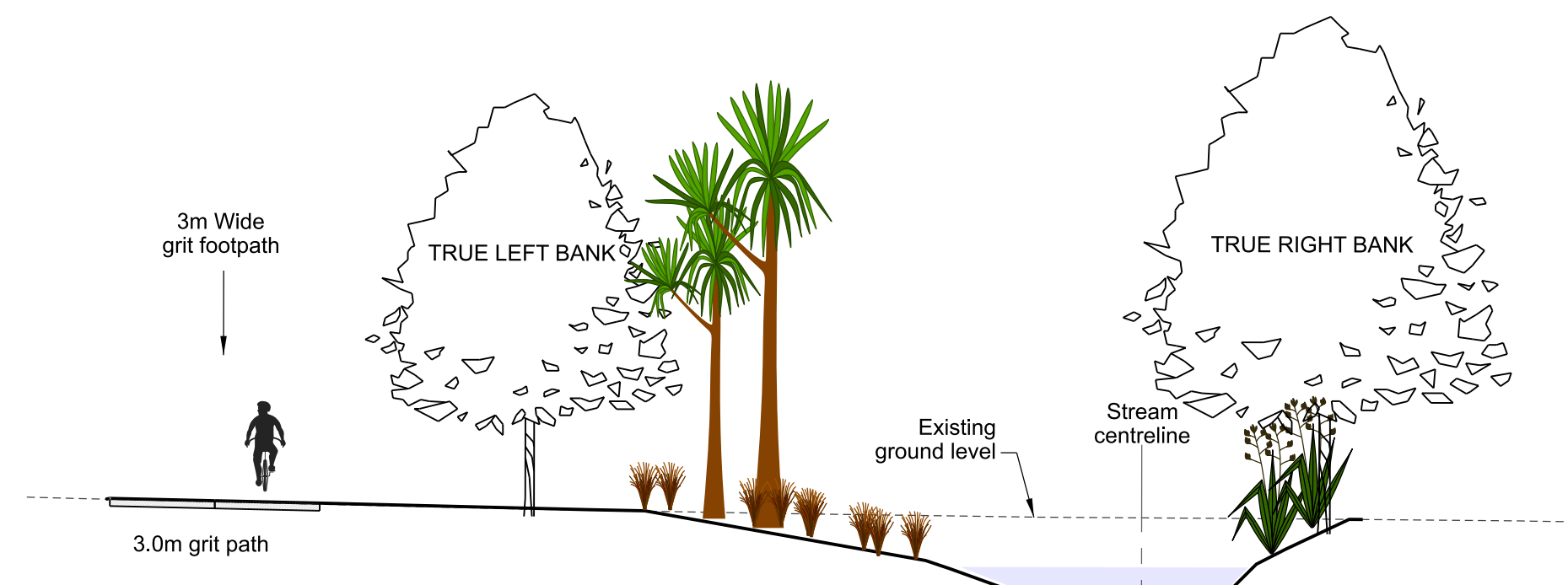
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CAD DRAWING FILE REF.	DD135001.DGN	TSD PROJECT FILE NUMBER	CP503560	SHEET	D08 OF 22

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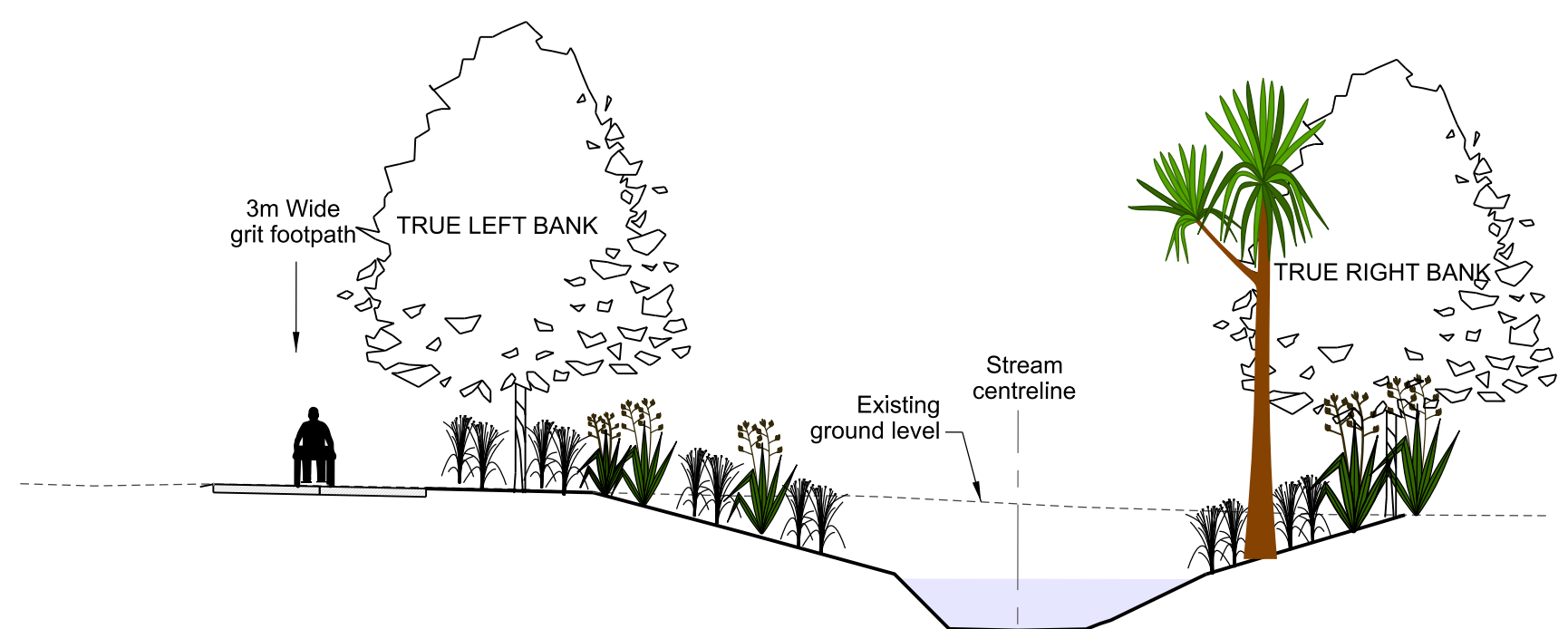
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FILL (m)		0.00	0.04	0.03		0.01		0.00		-0.30					

270
SECTION
SCALE 1:100 A1
1:200 A3



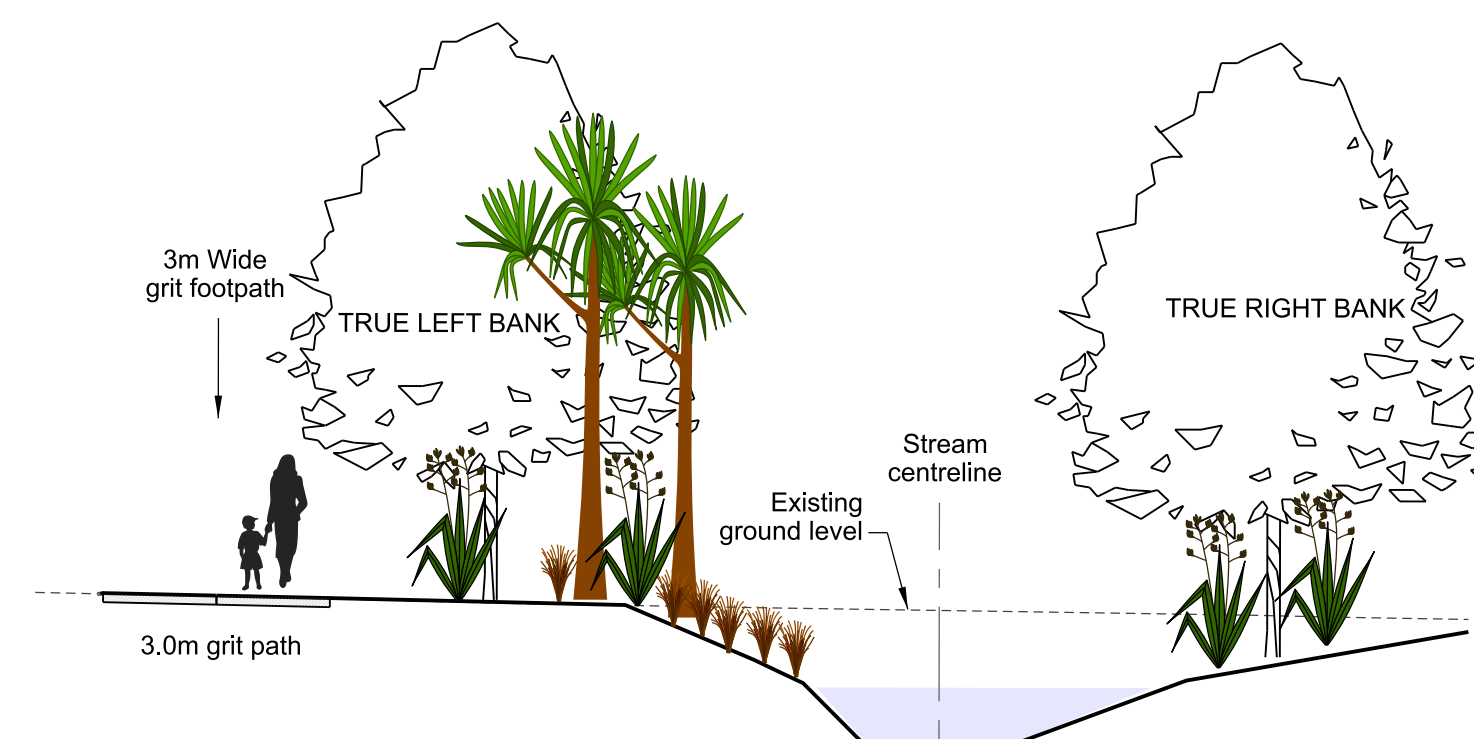
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OFFSET (m)		-14.08	-14.03	-13.44		-12.43		-11.35		-8.75		-8.19		-7.55	
FILL (m)		0.00	0.01	0.01		0.02		0.02		0.01		0.01		0.01	

273
SECTION
SCALE 1:100 A1
1:200 A3



DATUM R.L. 16.0															
ELEVATION (m)			18.79		18.19	18.05	17.77	17.61	16.81	16.79	16.81	17.30			
OFFSET (m)			-6.20		-3.95	-3.43	-2.40	-1.80	-1.00	0.00	0.90	2.49			
FILL (m)			0.00		-0.55	-0.69	-0.97	-1.12	-1.88	-1.85	-1.78	-1.25			

303
SECTION
SCALE 1:100 A1
1:200 A3



DATUM R.L. 16.0															
ELEVATION (m)		18.77	18.78	18.75	18.72	18.69	18.64	17.92	17.61	16.81	16.79	16.81	17.62	18.31	
OFFSET (m)		-11.13	-10.94	-9.45	-7.82	-6.58	-4.15	-2.45	-1.80	-1.00	0.00	1.00	3.17	7.00	
FILL (m)		0.00	0.01	0.01	0.01	0.01	0.01	-0.69	-0.99	-1.78	-1.78	-1.75	-0.92	-0.16	

274
SECTION
SCALE 1:100 A1
1:200 A3

NOTES

- Proposed in-stream features are not shown on these sections as locations are subject to change.

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TECHNICAL SERVICES & DESIGN

DATUM	C.D.D.	DESIGNED	NAME	SIGNED	DATE	APPROVED	
BENCH MK.	Bench Mark	DESIGNED	A SMITH		08/2022	FOR TENDER	
RL	Bench Mark RL	DES. REVIEW	M PENTECOST		Review Date	DATE	SIGNED
SURVEY	Survey	DRAWN	G WILLIAMS		08/2022	Tender Date	
SURVEY LB	Level Book	DRW. CHECK	M DUGGAN		11/2022	FOR CONSTRUCTION	
		FILE LOCATION					
DRAIN REF.	16717	\$FILENAME\$					
SAP WBS	562/3973	PRINTED ON \$DATE\$ BY \$USERNAME\$					

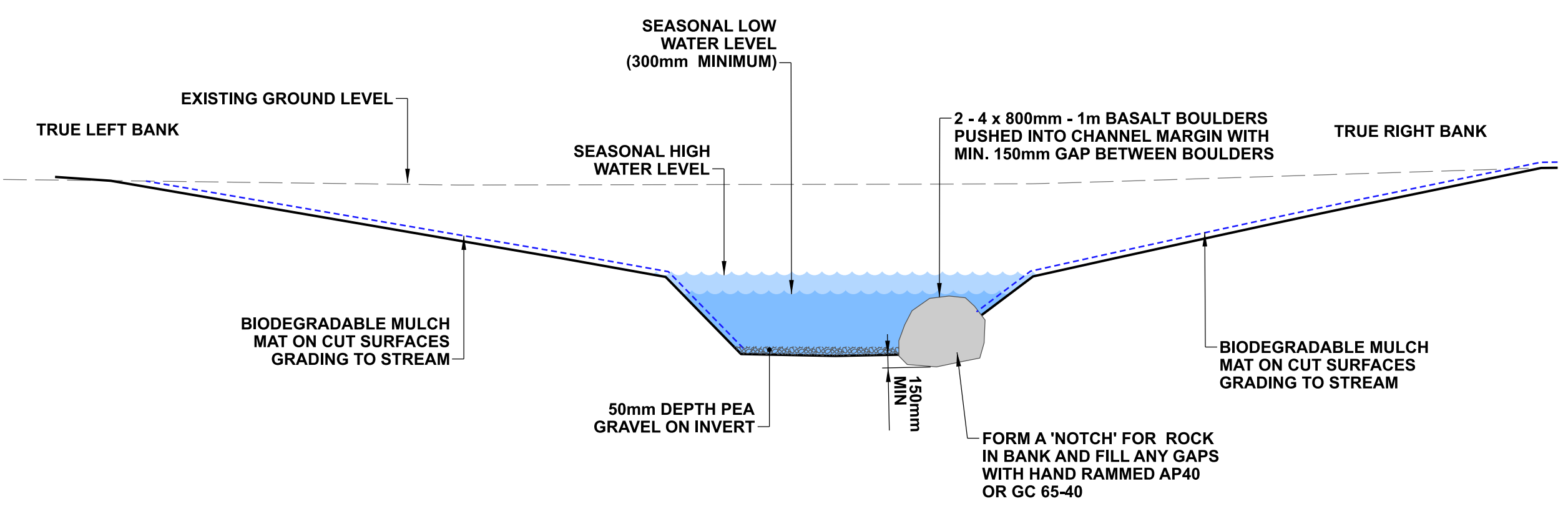
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		CASHMERE STREAM REALIGNMENT STAGE 3		CROSS-SECTIONS 2	
CONSULTANT PROJECT REF.				DOCUMENT NUMBER	TD
CONSULTANT FILE REF.				CAD DRAWING FILE REF.	DD135001.DGN
				TSD PROJECT FILE NUMBER	CP503560

ISSUE	FOR PRICING	AMENDMENTS	SIGNED	DATE

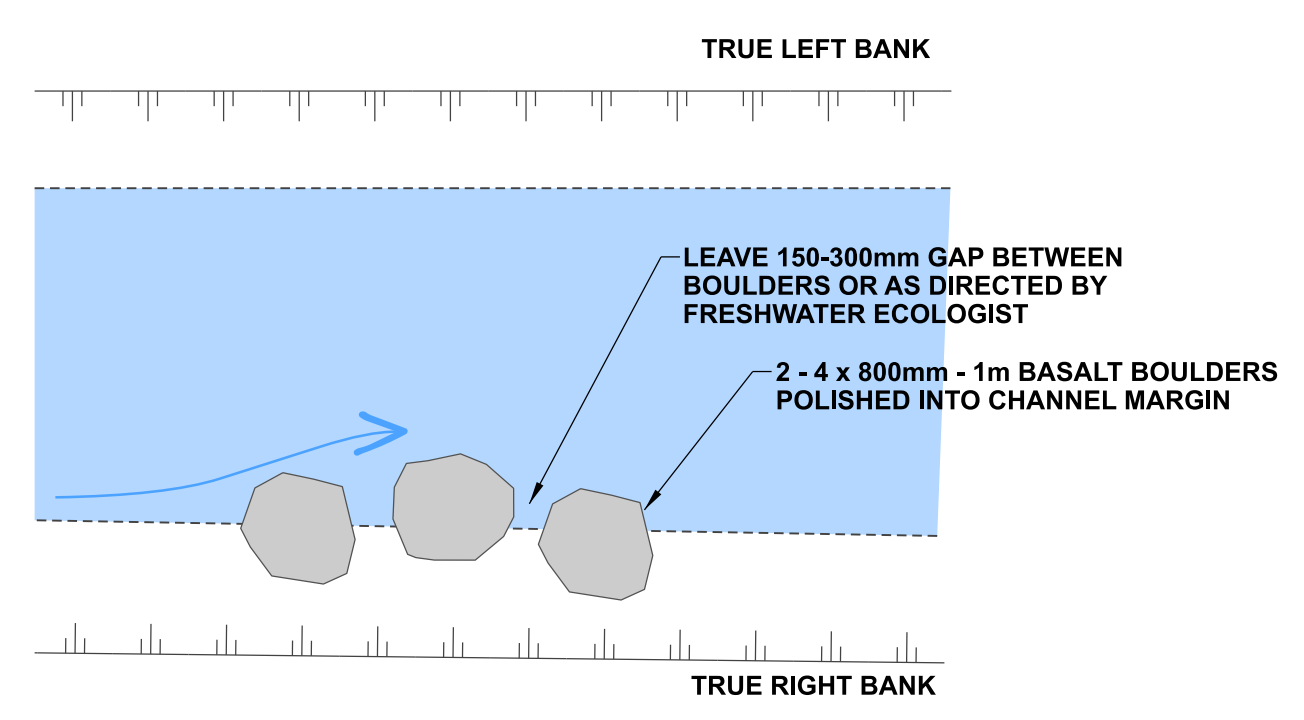
ORIGINAL SHEET SIZE	SCALES
A1	AS SHOWN

SHEET
D10 OF 22

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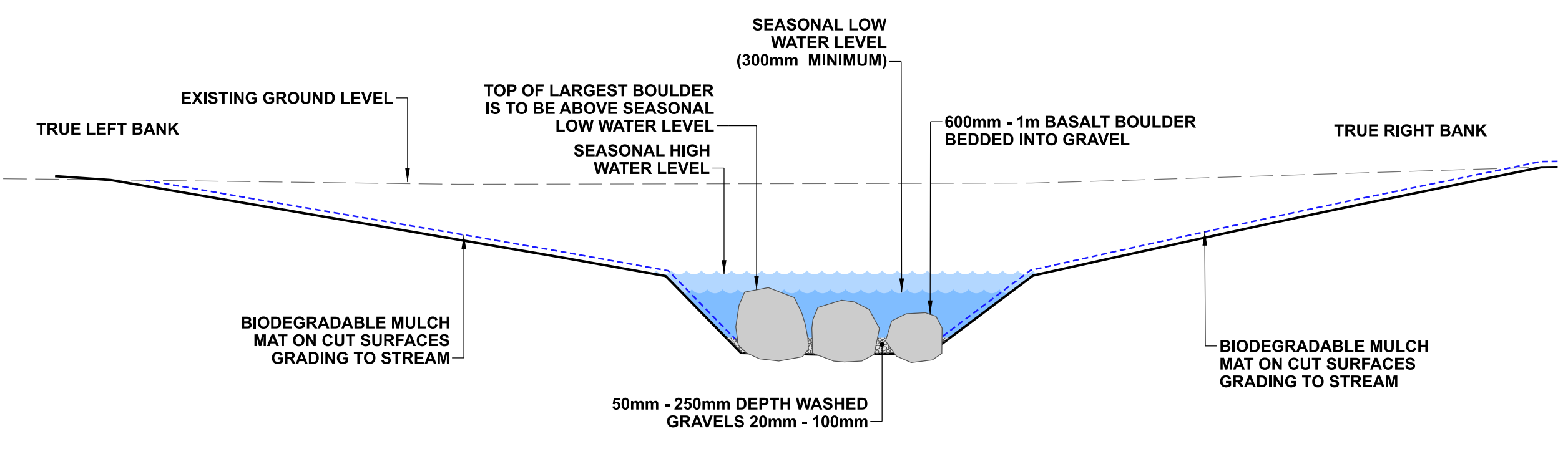
A TYPICAL DETAIL - ROCK EDGE
 1:50 @ A1
 1:100 @ A3



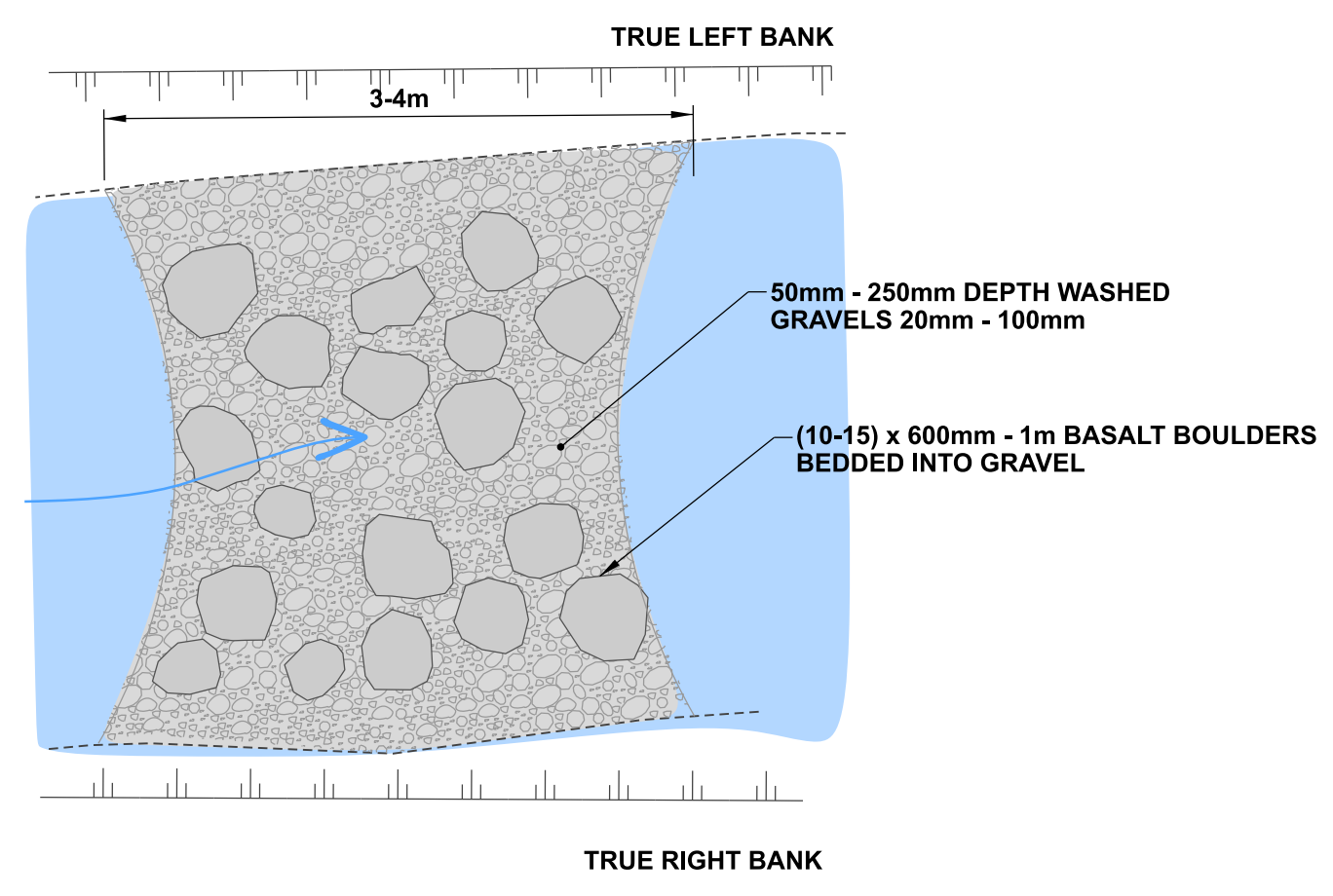
PLAN VIEW OF ROCK EDGE

DETAIL AIM:

- Spaces are left between the boulders to provide refuge for smaller aquatic species and access to soft substrate.
- Emergent boulders provide egg laying sites for insects.
- Provides flow variation in stream.
- Use in locations where there are bank stability concerns.



B TYPICAL DETAIL - RIFFLE
 1:50 @ A1
 1:100 @ A3



PLAN VIEW OF ROCK RIFFLE

DETAIL AIM:

- Gravels and boulders in the invert change the velocity of the stream flow providing habitat for aquatic species.
- The largest basalt boulders may be emergent to provide egg laying sites for insects.

NOTES

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2. Any deviation is not to be carried out until written instruction is received from the CCC Contracts Engineer.
3. The contractor is to check all services with the appropriate authorities prior to commencement of work.
4. Drawing is indicative only. Do not scale off drawing. All measurements to be confirmed on site prior to commencement of work.
5. Refer to sheet D02 for general notes.
6. The exact extent and location of these details is subject to on-site approval by the CCC Contracts Engineer and Freshwater Ecologist, including detail type, placement of timber, basalt boulders and cobbles.
7. The contractor is to ensure that all boulders and gravels are to be placed under the direction of CCC's Freshwater Ecologist, including gaps between boulders.
8. Exact numbers of boulders for each location to be determined on site.

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A	FOR PRICING		11/2022
ISSUE	AMENDMENTS	SIGNED	DATE

DATUM	C.D.D.	DESIGNED	NAME	SIGNED	DATE
BENCH MK.	Bench Mark	A SMITH			08/2022
RL	Bench Mark RL	M PENTECOST			10/2022
SURVEY	Survey	C JORDAAN			08/2022
SURVEY LB	Level Book	M DUGGAN			11/2022
FILE LOCATION					
DRAIN REF.	16717	FILENAME\$			
SAP WBS	562/3873	PRINTED ON \$DATE\$ BY \$USER\$			

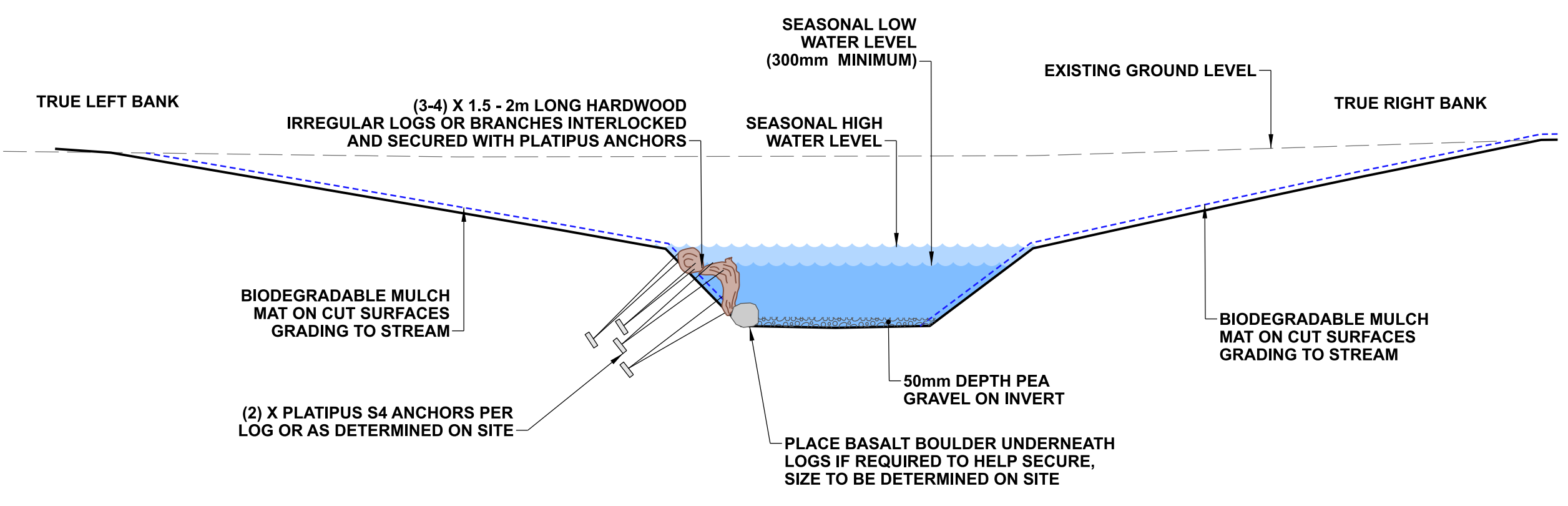
APPROVED		CONSULTANT
FOR TENDER		
DATE	SIGNED	PROJECT TITLE
Tender Date		
FOR CONSTRUCTION		CONSULTANT PROJECT REF.
DATE	SIGNED	
Constr Date		CONSULTANT FILE REF.

**CASHMERE STREAM REALIGNMENT
STAGE 3**

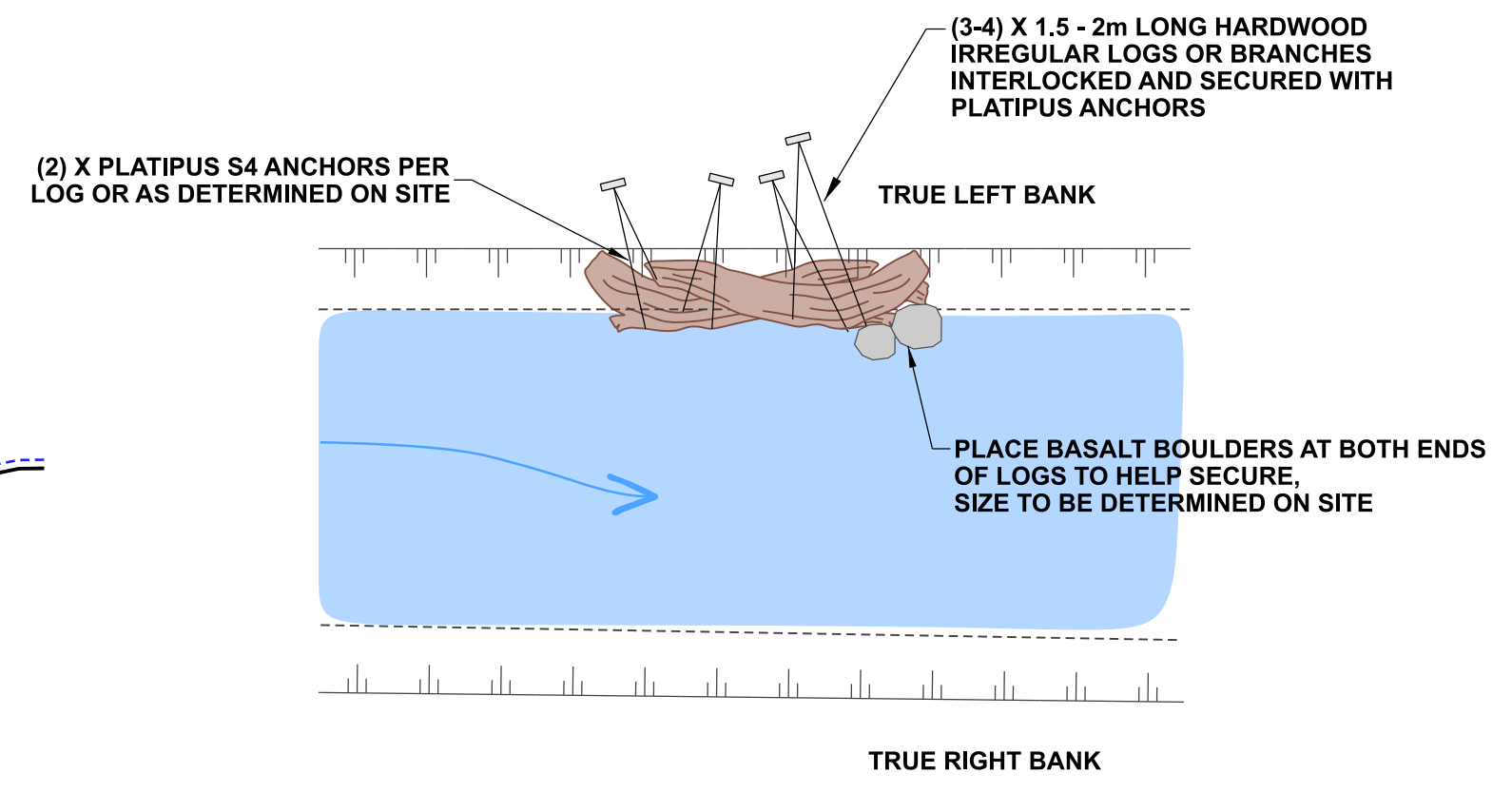
**TYPICAL IN-STREAM
FEATURES:
DETAILS A-B**

DOCUMENT NUMBER	TD	ORIGINAL SHEET SIZE	A1	SCALES	AS SHOWN
CAD DRAWING FILE REF.	DD135001.DGN				
TSD PROJECT FILE NUMBER	CP503560	SHEET	D11	OF 22	

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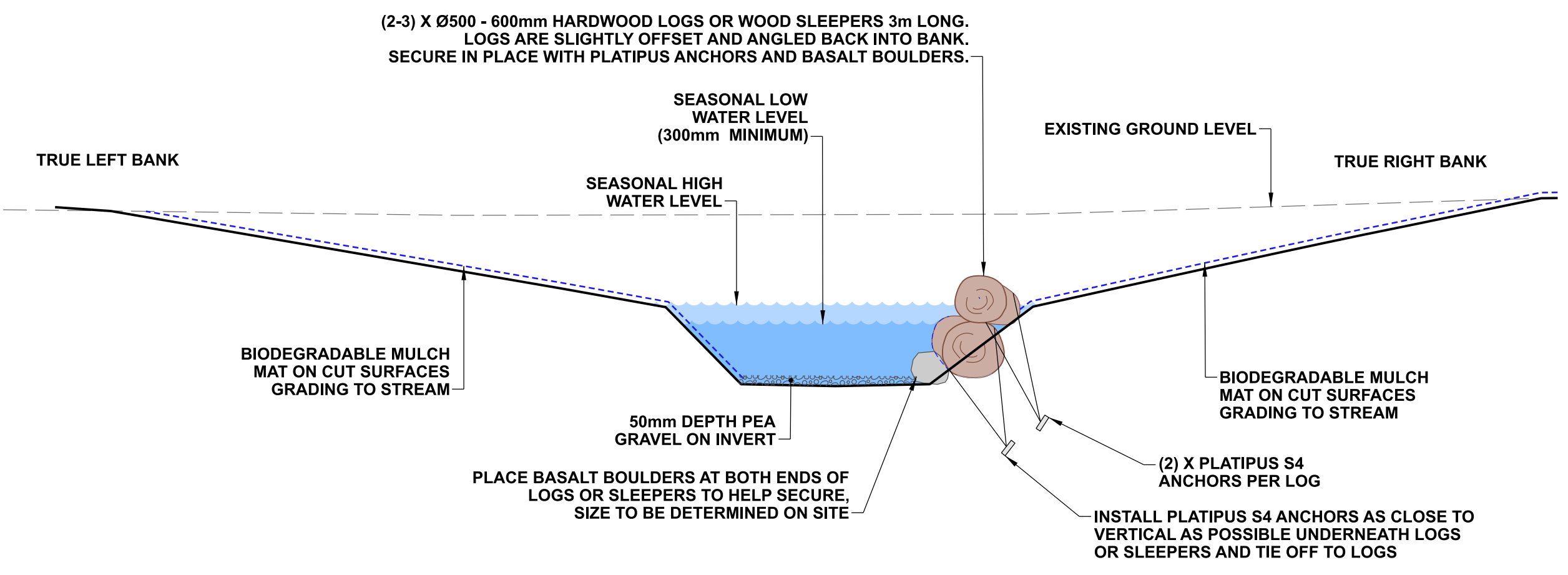
C TYPICAL DETAIL - TIMBER EDGE
 1:50 @ A1
 1:100 @ A3



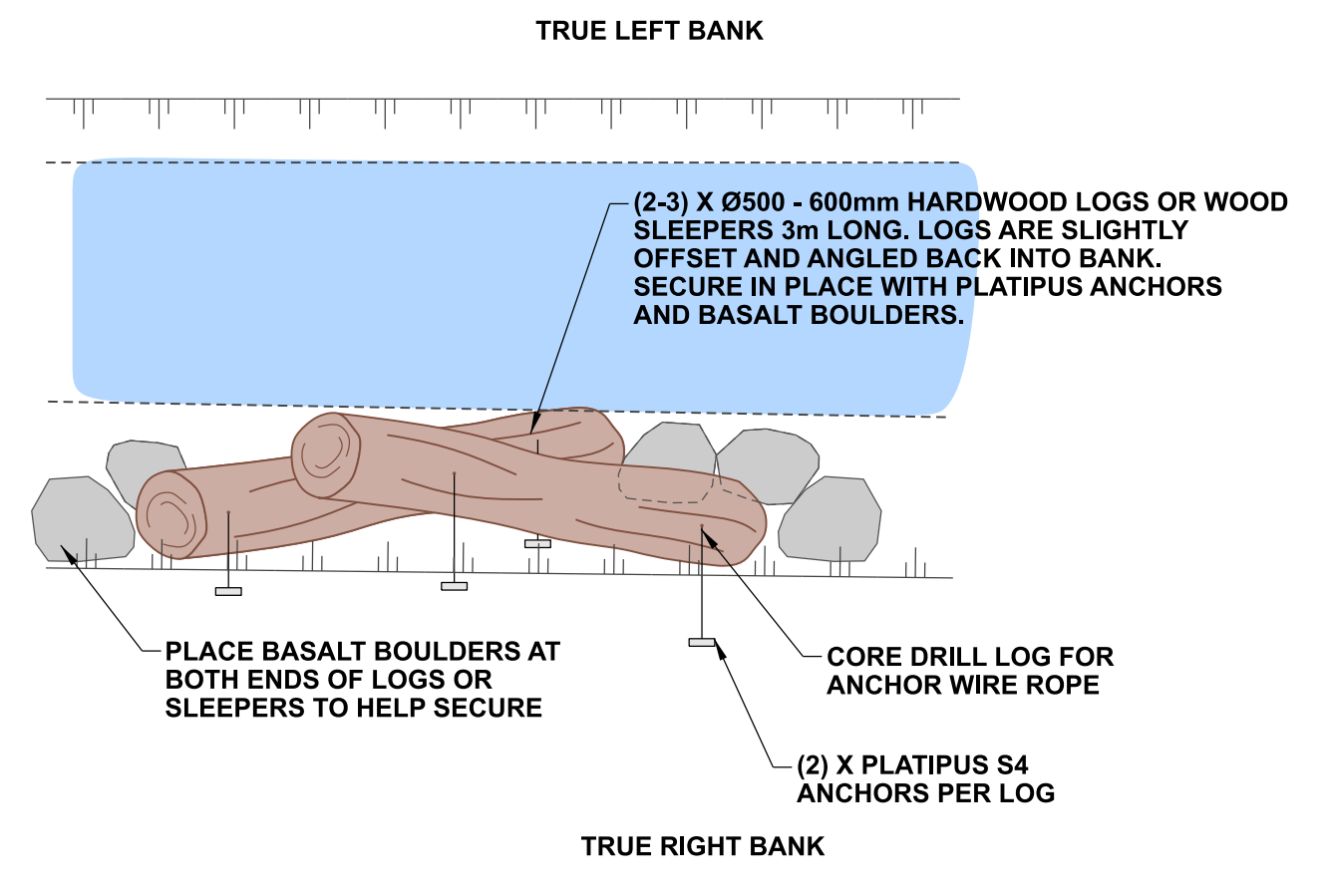
PLAN VIEW OF TIMBER EDGE

DETAIL AIM:

- Weathered hardwood timber (branches or irregular logs) are secured to bank to form an overhang and fish refuge.
- Timber is to be interlocked to secure and provide spaces for refuge and access to soft substrate of the bank.
- Provides flow variation in stream.
- Use in locations where there are bank stability concerns.



D TYPICAL DETAIL - LOG EDGE
 1:50 @ A1
 1:100 @ A3



PLAN VIEW OF LOG EDGE

DETAIL AIM:

- Logs or sleepers are secured to bank to form an overhang and fish refuge.
- Timber to provide spaces for refuge and access to soft substrate of the bank.
- Use in locations where there are bank stability concerns.

NOTES

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3. The contractor is to check all services with the appropriate authorities prior to commencement of work.
4. Drawing is indicative only. Do not scale off drawing. All measurements to be confirmed on site prior to commencement of work.
5. Refer to sheet D02 for general notes.
6. The exact extent and location of these details is subject to on-site approval by the CCC Contracts Engineer and Freshwater Ecologist, including detail type, placement of timber, basalt boulders and cobbles.
7. The contractor is to ensure that all boulders and gravels are to be placed under the direction of CCC's Freshwater Ecologist.
8. Location and placement of timber and logs to be under the direction of the CCC's Freshwater Ecologist to ensure site specific outcome is achieved.
9. Platipus anchors are to be installed so there is no slack in the stainless steel wire around the timber.

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CONSTRUCTION

A	FOR PRICING		11/2022
ISSUE	AMENDMENTS	SIGNED	DATE

Christchurch City Council
 TECHNICAL SERVICES & DESIGN

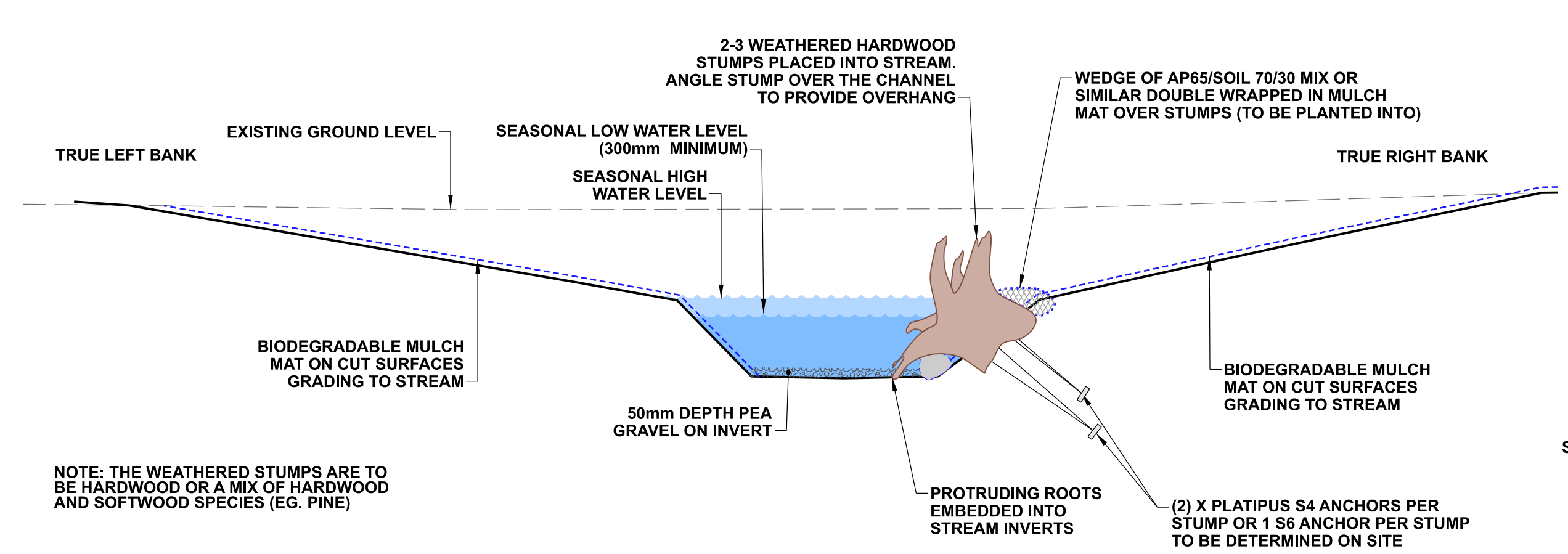
DATUM	C.D.D.	DESIGNED	A SMITH	SIGNED	DATE	APPROVED	
BENCH MK.	Bench Mark	DES. REVIEW	M PENTECOST		08/2022	FOR TENDER	
RL	Bench Mark RL				10/2022	DATE	SIGNED
SURVEY	Survey	DRAWN	C JORDAAN		08/2022	Tender Date	
SURVEY LB	Level Book	DRW. CHECK	M DUGGAN		11/2022	FOR CONSTRUCTION	
		FILE LOCATION				DATE	SIGNED
DRAIN. REF.	16717	FILENAME\$				Constn Date	
SAP WBS	562/3873	PRINTED ON \$DATE\$	BY \$USER\$			CONSULTANT PROJECT REF.	CONSULTANT FILE REF.

CONSULTANT	
PROJECT TITLE	CASHMERE STREAM REALIGNMENT STAGE 3
DRAWING TITLE	TYPICAL IN-STREAM FEATURES: DETAILS C-D

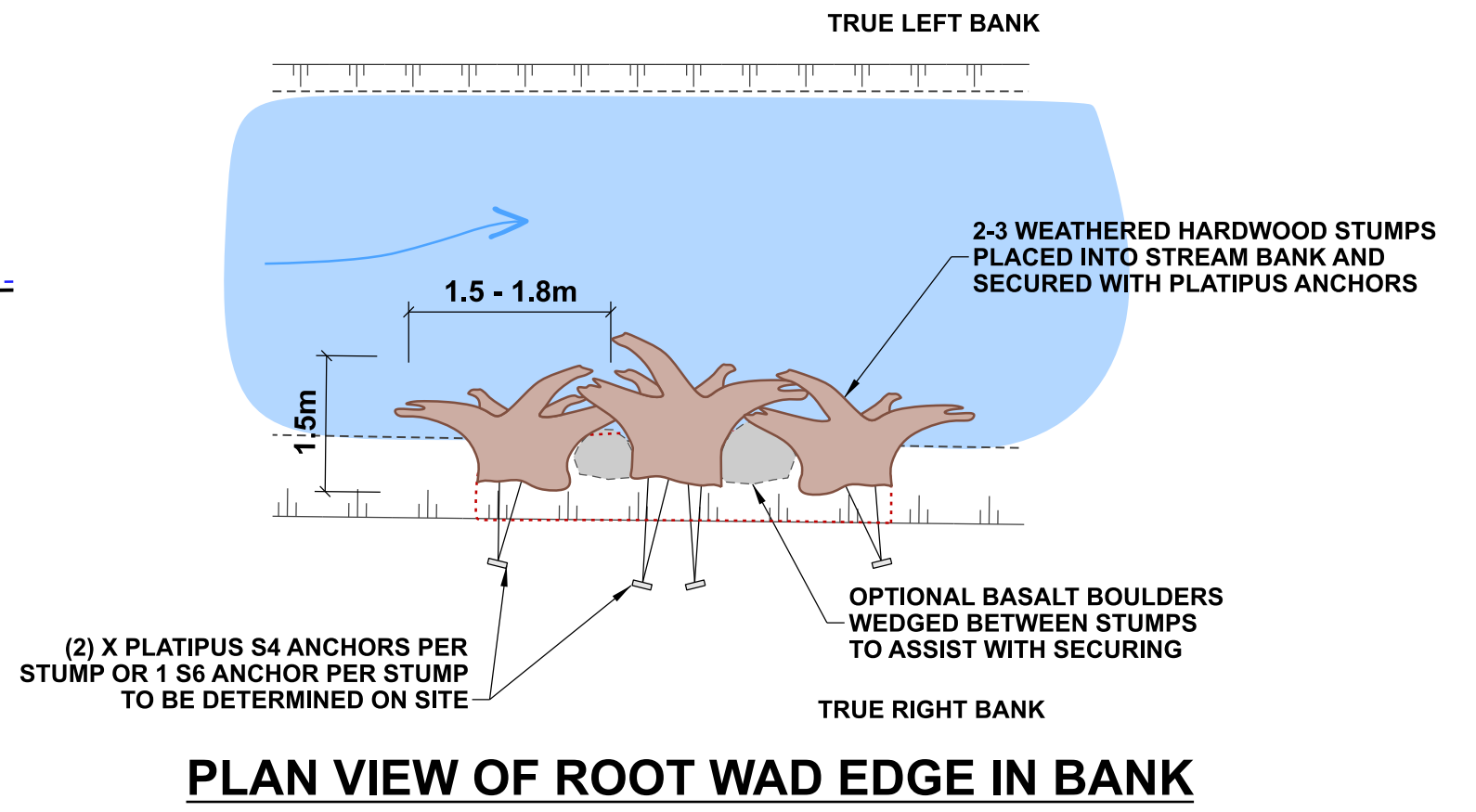
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CAD DRAWING FILE REF.	DD135001.DGN				
TSD PROJECT FILE NUMBER	CP503560	SHEET	D12	OF	22

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- NOTES**
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 5. Refer to sheet D02 for general notes.
 6. The exact extent and location of these details is subject to on-site approval by the CCC Contracts Engineer and Freshwater Ecologist, including detail type, placement of timber, basalt boulders and cobbles.
 7. The contractor is to ensure that all boulders and gravels are to be placed under the direction of CCC's Freshwater Ecologist.
 8. Location and placement of the stumps and posts is to be under the direction of the CCC's Freshwater Ecologist to ensure site specific outcome is achieved.
 9. Platipus anchors are to be installed so there is no slack in the stainless steel wire around the timber.

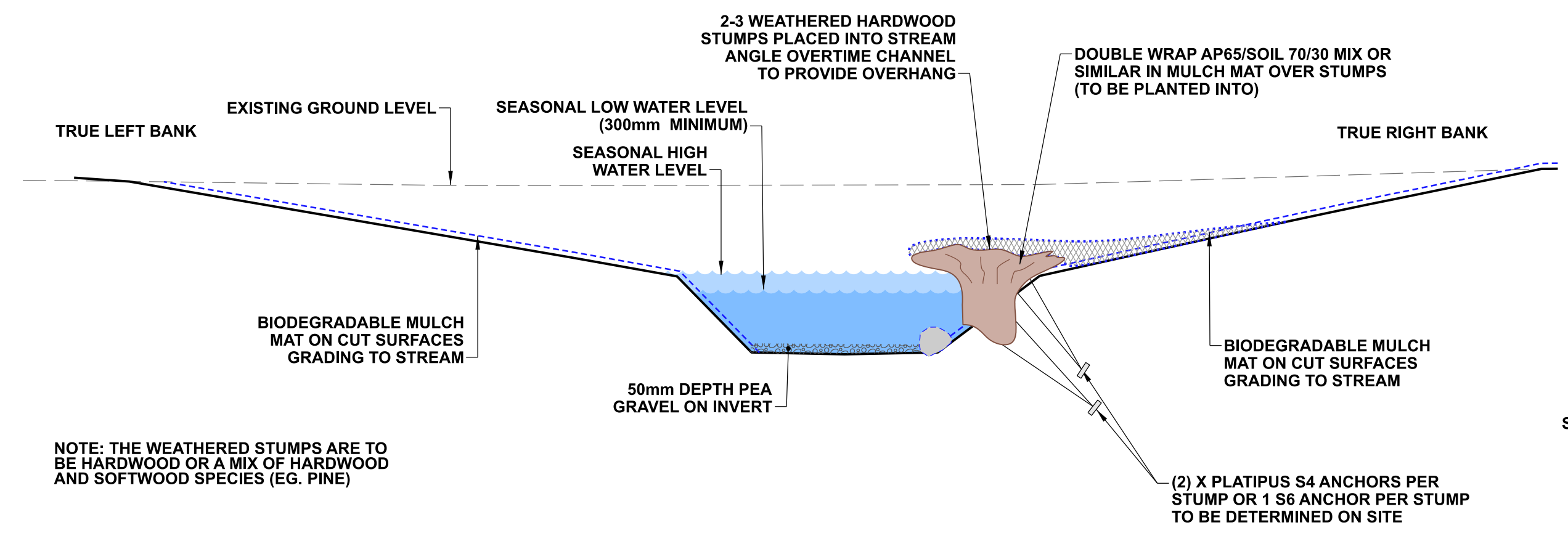


E
D13 **TYPICAL DETAIL - ROOT WAD EDGE - OPTION 1: IN BANK**
1:50 @ A1
1:100 @ A3

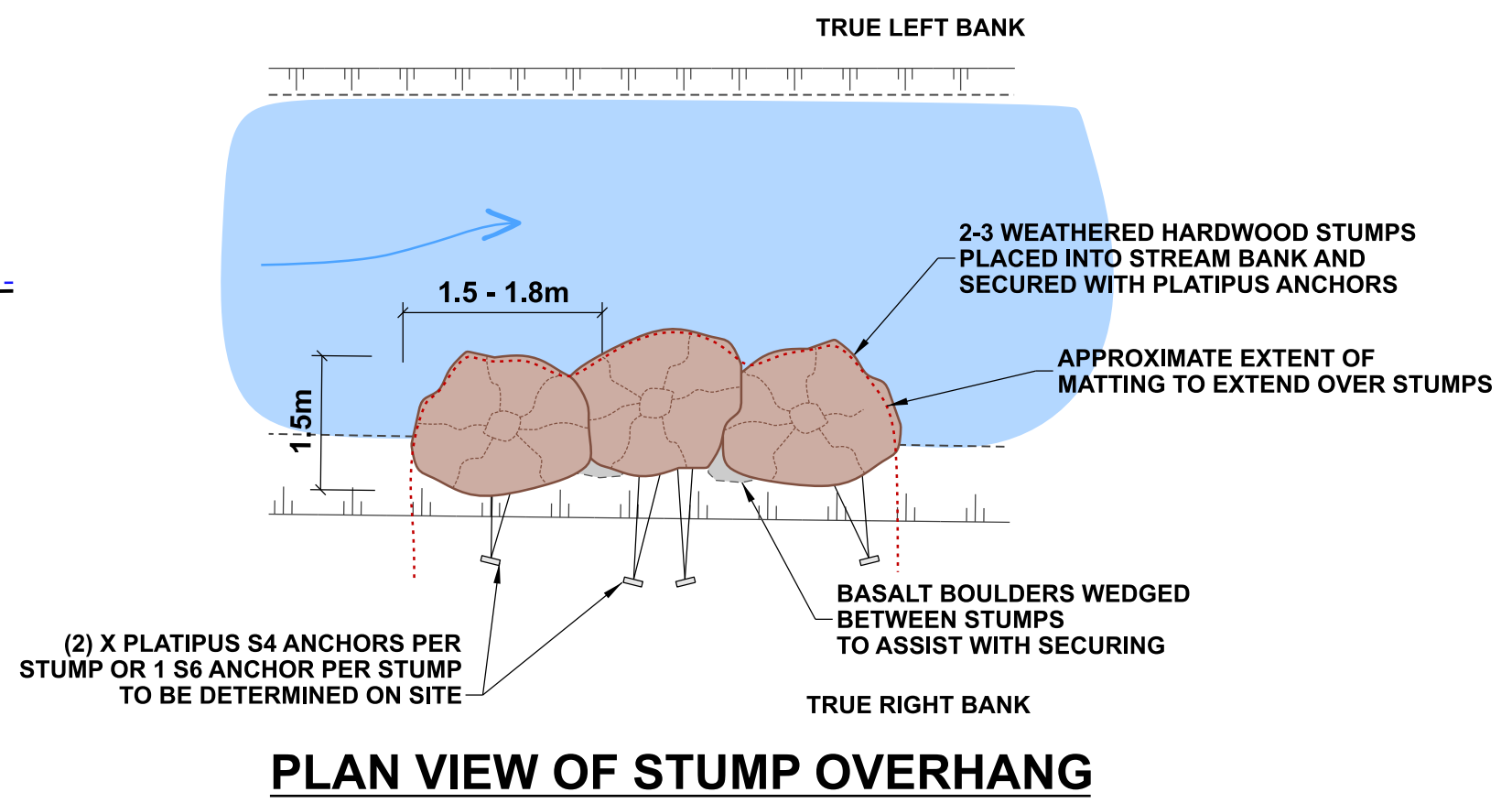


PLAN VIEW OF ROOT WAD EDGE IN BANK

- DETAIL AIM:**
- A fish refuge is created by the tangled roots of weathered tree stumps firmly secured to the side of the bank.
 - The root wad edge provides variable stream velocity and habitat for aquatic species.
 - Use in locations where there are bank stability concerns.



E
D13 **TYPICAL DETAIL - ROOT WAD EDGE - OPTION 2: STUMP OVERHANG**
1:50 @ A1
1:100 @ A3



PLAN VIEW OF STUMP OVERHANG

- DETAIL AIM:**
- A fish refuge is created by the tangled roots of weathered tree stumps firmly secured to the side of the bank.
 - The root wad edge provides variable stream velocity and habitat for aquatic species.
 - Use in locations where there are bank stability concerns.

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A	FOR PRICING		11/2022
ISSUE	AMENDMENTS	SIGNED	DATE

DATUM	C.D.D.	DESIGNED	A SMITH	SIGNED	DATE	APPROVED	
BENCH MK.	Bench Mark	DES. REVIEW	M PENTECOST		08/2022	FOR TENDER	
RL	Bench Mark RL	DRAWN	C JORDAAN		10/2022	DATE	SIGNED
SURVEY	Survey	DRW. CHECK	M DUGGAN		11/2022	DATE	SIGNED
SURVEY LB	Level Book	FILE LOCATION					
DRAIN REF.	16717	PRINTED ON \$DATE\$	BY \$USERNAMES\$				
SAP WBS	562/3873	Constr Date					

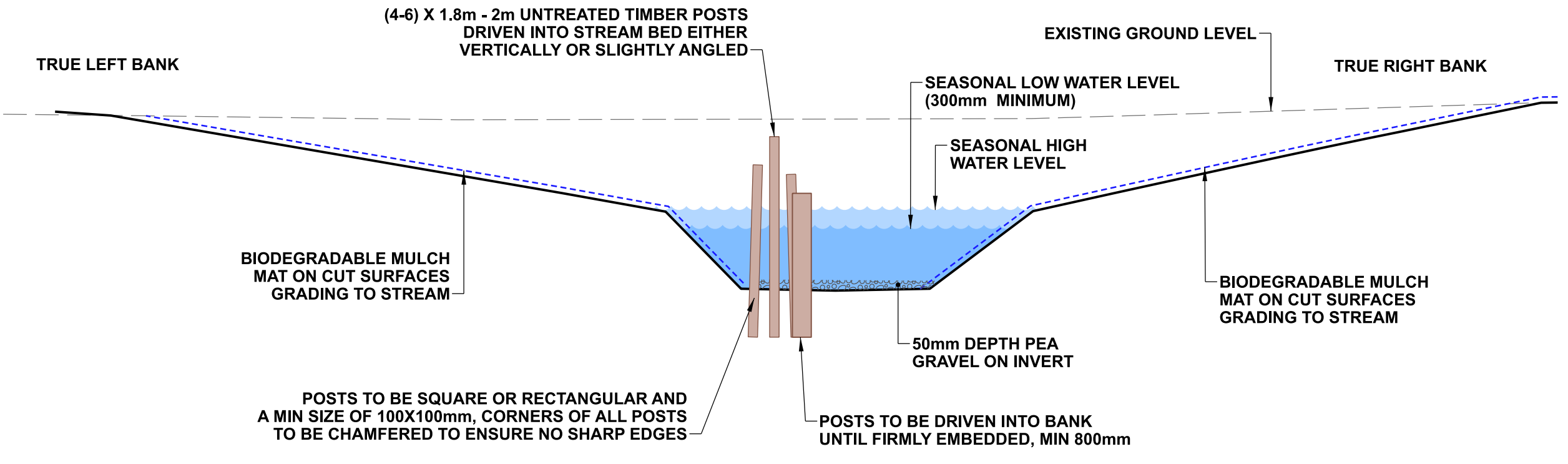
CONSULTANT	PROJECT TITLE
CONSULTANT PROJECT REF.	CONSULTANT FILE REF.

**CASHMERE STREAM REALIGNMENT
STAGE 3**

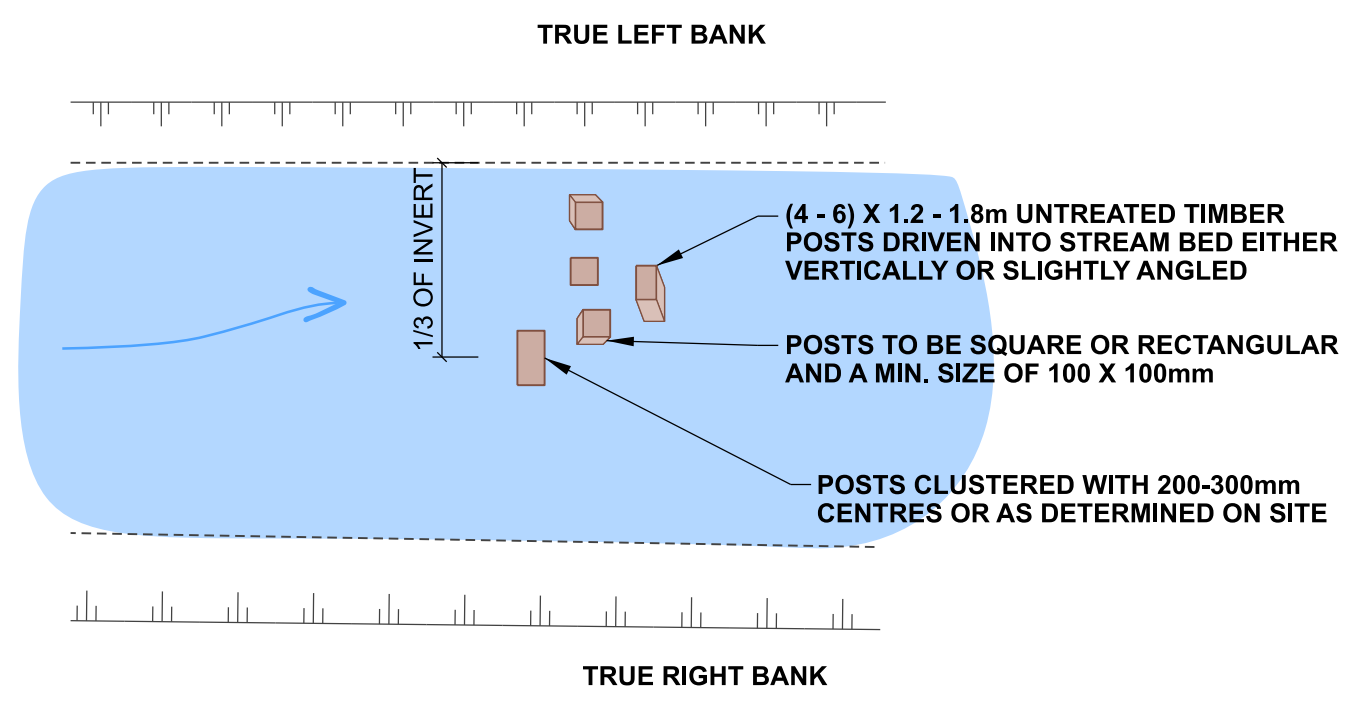
**TYPICAL IN-STREAM
FEATURES:
DETAIL E**

DOCUMENT NUMBER	TD	ORIGINAL SHEET SIZE	A1	SCALES	AS SHOWN
CAD DRAWING FILE REF.	DD135001.DGN			SHEET	D13 OF 22
TSD PROJECT FILE NUMBER	CP503560				

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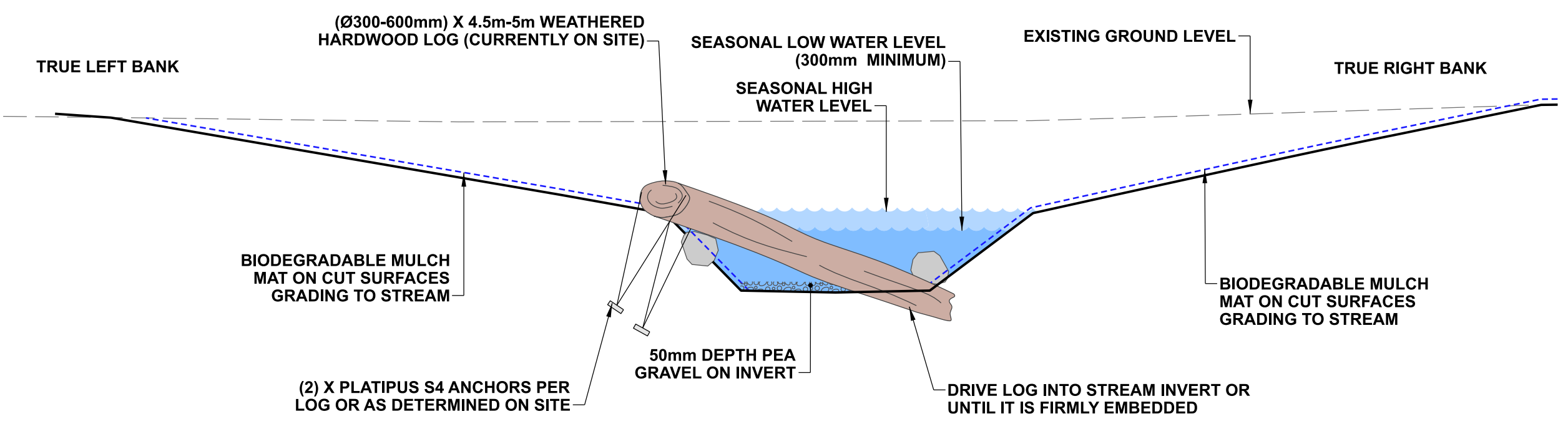
F TYPICAL DETAIL - POST SNAG
 1:50 @ A1
 1:100 @ A3



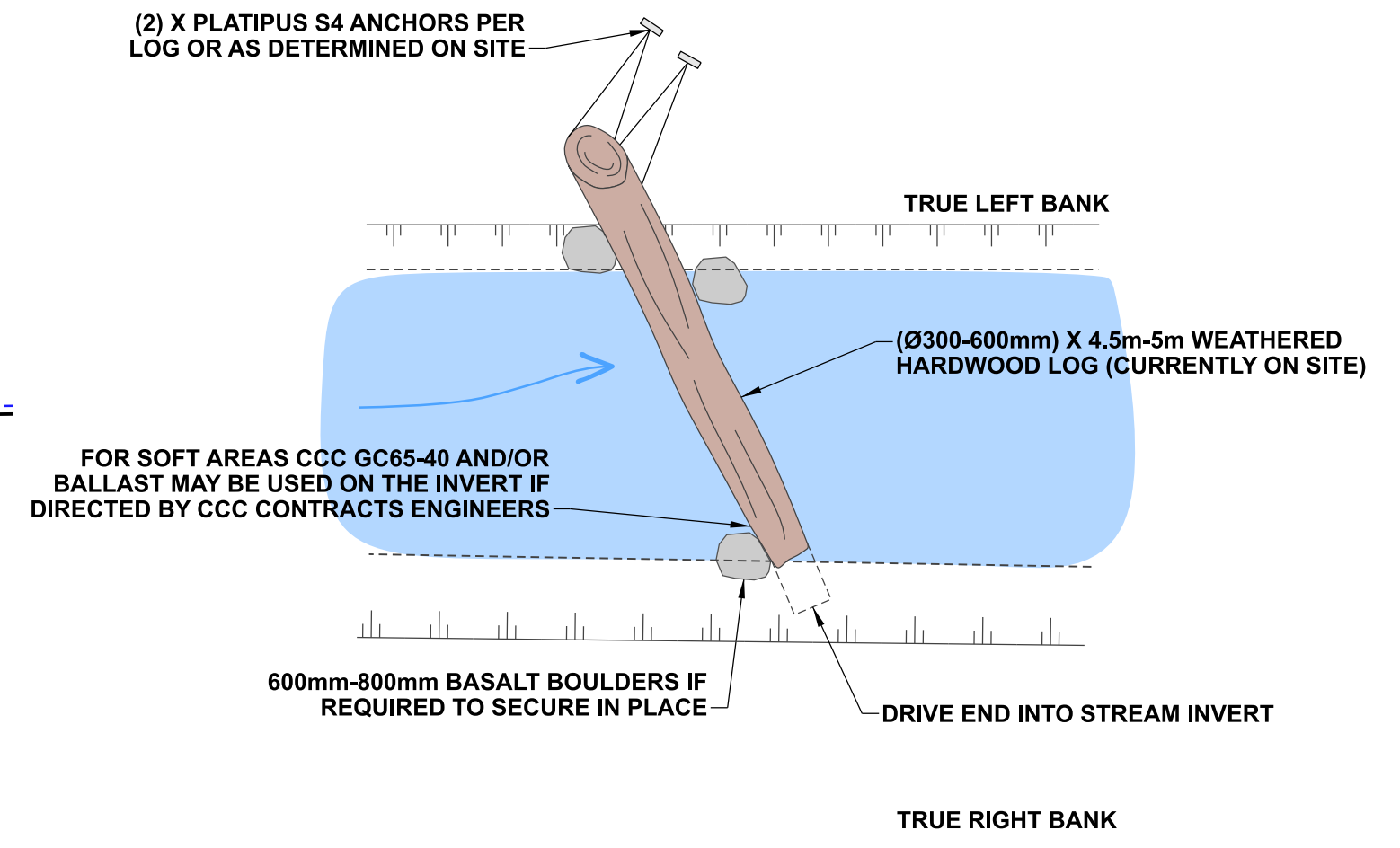
PLAN VIEW OF POST SNAG

DETAIL AIM

- Untreated timber posts are driven into the stream bed in a cluster to trap fine woody debris entering the stream.
- The woody debris snag provides variable stream velocity and habitat for aquatic species.
- Use in locations where there are bank stability concerns.



G TYPICAL DETAIL - LOG SNAG
 1:50 @ A1
 1:100 @ A3



PLAN VIEW OF ROOT WAD EDGE

DETAIL AIM:

- A hardwood log is wedged across the stream profile providing an informal weir and fish refuge.
- The log provides variable stream velocity and habitat for aquatic species.
- Use in locations where there are bank stability concerns.

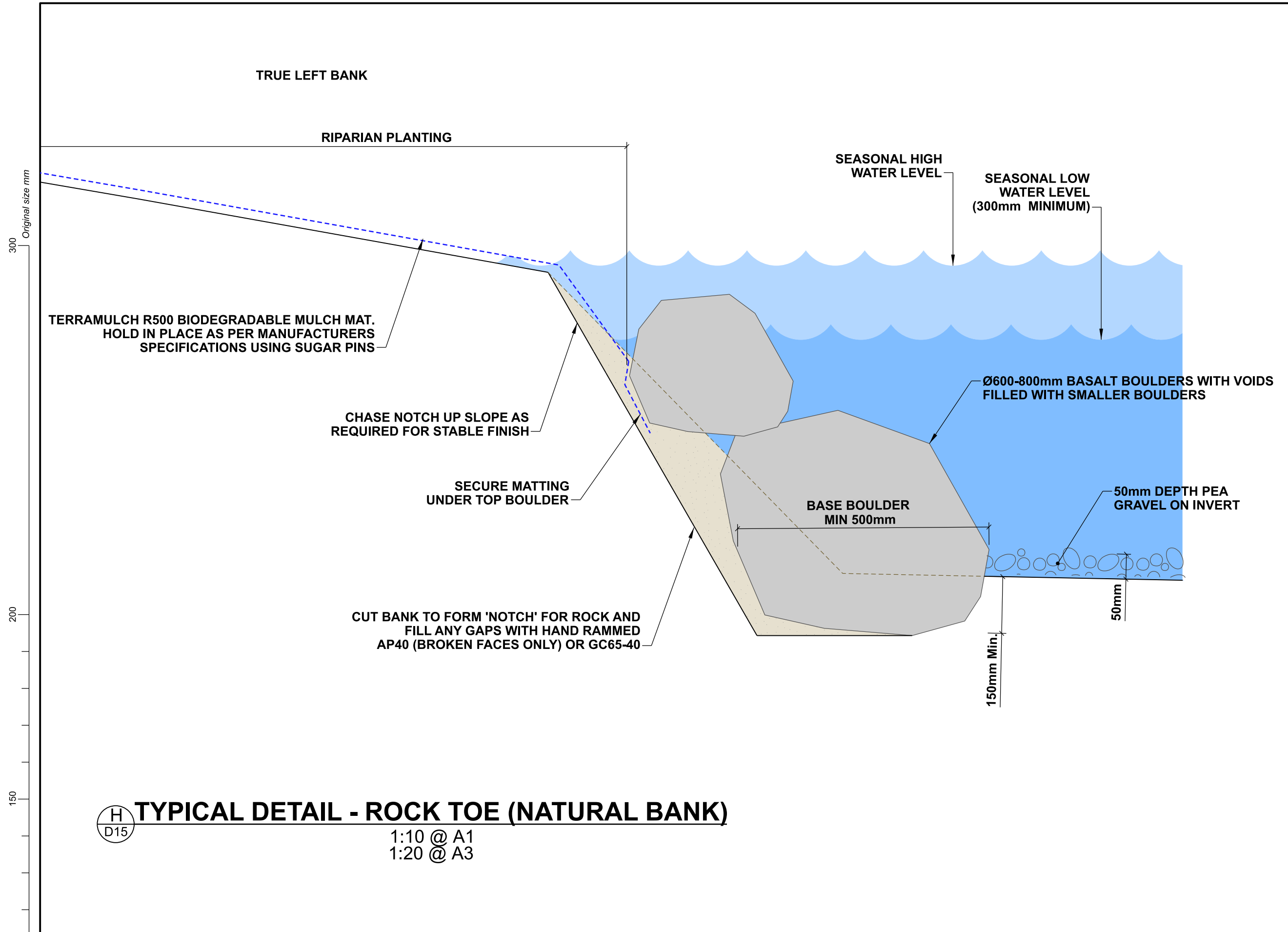
- NOTES**
1. All work is to be undertaken in accordance with the contract document and specifications, the CSS and IDS unless specified otherwise.
 2. Any deviation is not to be carried out until written instruction is received from the CCC Contracts Engineer.
 3. The contractor is to check all services with the appropriate authorities prior to commencement of work.
 4. Drawing is indicative only. Do not scale off drawing. All measurements to be confirmed on site prior to commencement of work.
 5. Refer to sheet D02 for general notes.
 6. The exact extent and location of these details is subject to on-site approval by the CCC Contracts Engineer and Freshwater Ecologist, including detail type, placement of timber, basalt boulders and cobbles.
 7. The contractor is to ensure that all boulders and gravels are to be placed under the direction of CCC's Freshwater Ecologist.
 8. Location and placement of timber and logs is to be under the direction of the CCC's Freshwater Ecologist to ensure site specific outcome is achieved.
 9. Platipus anchors are to be installed so there is no slack in the stainless steel wire around the timber.

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DATUM	C.D.D.	DESIGNED	NAME	SIGNED	DATE
BENCH MK.	Bench Mark	DESIGNED	A SMITH		08/2022
RL	Bench Mark RL	DES. REVIEW	M PENTECOST		10/2022
SURVEY	Survey	DRAWN	C JORDAAN		08/2022
SURVEY LB	Level Book	DRW. CHECK	M DUGGAN		11/2022
FILE LOCATION					
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SAP.WBS	562/3873	PRINTED ON \$DATE\$	BY \$USER\$		

APPROVED		CONSULTANT
FOR TENDER		
DATE	SIGNED	
FOR CONSTRUCTION		
DATE	SIGNED	
Constn Date		
CONSULTANT PROJECT REF.		CONSULTANT FILE REF.

DOCUMENT NUMBER	TD	ORIGINAL SHEET SIZE	A1	SCALES	AS SHOWN
CAD DRAWING FILE REF.	DD135001.DGN	TSD PROJECT FILE NUMBER	CP503560	SHEET	D14 OF 22



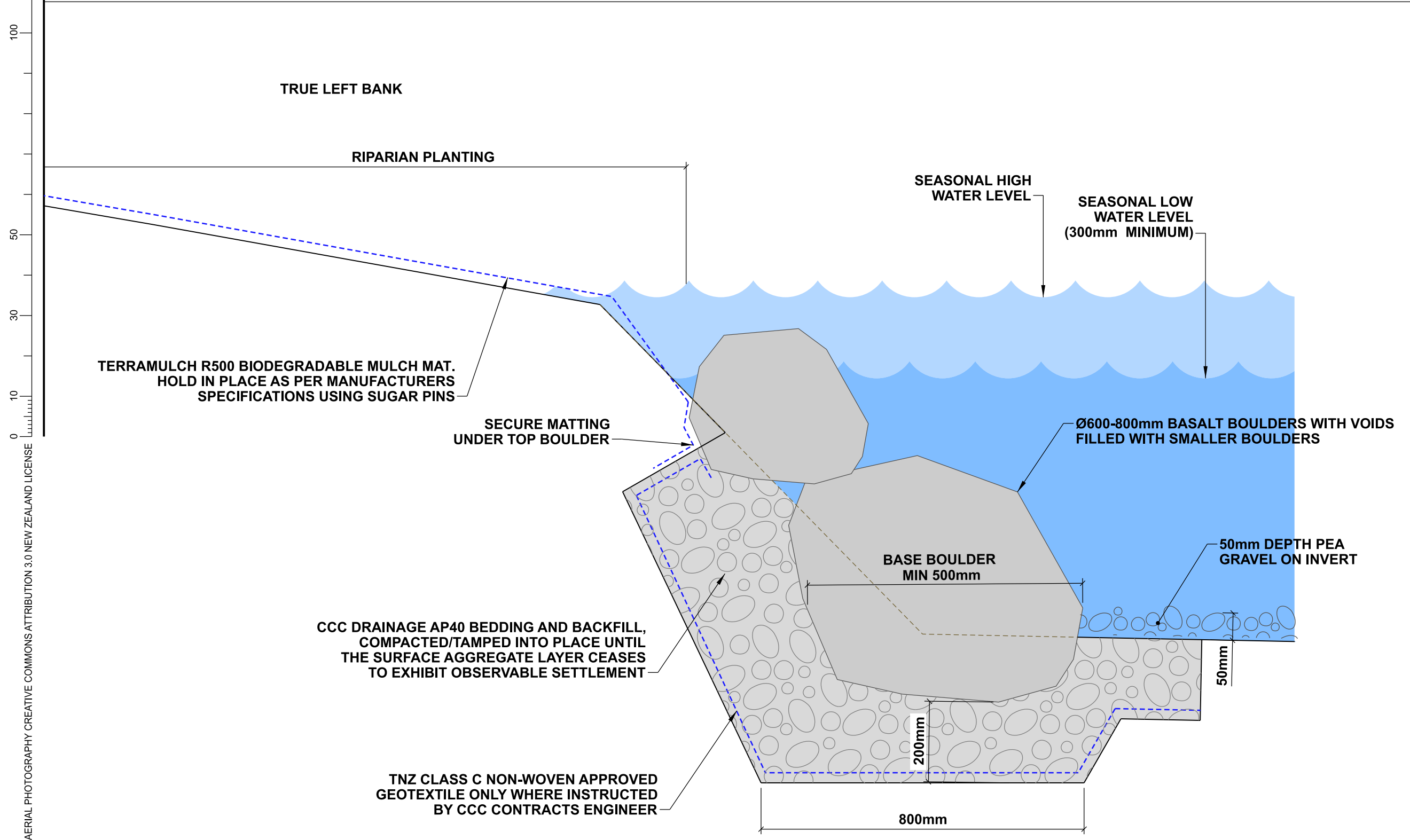
H
D15
TYPICAL DETAIL - ROCK TOE (NATURAL BANK)
1:10 @ A1
1:20 @ A3

DETAIL AIM:

- For use where bank stability is required or is a concern.
- To provide scour protection at the bank margin.

NOTE:

- Detail to be used only when other features won't provide sufficient bank stability.



I
D15
TYPICAL DETAIL - ROCK TOE
1:10 @ A1
1:20 @ A3

DETAIL AIM:

- For use where bank stability is required or is a concern.
- To provide scour protection at the bank margin.

NOTE:

- Detail to be used only when other features won't provide sufficient bank stability.

- NOTES**
- All work is to be undertaken in accordance with the contract document and specifications, the CSS and IDS unless specified otherwise.
 - Any deviation is not to be carried out until written instruction is received from the CCC Contracts Engineer.
 - The contractor is to check all services with the appropriate authorities prior to commencement of work.
 - Drawing is indicative only. Do not scale off drawing. All measurements to be confirmed on site prior to commencement of work.
 - Refer to sheet D02 for general notes.
 - The exact extent and location of these details is subject to on-site approval by the CCC Contracts Engineer and Freshwater Ecologist, including detail type, placement of basalt boulders.
 - The contractor is to ensure that all boulders and gravels are to be placed under the direction of CCC's Freshwater Ecologist, including gaps between boulders.
 - Exact numbers of boulders for each location to be determined on site.

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CONSTRUCTION

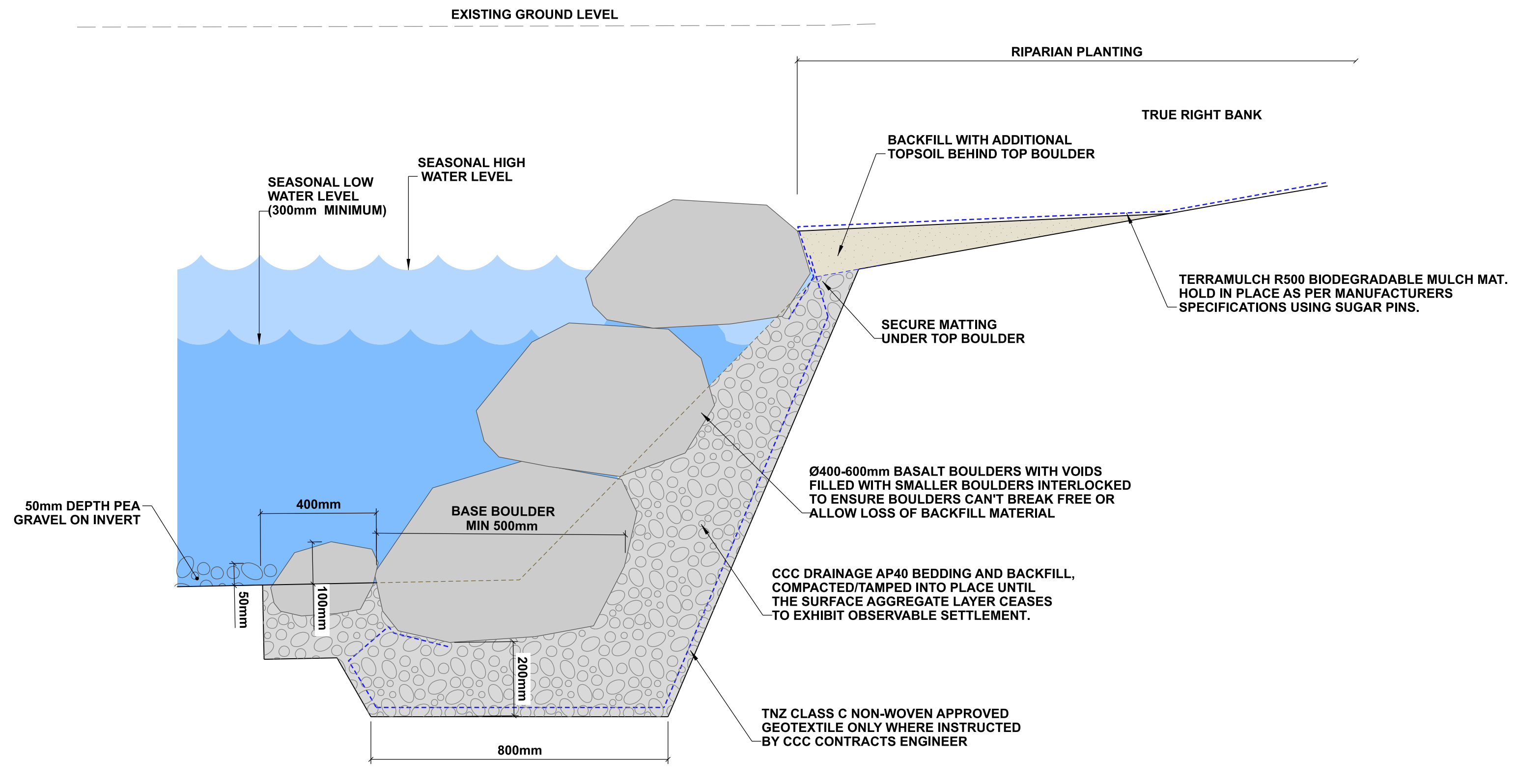
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RL	Bench Mark RL	DES. REVIEW	M PENTECOST		10/2022	DATE	SIGNED
SURVEY	Survey	DRAWN	C JORDAAN		08/2022	Tender Date	
SURVEY LB	Level Book	DRW. CHECK	M DUGGAN		11/2022	FOR CONSTRUCTION	
		FILE LOCATION				DATE	SIGNED
DRAIN. REF.	16717	FILENAME\$				CONSULTANT PROJECT REF.	
SAP WBS	562/3873	PRINTED ON \$DATE\$	BY \$USER\$		Constn Date	CONSULTANT FILE REF.	

PROJECT TITLE
**CASHMERE STREAM REALIGNMENT
STAGE 3**

DRAWING TITLE
**TYPICAL BANK
AND INVERT DETAILS:
DETAILS H-I**

DOCUMENT NUMBER	ORIGINAL SHEET SIZE	SCALES
TD	A1	AS SHOWN
CAD DRAWING FILE REF. DD135001.DGN		
TSD PROJECT FILE NUMBER CP503560	SHEET D15	OF 22

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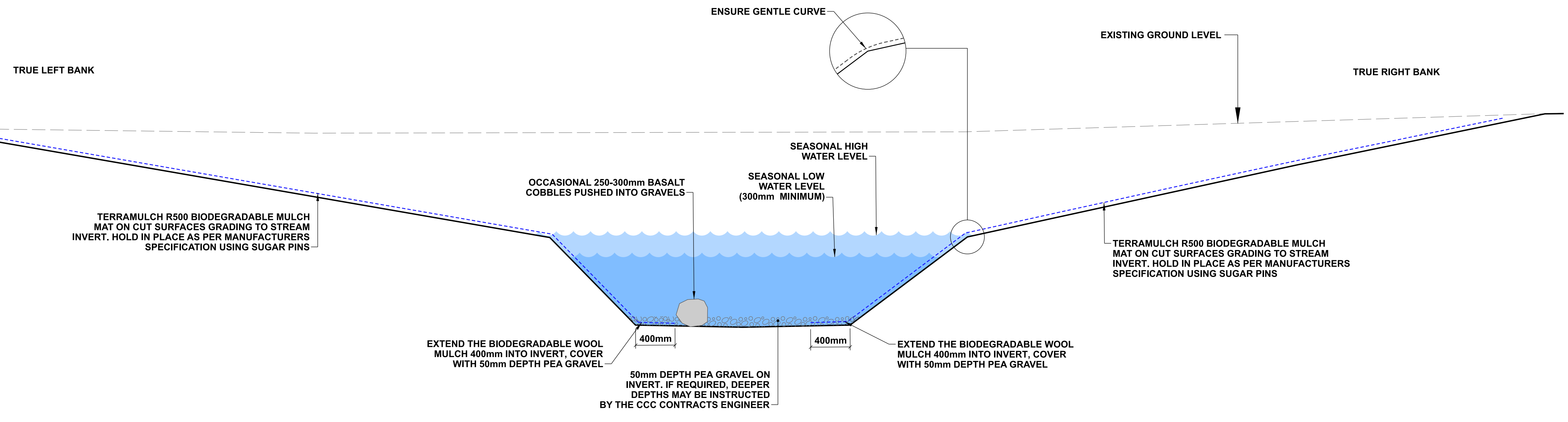
J TYPICAL DETAIL - ROCK EDGE
 1:10 @ A1
 1:20 @ A3

DETAIL AIM:

- For use where bank stability is required or is a concern.
- To provide scour protection at the bank margin.

NOTE:

- Detail to be used only when other features won't provide sufficient bank stability.



K TYPICAL DETAIL - SLOPE AND INVERT DETAIL
 1:25 @ A1
 1:50 @ A3

- NOTES**
1. All work is to be undertaken in accordance with the contract document and specifications, the CSS and IDS unless specified otherwise.
 2. Any deviation is not to be carried out until written instruction is received from the CCC Contracts Engineer.
 3. The contractor is to check all services with the appropriate authorities prior to commencement of work.
 4. Drawing is indicative only. Do not scale off drawing. All measurements to be confirmed on site prior to commencement of work.
 5. Refer to sheet D02 for general notes.
 6. The exact extent and location of these details is subject to on-site approval by the CCC Contracts Engineer and Freshwater Ecologist, including detail type, placement of basalt boulders.
 7. The contractor is to ensure that all boulders and gravels are to be placed under the direction of CCC's Freshwater Ecologist, including gaps between boulders.
 8. Exact numbers of boulders for each location to be determined on site.

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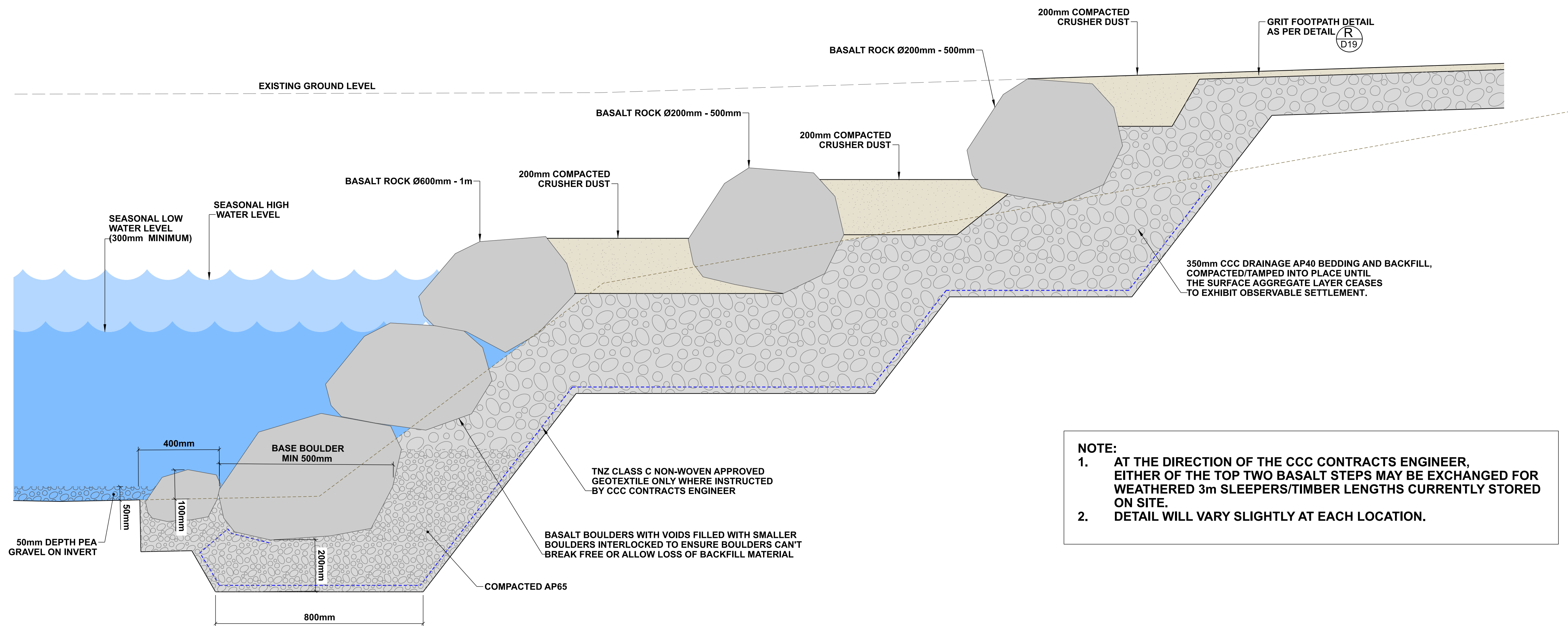
A	FOR PRICING		11/2022
ISSUE	AMENDMENTS	SIGNED	DATE

DATUM	C.D.D.	DESIGNED	A SMITH	SIGNED	DATE
BENCH MK.	Bench Mark	DES. REVIEW	M PENTECOST		08/2022
RL	Bench Mark RL	DRAWN	C JORDAAN		10/2022
SURVEY	Survey	DRW. CHECK	M DUGGAN		08/2022
SURVEY LB	Level Book	FILE LOCATION			11/2022
DRAIN. REF.	16717	PRINTED ON \$DATES	BY \$USERNAMES		
SAP WBS	562/3873				

APPROVED		CONSULTANT
FOR TENDER		
DATE	SIGNED	
FOR CONSTRUCTION		
DATE	SIGNED	
CONSULTANT PROJECT REF.	CONSULTANT FILE REF.	

DOCUMENT NUMBER	TD	ORIGINAL SHEET SIZE	A1	SCALES	AS SHOWN
CAD DRAWING FILE REF.	DD135001.DGN				
TSD PROJECT FILE NUMBER	CP503560	SHEET	D16	OF	22

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NOTE:
 1. AT THE DIRECTION OF THE CCC CONTRACTS ENGINEER, EITHER OF THE TOP TWO BASALT STEPS MAY BE EXCHANGED FOR WEATHERED 3m SLEEPERS/TIMBER LENGTHS CURRENTLY STORED ON SITE.
 2. DETAIL WILL VARY SLIGHTLY AT EACH LOCATION.

- NOTES**
- All work is to be undertaken in accordance with the contract document and specifications, the CSS and IDS unless specified otherwise.
 - Any deviation is not to be carried out until written instruction is received from the CCC Contracts Engineer.
 - The contractor is to check all services with the appropriate authorities prior to commencement of work.
 - Drawing is indicative only. Do not scale off drawing. All measurements to be confirmed on site prior to commencement of work.
 - Refer to sheet D02 for general notes.
 - The exact extent and location of these details is subject to on-site approval by the CCC Contracts Engineer and Freshwater Ecologist, including detail type, placement of basalt boulders.
 - The contractor is to ensure that all boulders and gravels are to be placed under the direction of CCC's Freshwater Ecologist, including gaps between boulders.
 - Exact numbers of boulders for each location to be determined on site.

TYPICAL DETAIL - BASALT ROCK STEPS
 1:10 @ A1
 1:20 @ A3

DETAIL AIM:

- For use where pedestrian access to the stream is to be provided, and bank stability is required.

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A	FOR PRICING			11/2022
ISSUE	AMENDMENTS	SIGNED	DATE	



DATUM	C.D.D.	DESIGNED	A SMITH	SIGNED	DATE
BENCH MK.	Bench Mark	DES. REVIEW	M PENTECOST		08/2022
RL	Bench Mark RL	DRAWN	C JORDAAN		10/2022
SURVEY	Survey	DRW. CHECK	M DUGGAN		08/2022
SURVEY LB	Level Book	FILE LOCATION			11/2022
DRAIN. REF.	16717	FILENAMES			
SAP WBS	562/3873	PRINTED ON \$DATES	BY \$USERNAMES	Constn Date	

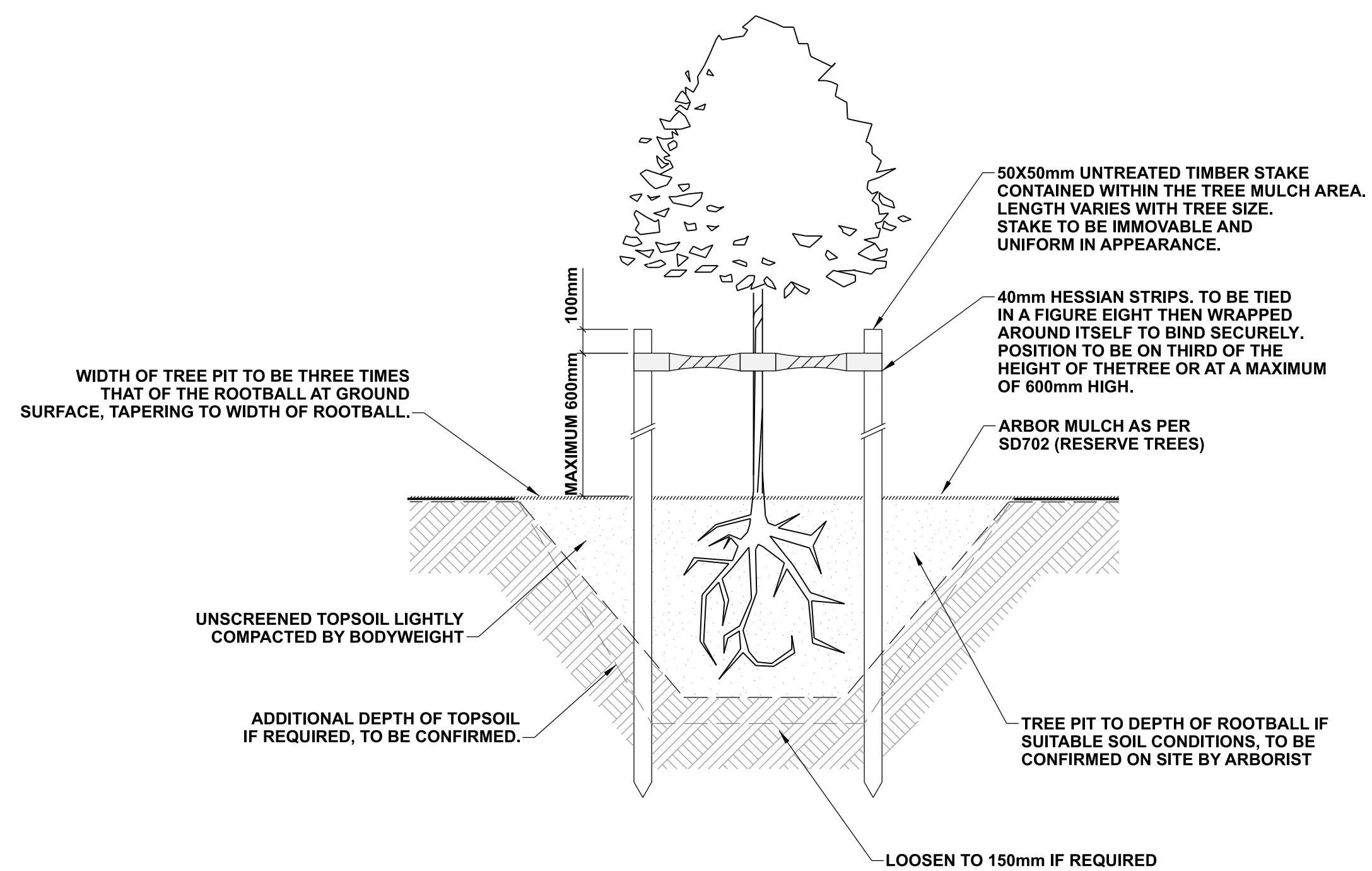
APPROVED		CONSULTANT
FOR TENDER		
DATE	SIGNED	
FOR CONSTRUCTION		
DATE	SIGNED	
CONSULTANT PROJECT REF.	CONSULTANT FILE REF.	

PROJECT TITLE
**CASHMERE STREAM REALIGNMENT
 STAGE 3**

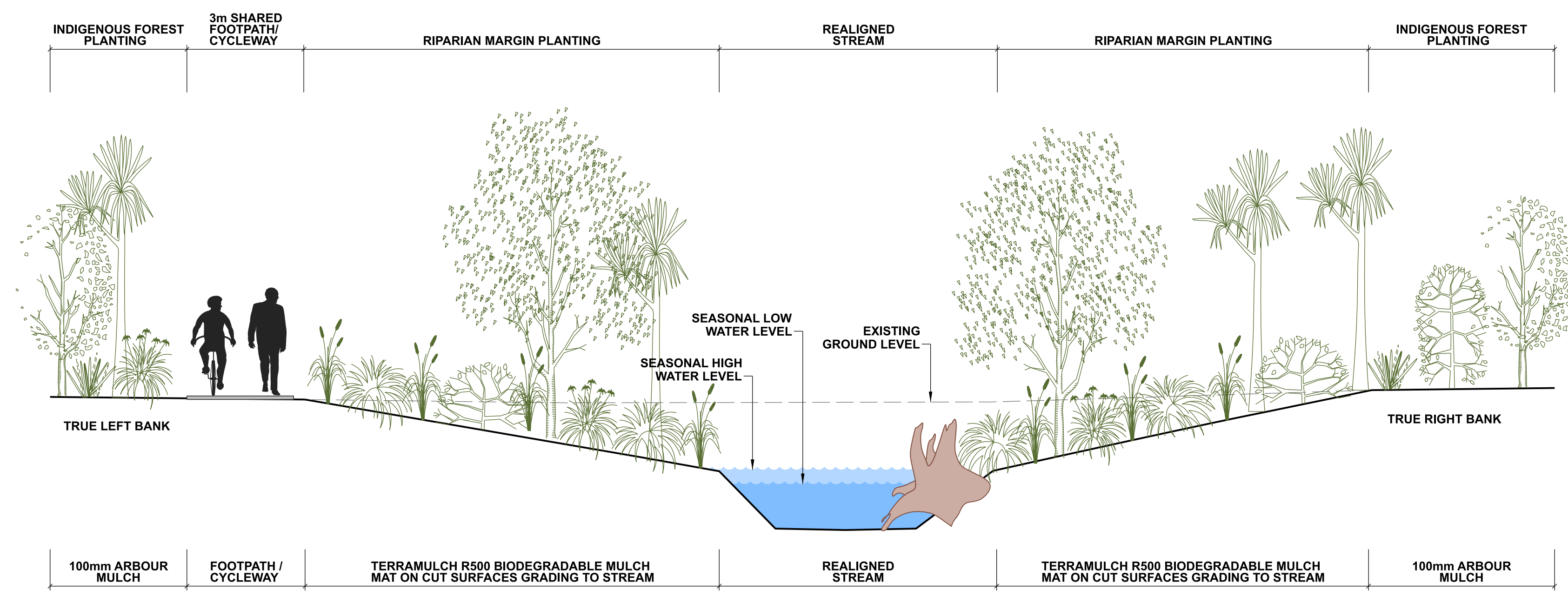
DRAWING TITLE
**TYPICAL DETAILS:
 DETAIL L**

DOCUMENT NUMBER	TD	ORIGINAL SHEET SIZE	A1	SCALES	AS SHOWN
CAD DRAWING FILE REF.	DD135001.DGN	TSD PROJECT FILE NUMBER	CP503560	SHEET	D17 OF 22

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M
D18
TYPICAL DETAIL - TREE PIT
1:20 @ A1
1:40 @ A3



N
D18
TYPICAL DETAIL - PLANTING CROSS-SECTION
1:50 @ A1
1:100 @ A3

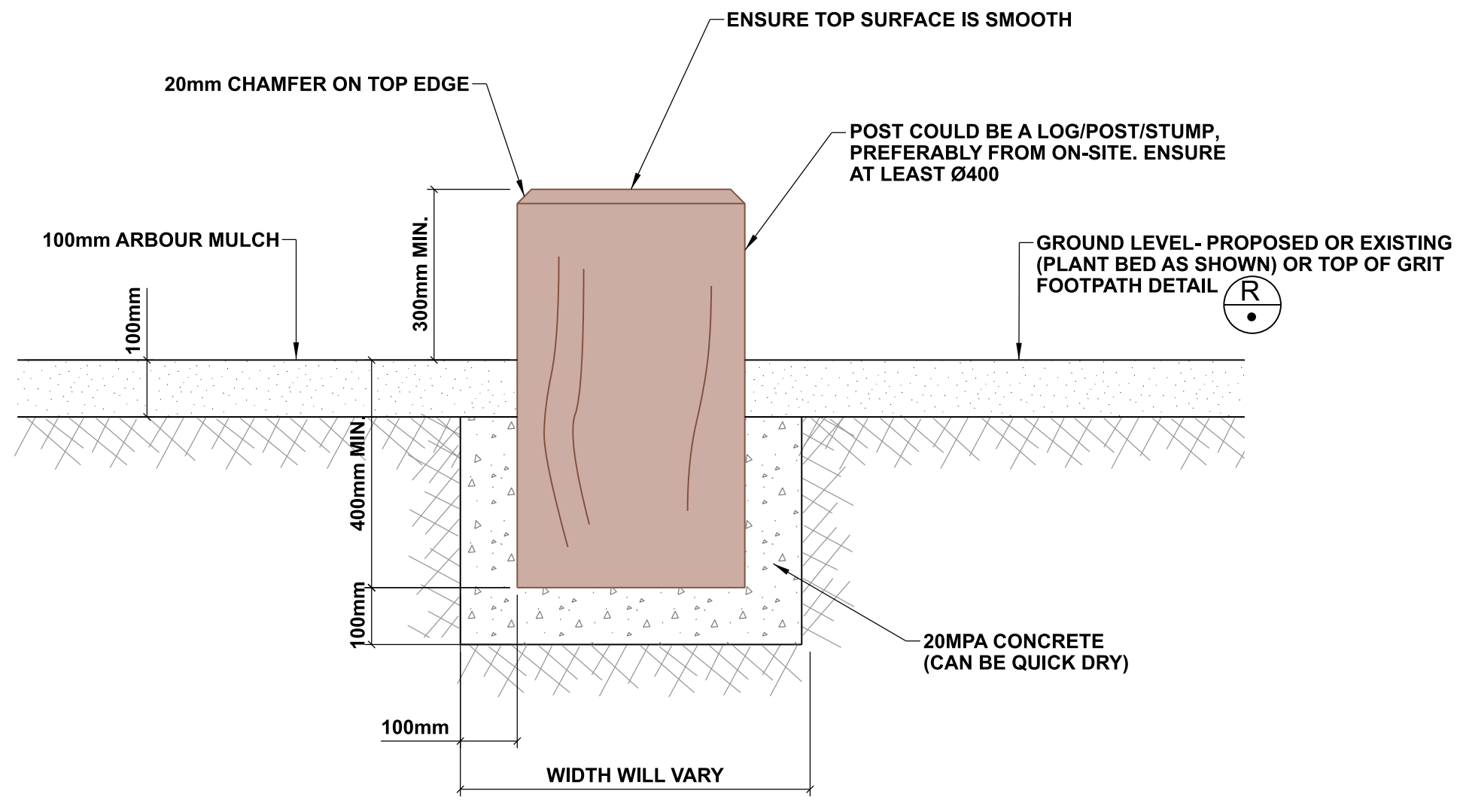
- NOTES**
1. All work is to be undertaken in accordance with the contract document and specifications, the CSS and IDS unless specified otherwise.
 2. Any deviation is not to be carried out until written instruction is received from the CCC Contracts Engineer.
 3. The contractor is to check all services with the appropriate authorities prior to commencement of work.
 4. Drawing is indicative only. Do not scale off drawing. All measurements to be confirmed on site prior to commencement of work.
 5. Refer to sheet D02 for general notes.
 6. Refer to sheets L01-L05 for planting plans.

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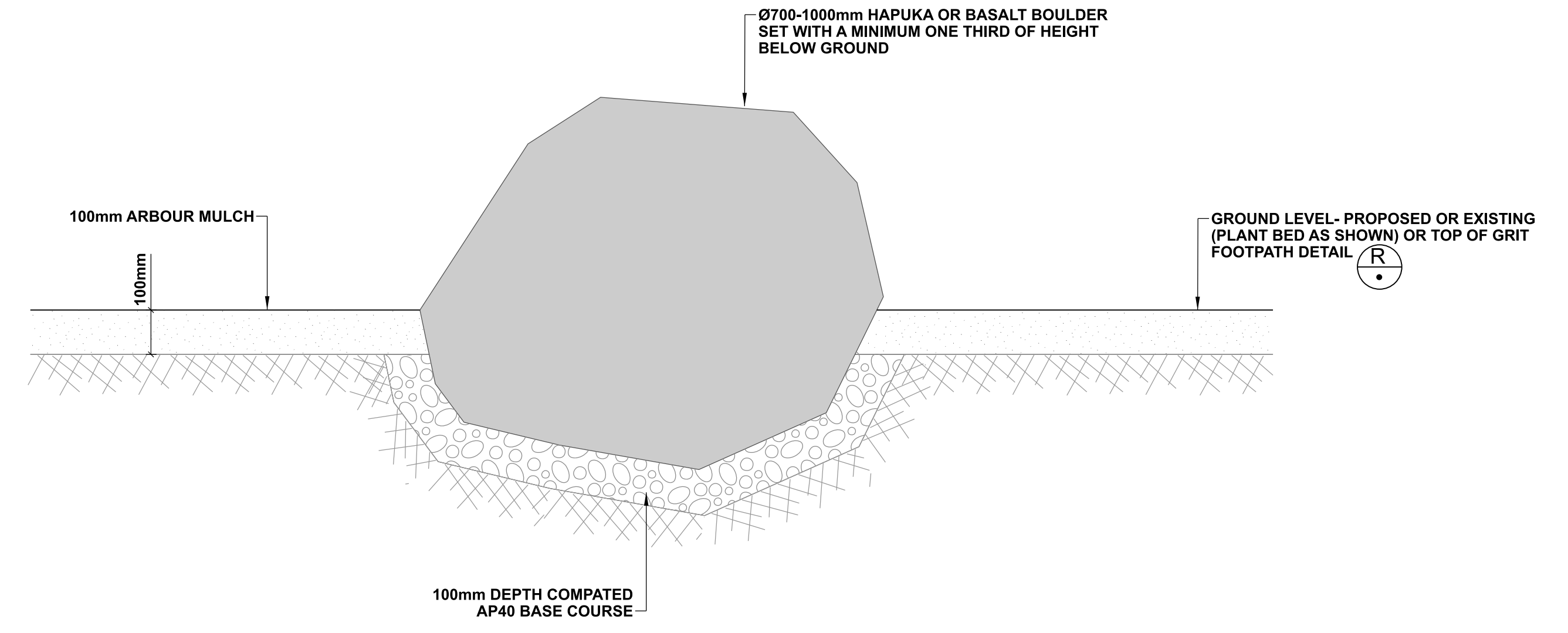
A	FOR PRICING		11/2022
ISSUE	AMENDMENTS	SIGNED	DATE

DATUM	C.D.D.	DESIGNED	NAME	SIGNED	DATE
BENCH MK.	Bench Mark	DES. REVIEW	A SMITH		08/2022
RL	Bench Mark RL	DRAWN	M PENTECOST		10/2022
SURVEY	Survey	DRW. CHECK	C JORDAAN		08/2022
SURVEY LB	Level Book	FILE LOCATION	M DUGGAN		11/2022
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SAP WBS	562/3873	Constn Date			

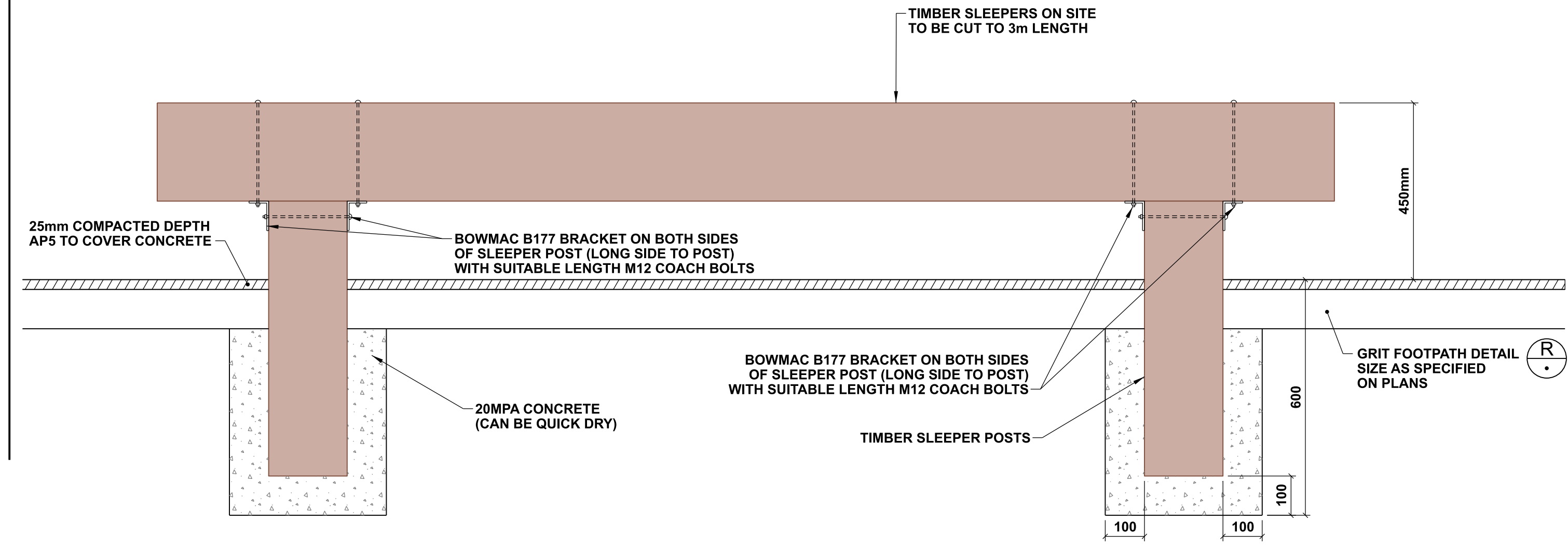
APPROVED	
FOR TENDER	
DATE	SIGNED
FOR CONSTRUCTION	
DATE	SIGNED
CONSULTANT PROJECT REF.	CONSULTANT FILE REF.



O **TYPICAL DETAIL - POST IN PLANT BED (INFORMAL SEAT)**
 1:10 @ A1
 1:20 @ A3

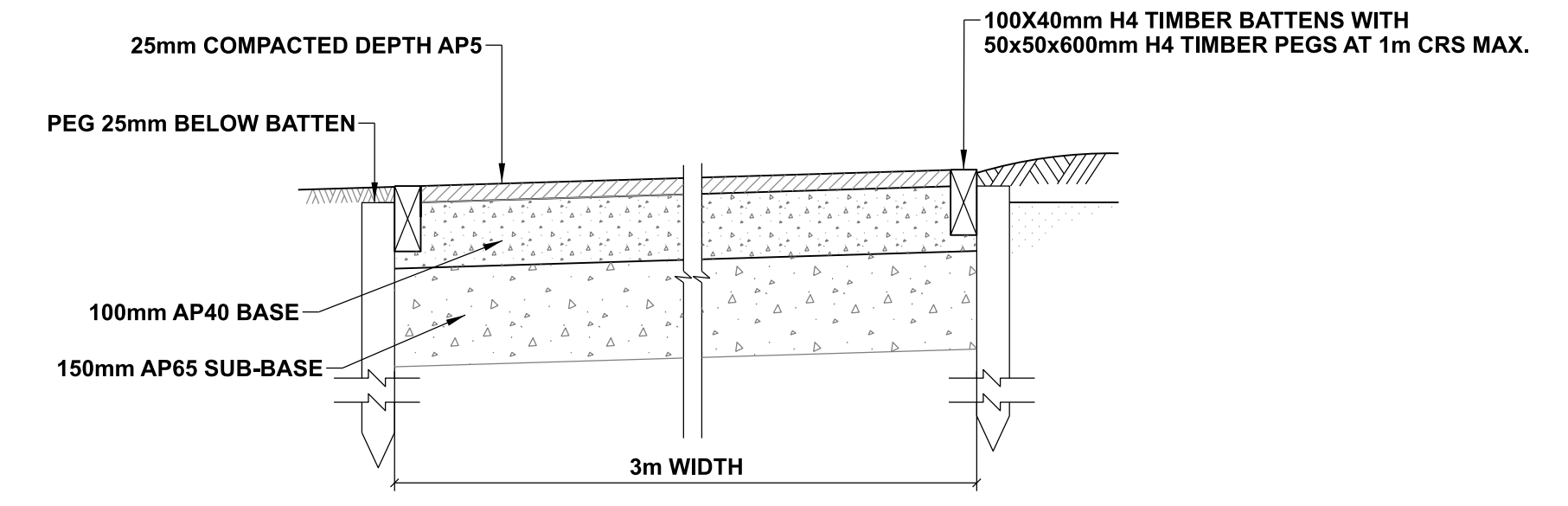


Q **TYPICAL DETAIL - ROCK IN PLANT BED (INFORMAL SEAT)**
 1:10 @ A1
 1:20 @ A3



P **SLEEPER SEATS**
 1:10 @ A1
 1:20 @ A3

NOTE: DETAIL TO BE USED IF SLEEPERS ON SITE ARE DEEMED SUITABLE FOR USE BY CCC CONTRACTS ENGINEER



R **TYPICAL DETAIL - 3m WIDE GRIT FOOTPATH**
 1:10 @ A1
 1:20 @ A3

NOTES

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3. The contractor is to check all services with the appropriate authorities prior to commencement of work.
4. Drawing is indicative only. Do not scale off drawing. All measurements to be confirmed on site prior to commencement of work.
5. Refer to sheet D02 for general notes.

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DATUM	C.D.D.	DESIGNED	NAME	SIGNED	DATE
BENCH MK.	Bench Mark	DESIGNED	A SMITH		08/2022
RL	Bench Mark RL	DES. REVIEW	M PENTECOST		10/2022
SURVEY	Survey	DRAWN	C JORDAAN		08/2022
SURVEY LB	Level Book	DRW. CHECK	M DUGGAN		11/2022

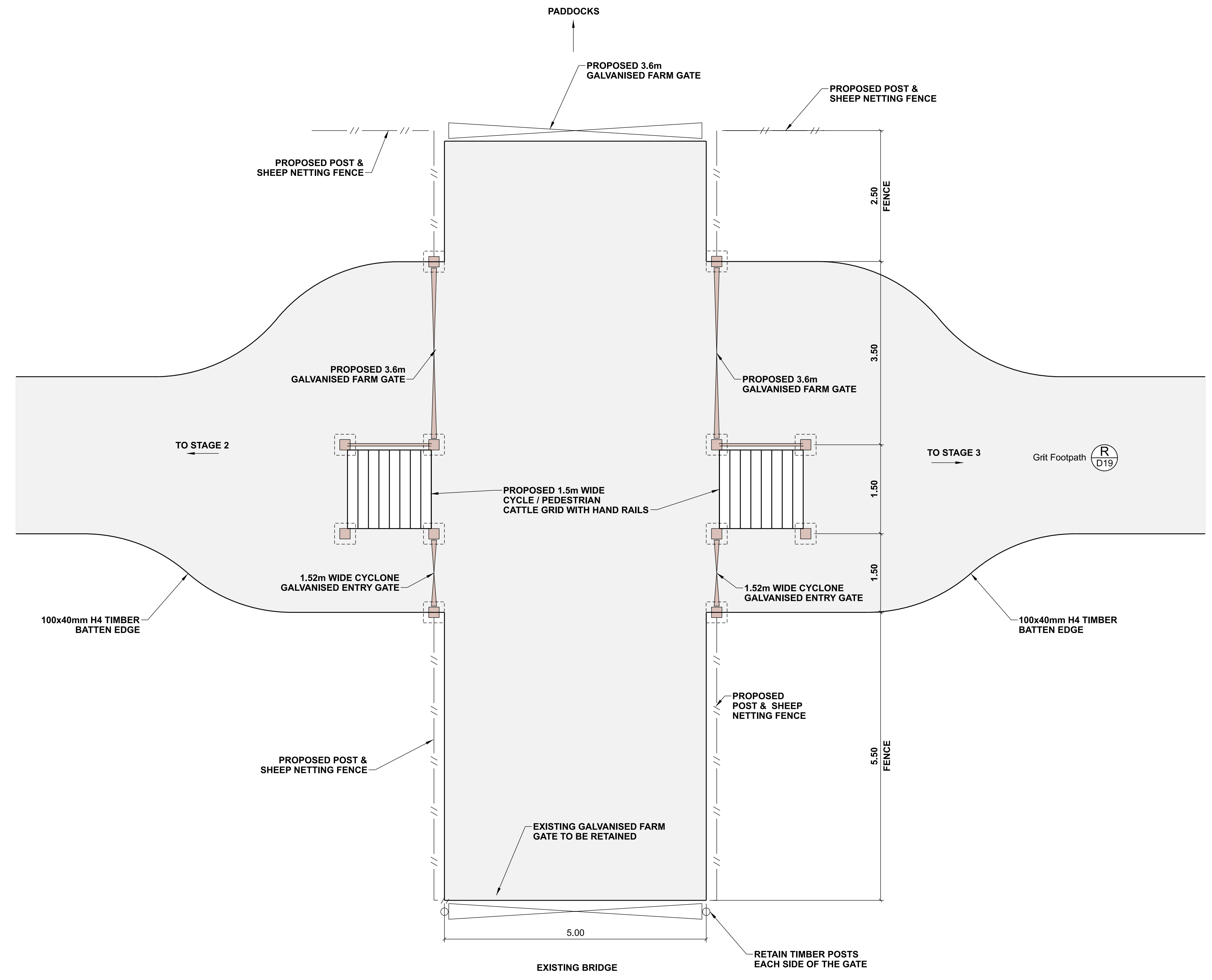
APPROVED	
FOR TENDER	FOR CONSTRUCTION
DATE	SIGNED
DATE	SIGNED

CONSULTANT	PROJECT TITLE	DRAWING TITLE
	CASHMERE STREAM REALIGNMENT	TYPICAL DETAILS:
	STAGE 3	DETAILS O-R

DOCUMENT NUMBER	ORIGINAL SHEET SIZE	SCALES
TD	A1	AS SHOWN
CAD DRAWING FILE REF.		
DD135001.DGN		
TSD PROJECT FILE NUMBER		SHEET
CP503560		D19 OF 22

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				11/2022

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1 PLAN
 1:50 @ A1
 1:100 @ A3

NOTES

1. All work is to be undertaken in accordance with the contract document and specifications, the CSS and IDS unless specified otherwise.
2. Any deviation is not to be carried out until written instruction is received from the CCC Contracts Engineer.
3. The contractor is to check all services with the appropriate authorities prior to commencement of work.
4. Drawing is indicative only. Do not scale off drawing. All measurements to be confirmed on site prior to commencement of work.
5. Refer to sheet D02 for general notes.

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DATUM	C.D.D.	DESIGNED	A SMITH	SIGNED	DATE
BENCH MK.	Bench Mark	DES. REVIEW	M PENTECOST		10/2022
RL	Bench Mark RL	DRAWN	C JORDAAN		08/2022
SURVEY	Survey	DRW. CHECK	M DUGGAN		11/2022
SURVEY LB	Level Book	FILE LOCATION			
DRAIN. REF.	16717	\$FILENAME\$			
SAP WBS	562/3873	PRINTED ON \$DATE\$	BY \$USER\$		

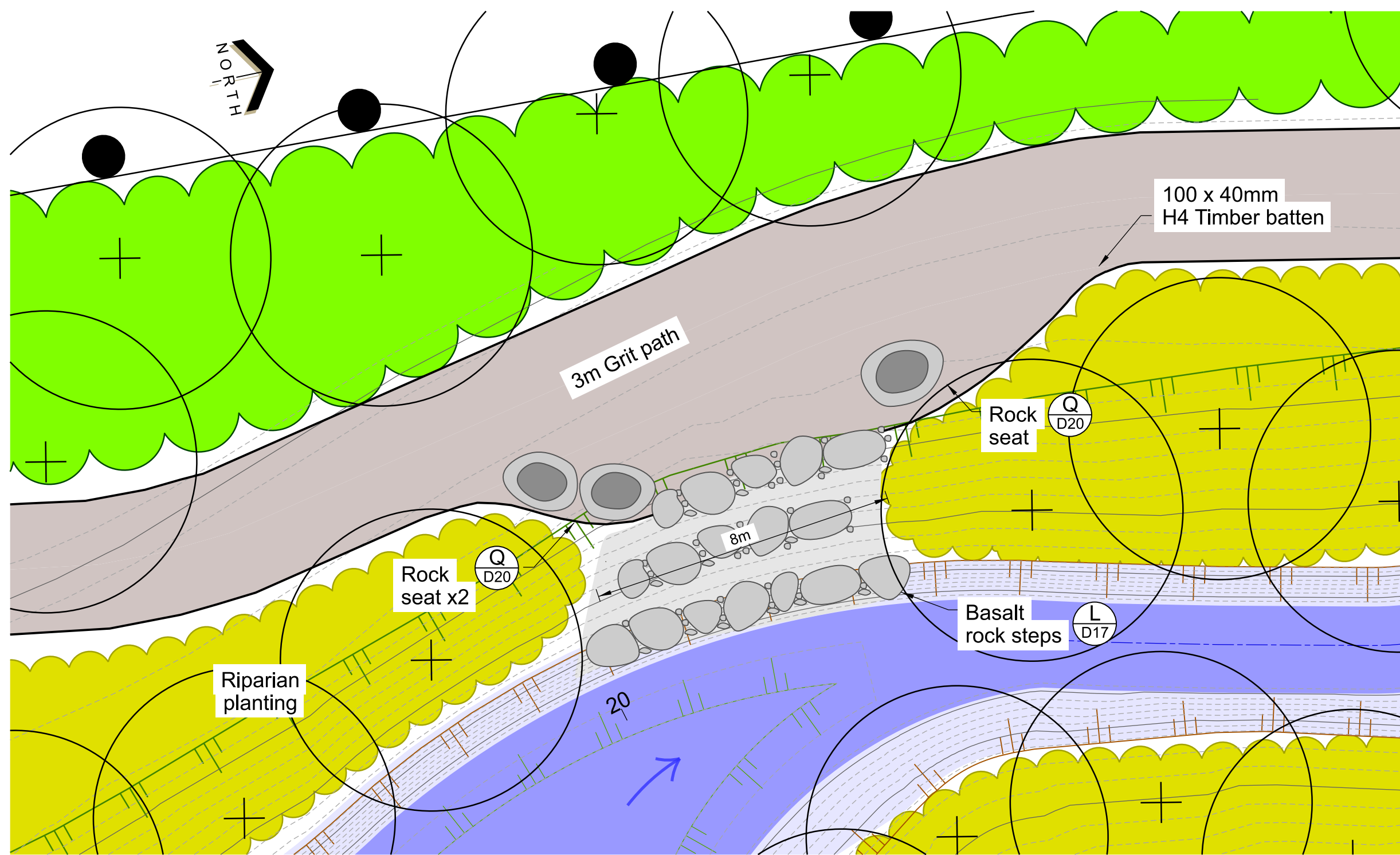
APPROVED		CONSULTANT
FOR TENDER		
DATE	SIGNED	
FOR CONSTRUCTION		
DATE	SIGNED	
Cons'n Date		CONSULTANT PROJECT REF.
		CONSULTANT FILE REF.

PROJECT TITLE
**CASHMERE STREAM REALIGNMENT
 STAGE 3**

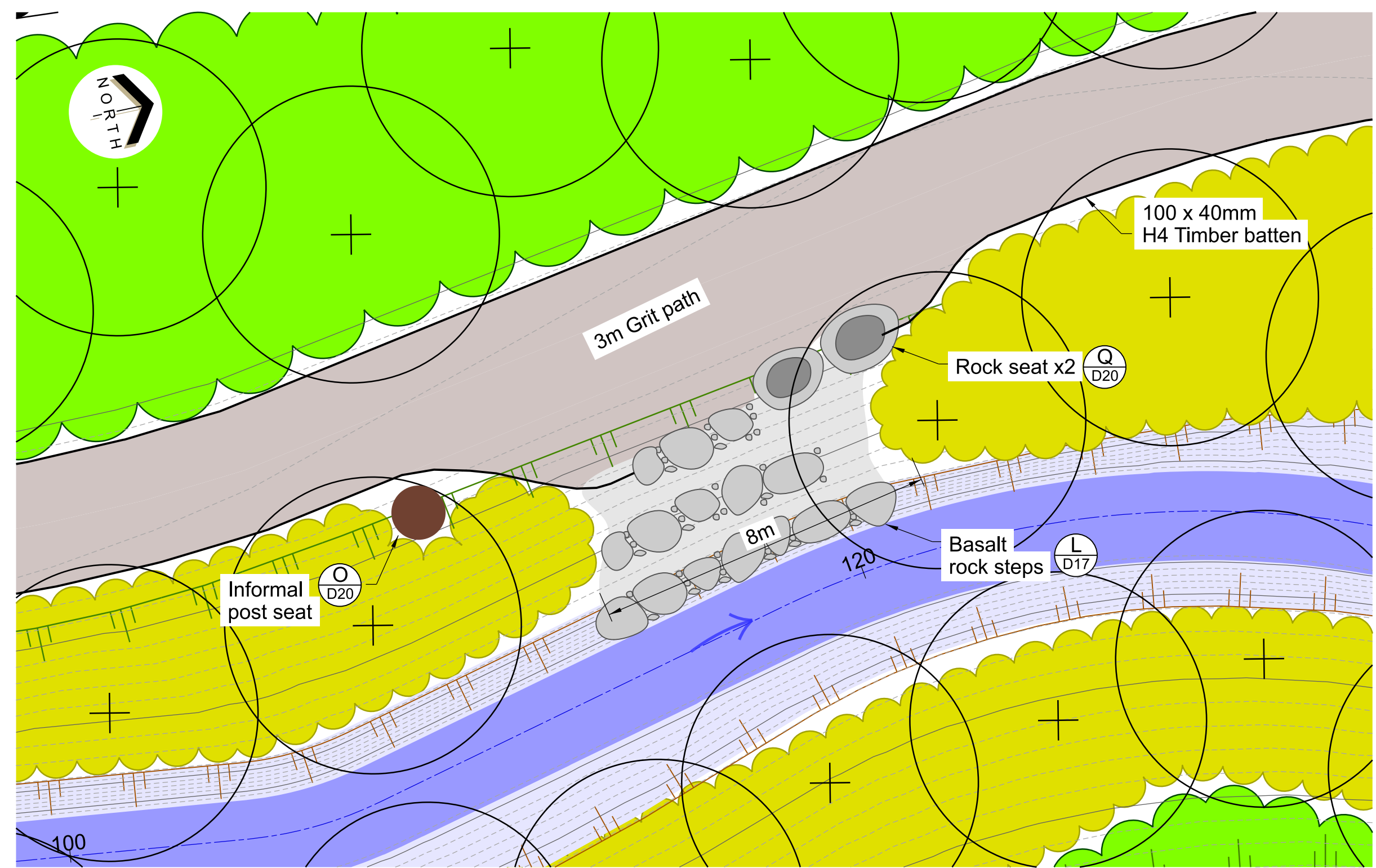
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DETAIL 1

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DOCUMENT NUMBER	TD	ORIGINAL SHEET SIZE	SCALES
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TSD PROJECT FILE NUMBER	CP503560	SHEET	D20 OF 22

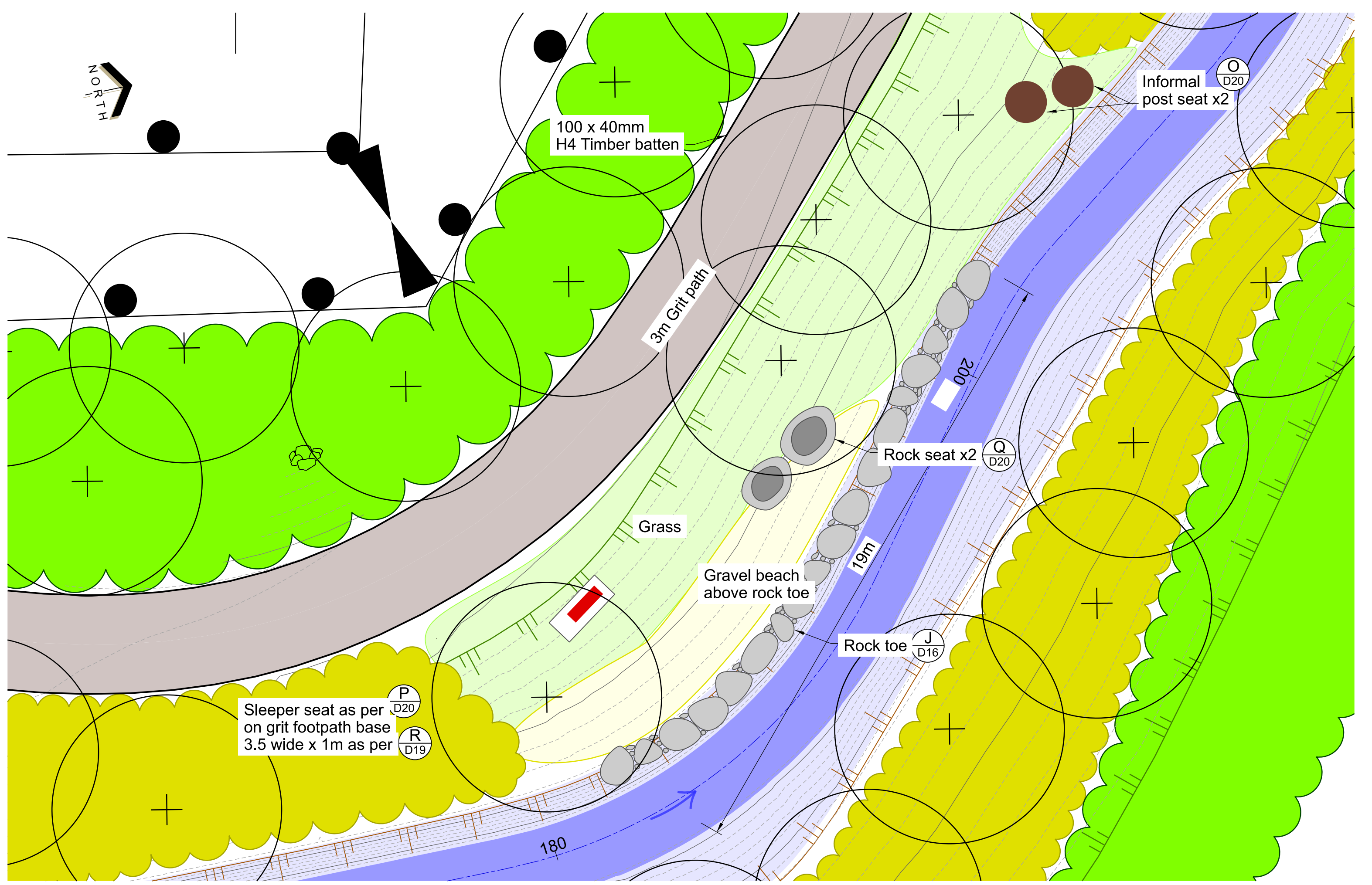
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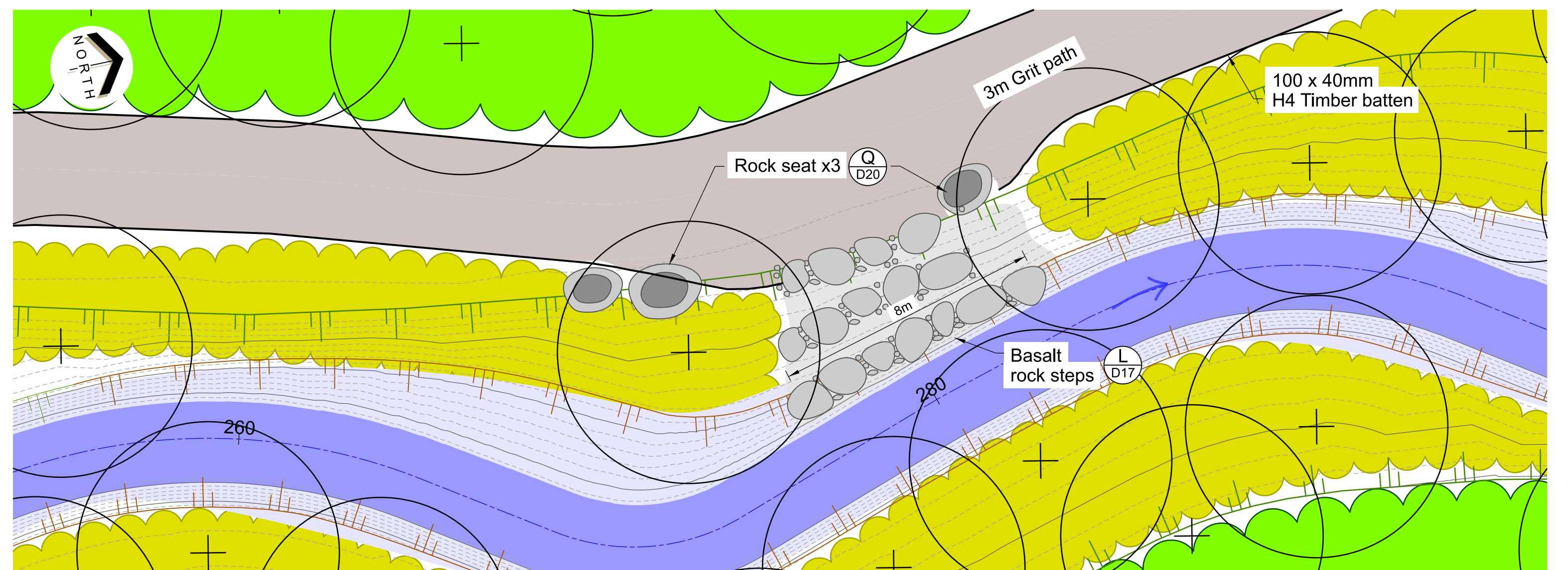
2 PLAN
SCALE 1:100 A1
1:200 A3



3 PLAN
SCALE 1:100 A1
1:200 A3



4 PLAN
SCALE 1:100 A1
1:200 A3



5 PLAN
SCALE 1:100 A1
1:200 A3

- NOTES**
- All work to be undertaken in accordance with the Contract Document and Specifications, the CSS and IDS unless specified otherwise.
 - Refer to Sheet D02 for General Notes.
 - Location of all informal seats to be confirmed on site with the CCC Contracts Engineer and Landscape Architect.

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DATUM	C.D.D.	DESIGNED	NAME	SIGNED	DATE	APPROVED		CONSULTANT
BENCH MK.	Bench Mark	DESIGN REVIEW	A SMITH		08/2022	FOR TENDER		
RL	Bench Mark RL	DES. REVIEW	M PENTECOST		10/2022	DATE	SIGNED	
SURVEY	Survey	DRAWN	G WILLIAMS		08/2022	FOR CONSTRUCTION		
SURVEY LB	Level Book	DRW. CHECK	M DUGGAN		11/2022	DATE	SIGNED	
DRAIN REF.	16717	FILE NAMES	PRINTED ON \$DATES BY \$USERNAMES		Constrn Date	CONSULTANT PROJECT REF.	CONSULTANT FILE REF.	

A	FOR PRICING	ISSUE	AMENDMENTS	SIGNED	DATE
	TD				11/2022
	CAD DRAWING FILE REF.	ORIGINAL SHEET SIZE	SCALES		
	DD135001.DGN	A1	1:100 A1 1:200 A3		
	TSD PROJECT FILE NUMBER	SHEET			
	CP503560	D21	OF 22		

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300 Original size mm

200

150

100

50

30

10

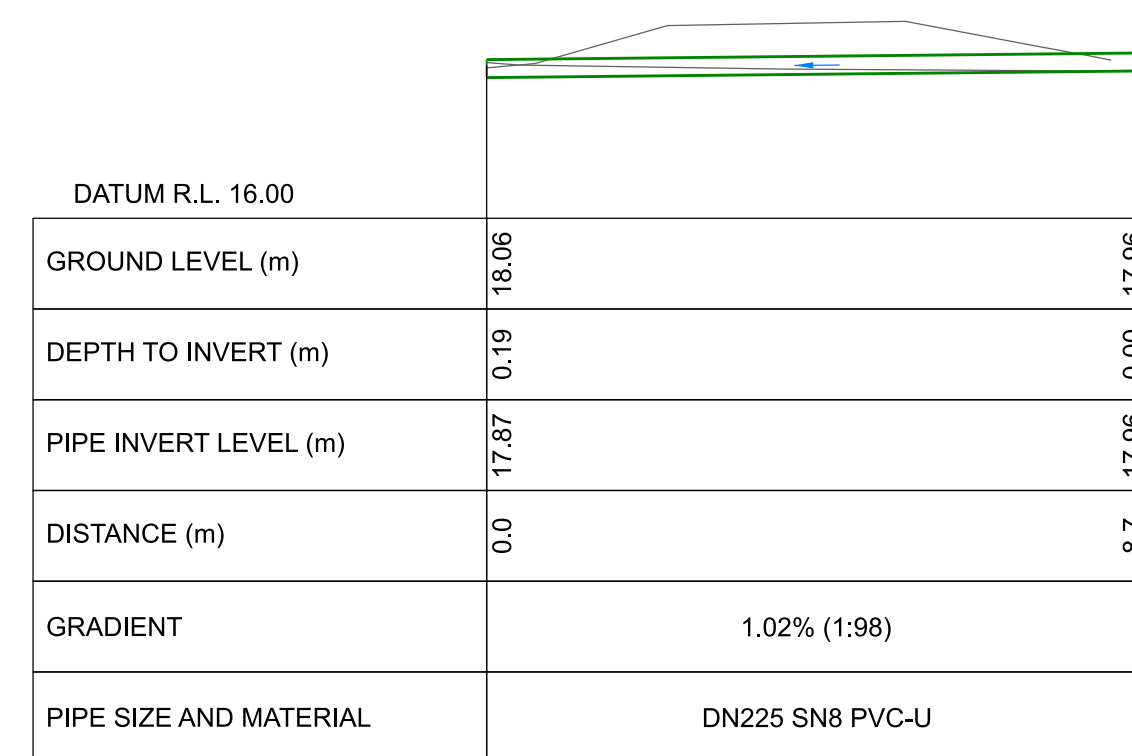
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PIPE STRUCTURES			
ID	TYPE	DETAILS	CO-ORD (CENTROID)
HW01	DN225 ROCK HEADWALL	CL = 19.090 SW1.01 INV OUT = 18.852	E: 388443.82 N: 800540.00
HW02	DN225 ROCK HEADWALL	CL = 18.960 SW1.01 INV IN = 18.722	E: 388444.02 N: 800544.79
HW09	DN225 ROCK HEADWALL	CL = 18.933 SW1.05 INV OUT = 18.571	E: 389047.42 N: 800526.82
HW10	DN225 ROCK HEADWALL	CL = 18.791 SW1.05 INV IN = 18.553	E: 389048.29 N: 800522.48
HW14	DN225 ROCK HEADWALL	CL = 18.681 SW1.03 INV IN = 18.140	E: 389141.82 N: 800595.48
HW03	DN225 ROCK HEADWALL	CL = 18.679 SW1.02 INV OUT = 18.441	E: 388587.58 N: 800541.31
HW04	DN225 ROCK HEADWALL	CL = 18.628 SW1.02 INV IN = 18.390	E: 388586.73 N: 800546.36
HW07	DN225 ROCK HEADWALL	CL = 18.536 SW1.04 INV OUT = 18.247	E: 389140.89 N: 800607.52
HW13	DN225 ROCK HEADWALL	CL = 18.510 SW1.03 INV OUT = 18.180	E: 389138.19 N: 800596.11
HW08	DN225 ROCK HEADWALL	CL = 18.461 SW1.04 INV IN = 18.224	E: 389145.51 N: 800607.46
HW15	DN225 ROCK HEADWALL	CL = 18.194 SW1.08 INV OUT = 17.956	E: 389158.87 N: 800804.94
HW16	DN225 ROCK HEADWALL	CL = 18.105 SW1.08 INV IN = 17.867	E: 389167.47 N: 800803.38

PIPE STRUCTURES			
ID	TYPE	DETAILS	CO-ORD (CENTROID)
MH18	SD303 MH	CL = 18.872 SW01.09 INV IN = 15.928	E: 389125.78 N: 800975.49
MH17	SD303 MH	CL = 18.400 SW01.09 INV OUT = 16.081	E: 389162.62 N: 800965.66
MH20	NULL STRUCTURE	CL = 17.916 SW01.10 INV IN = 17.060	E: 389150.77 N: 800960.27
MH19	NULL STRUCTURE	CL = 16.786	E: 389164.59 N: 800956.67

PIPE DATA - NETWORK SW1							
PIPE ID	TYPE	2D LENGTH	3D LENGTH	GRADE	US IL	DS IL	MAX. DEPTH
SW1.01	DN225 SN8 PVC-U	4.8	4.8	2.71%	18.85	18.72	0.5
SW1.02	DN225 SN8 PVC-U	5.1	5.1	1.00%	18.44	18.39	0.7
SW1.04	DN225 SN8 PVC-U	4.6	4.6	0.50%	18.25	18.22	0.5
SW1.05	DN225 SN8 PVC-U	4.4	4.4	0.40%	18.57	18.55	0.6
SW1.03	DN150 SN8 PVC-U	3.7	3.7	1.09%	18.18	18.14	0.6
SW1.08	DN225 SN8 PVC-U	8.7	8.7	1.02%	17.96	17.87	0.2

PIPE DATA - NETWORK SW01							
PIPE ID	TYPE	2D LENGTH	3D LENGTH	GRADE	US IL	DS IL	MAX. DEPTH
SW01.09	DN375 SN8 PVC-U	38.1	38.1	0.40%	16.08	15.93	2.9
SW01.10	DN1200 CLASS 2 RCRRJ	12.1	12.1	-0.08%	17.05	17.06	0.2



S
D04 LONGITUDINAL PROFILE 0.0 m TO 8.9 m (SW 1.08)

HORIZONTAL SCALE 1:100 @ A1
VERTICAL SCALE 1:100 @ A1

NOTES

- All work is to be undertaken in accordance with the contract document and specifications, the CSS and IDS unless specified otherwise.
- Refer to sheet D02 for general notes.

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A	FOR PRICING		11/2022
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 Christchurch City Council TECHNICAL SERVICES & DESIGN	DATUM BENCH MK: Bench Mark RL: Bench Mark RL SURVEY: Survey SURVEY LB: Level Book	C.D.D. DESIGNED: A SMITH DES. REVIEW: M PENTECOST DRAWN: C JORDAAN DRW. CHECK: M DUGGAN	NAME: A SMITH SIGNED: M PENTECOST DATE: 10/2022 Tender Date: 08/2022 11/2022	APPROVED FOR TENDER DATE: SIGNED: FOR CONSTRUCTION DATE: SIGNED:	CONSULTANT PROJECT REF.: CONSULTANT FILE REF.:	CASHMERE STREAM REALIGNMENT STAGE 3	PIPEWORK LONGITUDINAL PROFILES AND DETAIL	DOCUMENT NUMBER: TD CAD DRAWING FILE REF.: DD135001.DGN TSD PROJECT FILE NUMBER: CP503560	ORIGINAL SHEET SIZE: A1 SCALES: AS SHOWN SHEET: D22 OF 22	
	DRAIN. REF.: 16717 SAP: WBS: 562/3873	FILE NAMES: \$FILENAME\$ PRINTED ON \$DATES\$ BY \$USERNAMES\$	FILE LOCATION: DATE: SIGNED:	DATE: SIGNED:	DATE: SIGNED:	CONSULTANT PROJECT REF.: CONSULTANT FILE REF.:	PROJECT TITLE:	DRAWING TITLE:	DOCUMENT NUMBER: TD CAD DRAWING FILE REF.: DD135001.DGN TSD PROJECT FILE NUMBER: CP503560	ORIGINAL SHEET SIZE: A1 SCALES: AS SHOWN SHEET: D22 OF 22