SSD7764 MASTERPLAN MOD 1

HDBP STAGE 2

COWPASTURE ROAD, WETHERILL PARK NSW

DRAWING LIST:

DRAWING NO.	DRAWING TITLE
C011492.17-DA 10	DRAWING LIST & GENERAL NOTES
C011492.17-DA 20	EROSION & SEDIMENT CONTROL PLAN
C011492.17-DA 25	EROSION & SEDIMENT CONTROL DETAILS
C011492.17-DA 30	BULK EARTHWORKS PLAN
C011492.17-DA 31	BULK EARTHWORKS PLAN-COMPARISON TO APPROVED LEVELS
C011492.17-DA 35	BULK EARTHWORKS SECTIONS - SHEET 1
C011492.17-DA 36	BULK EARTHWORKS SECTIONS - SHEET 2
C011492.17-DA 37	BULK EARTHWORKS SECTIONS - SHEET 3
C011492.17-DA 41	CIVIL WORKS PLAN - SHEET 1
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C011492.17-DA 43	NORTHERN BASIN PLAN
C011492.17-DA 44	WESTERN BASIN PLAN
C011492.17-DA 45	BIO-RETENTION/OSD BASIN PLAN
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C011492.17-DA 47	STORMWATER DETAILS - SHEET 2
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C011492.17-DA 50	ACCESS ROAD DETAILS
C011492.17-DA 51	ACCESS TRACK AND CREEK DETAILS
C011492.17-DA 52	ROAD ALIGNMENT PLAN AND LONG SECTIONS
C011492.17-DA 61	RETAINING WALL PLAN - SHEET 1
C011492.17-DA 62	RETAINING WALL PLAN - SHEET 2
C011492.17-DA 63	RETAINING WALL PLAN - SHEET 3
C011492.17-DA 64	RETAINING WALL PLAN - SHEET 4
C011492.17-DA 65	RETAINING WALL DETAILS
C011492.17-DA70	INTERSECTION FUNCTIONAL LAYOUT PLAN

GENERAL NOTES:

G1 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

G2 ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT AND CURRENT STANDARDS AUSTRALIA CODES AND WITH THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION.

G3 ALL DIMENSIONS SHOWN SHALL BE VERIFIED BY THE BUILDER ON SITE.
ENGINEER'S DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS.
ENGINEER'S DRAWINGS ISSUED IN ANY ELECTRONIC FORMAT MUST NOT BE USED FOR DIMENSIONAL SETOUT.
REFER TO THE ARCHITECT'S DRAWINGS FOR ALL DIMENSIONAL SETOUT INFORMATION.

G4 DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED. TEMPORARY BRACING SHALL BE PROVIDED BY THE BUILDER TO KEEP THE WORKS AND EXCAVATIONS STABLE AT ALL TIMES.

G5 UNLESS NOTED OTHERWISE ALL LEVELS ARE IN METRES AND ALL DIMENSIONS ARE IN MILLIMETRES.

G6 ALL WORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH ACCEPTABLE SAFETY STANDARDS & APPROPRIATE SAFETY SIGNS SHALL BE INSTALLED AT ALL TIMES DURING THE PROGRESS OF THE JOB.

ELECTRONIC INFORMATION NOTES:

1. THE ISSUED DRAWINGS IN HARD COPY OR PDF FORMAT TAKE PRECEDENCE OVER ANY ELECTRONICALLY ISSUED INFORMATION, LAYOUTS OR DESIGN MODELS.
2. THE CONTRACTOR'S DIRECT AMENDMENT OR MANIPULATION OF THE DATA OR INFORMATION THAT MIGHT BE CONTAINED WITHIN AN ENGINEER-SUPPLIED DIGITAL TERRAIN MODEL AND ITS SUBSEQUENT USE TO UNDERTAKE THE WORKS WILL BE SOLELY AT THE DISCRETION OF AND THE RISK OF THE CONTRACTOR.
3. THE CONTRACTOR IS REQUIRED TO HIGHLIGHT ANY DISCREPANCIES BETWEEN THE DIGITAL TERRAIN MODEL AND INFORMATION PROVIDED IN THE CONTRACT AND/OR DRAWINGS AND IS REQUIRED TO SEEK CLARIFICATION FROM THE SUPERINTENDENT.
4. THE ENGINEER WILL NOT BE LIABLE OR RESPONSIBLE FOR THE POSSIBLE ON-GOING NEED TO UPDATE THE DIGITAL TERRAIN MODEL, SHOULD THERE BE ANY AMENDMENTS OR CHANGES TO THE DRAWINGS OR CONTRACT INITIATED BY THE CONTRACTOR.

SURVEY NOTE:

EXISTING SITE LEVELS AND DETAILS BASED ON A PLAN OF SURVEY 160136A_02 BY MONTEATH & POWYS SURVEYORS 12.10.16 COORDINATES BASED ON MGA COORDINATES AS NOMINATED ON SURVEY DRAWING.

SAFETY NOTE:
EARTHWORKS TO SOUTHERN EXTENT OF SITE ARE LOCATED WITHIN AN ELECTRICAL EASEMENT & ASSOCIATED HIGH VOLTAGE TRANSMISSION LINES.
ALL WORKS WITHIN THIS ZONE TO BE PERFORMED IN ACCORDANCE WITH THE RELEVANT SERVICE PROVIDERS GUIDELINES. THE CONTRACTOR IS TO ENSURE ALL NECESSARY OH&S MEASURES ARE ALLOWED FOR AND IMPLEMENTED DURING WORKS IN THIS ZONE



LOCALITY PLAN
NOT TO SCALE

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
RETAINING WALL PLANS ADDED	25.06.20	C
DRAWING ADDED	23.06.20	B
ISSUED FOR DEVELOPMENT APPLICATION	11.12.19	A

ARCHITECT: LEFFLER SIMES ARCHITECTS

CLIENT: Charter Hall

PROJECT: SSD7764 MASTERPLAN MOD1
HDBP STAGE 2
COWPASTURE ROAD, WETHERILL PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF.
M.C	M.C	NOV 19	M.W	A0	AS SHOWN	C011492.17- DA10

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DRAWING TITLE: DRAWING LIST & GENERAL NOTES

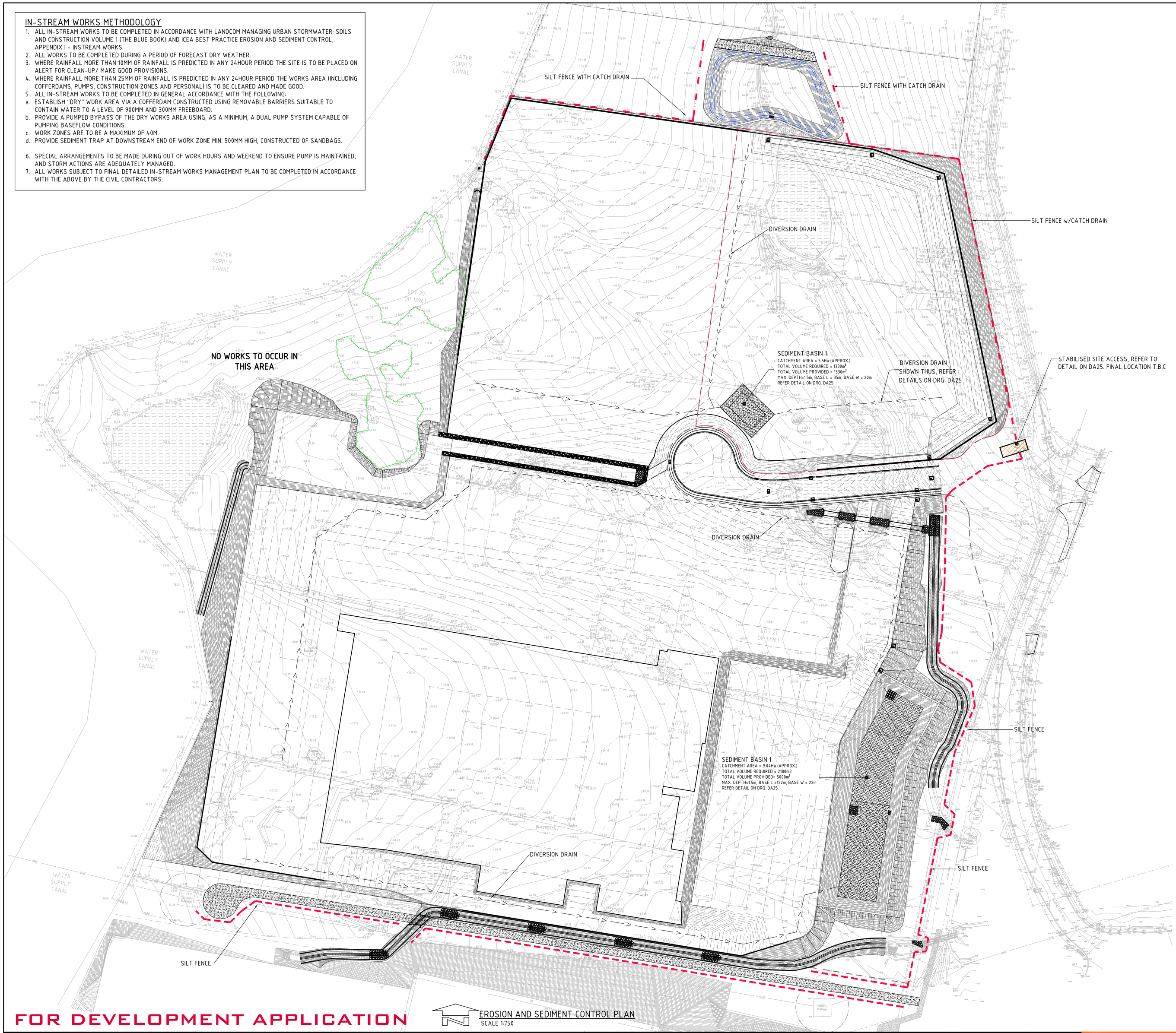
DRAWING No: C011492.17- DA10 ISSUE: C

IN-STREAM WORKS METHODOLOGY

1. ALL IN-STREAM WORKS TO BE COMPLETED IN ACCORDANCE WITH LANDCOM MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION VOLUME 1 (THE BLUE BOOK) AND ICEA BEST PRACTICE EROSION AND SEDIMENT CONTROL, APPENDIX I – INSTREAM WORKS.
2. ALL WORKS TO BE COMPLETED DURING A PERIOD OF FORECAST DRY WEATHER.
3. WHERE RAINFALL MORE THAN 10MM OF RAINFALL IS PREDICTED IN ANY 24HOUR PERIOD THE SITE IS TO BE PLACED ON ALERT FOR CLEAN-UP/ MAKE GOOD PROVISIONS.
4. WHERE RAINFALL MORE THAN 25MM OF RAINFALL IS PREDICTED IN ANY 24HOUR PERIOD THE WORKS AREA (INCLUDING COFFERDAMS, PUMPS, CONSTRUCTION ZONES AND PERSONAL) IS TO BE CLEARED AND MADE GOOD.
5. ALL IN-STREAM WORKS TO BE COMPLETED IN GENERAL ACCORDANCE WITH THE FOLLOWING:

a. ESTABLISH "DRY" WORK AREA VIA A COFFERDAM CONSTRUCTED USING REMOVABLE BARRIERS SUITABLE TO CONTAIN WATER TO A LEVEL OF 900MM AND 300MM FREEBOARD.
b. PROVIDE A PUMPED BYPASS OF THE DRY WORKS AREA USING, AS A MINIMUM, A DUAL PUMP SYSTEM CAPABLE OF PUMPING BASEFLOW CONDITIONS.
c. WORK ZONES ARE TO BE A MAXIMUM OF 40M.
d. PROVIDE SEDIMENT TRAP AT DOWNSTREAM END OF WORK ZONE MIN. 500MM HIGH, CONSTRUCTED OF SANDBAGS.

6. SPECIAL ARRANGEMENTS TO BE MADE DURING OUT OF WORK HOURS AND WEEKEND TO ENSURE PUMP IS MAINTAINED, AND STORM ACTIONC ARE ADEQUATELY MANAGED.
7. ALL WORKS SUBJECT TO FINAL DETAILED IN-STREAM WORKS MANAGEMENT PLAN TO BE COMPLETED IN ACCORDANCE WITH THE ABOVE BY THE CIVIL CONTRACTORS.



EROSION CONTROL NOTES

ALL CONTROL WORK INCLUDING DIVERSION BANKS AND CATCH DRAINS, V-DRAINS AND SILT FENCES SHALL BE COMPLETED DIRECTLY FOLLOWING THE COMPLETION OF THE EARTHWORKS.

1. SILT FENCES AND SILT FENCE RETURNS SHALL BE ERECTED CONVEX TO THE CONTOUR TO POND WATER.
2. HAY BALE BARRIERS AND GEOFABRIC FENCES ARE TO BE CONSTRUCTED TO TOE OF BATTER, PRIOR TO COMMENCEMENT OF EARTHWORKS, IMMEDIATELY AFTER CLEARING OF VEGETATION AND BEFORE REMOVAL OF TOP SOIL.
3. ALL TEMPORARY EARTH BERMS, DIVERSION AND SILT DAM EMBANKMENTS ARE TO BE MACHINE COMPACTED, SEEDED AND MULCHED FOR TEMPORARY VEGETATION COVER AS SOON AS THEY HAVE BEEN FORMED.
4. CLEAR WATER IS TO BE DIVERTED AWAY FROM DISTURBED GROUND AND INTO THE DRAINAGE SYSTEM.
5. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND PROVIDING ON GOING ADJUSTMENT TO EROSION CONTROL MEASURES AS REQUIRED DURING CONSTRUCTION.
6. ALL SEDIMENT TRAPPING STRUCTURES AND DEVICES ARE TO BE INSPECTED AFTER STORMS FOR STRUCTURAL DAMAGE OR CLOGGING, TRAPPED MATERIAL IS TO BE REMOVED TO A SAFE, APPROVED LOCATION.
7. ALL FINAL EROSION PREVENTION MEASURES INCLUDING THE ESTABLISHMENT OF GRASSING ARE TO BE MAINTAINED UNTIL THE END OF THE DEFECTS LIABILITY PERIOD.
8. ALL EARTHWORKS AREAS SHALL BE ROLLED ON A REGULAR BASIS TO SEAL THE EARTHWORKS.
9. ALL FILL AREAS ARE TO BE LEFT WITH A BUND AT THE TOP OF THE SLOPE AT THE END OF EACH DAYS EARTHWORKS. THE HEIGHT OF THE BUND SHALL BE A MINIMUM OF 200MM.
10. ALL CUT AND FILL SLOPES ARE TO BE SEEDED AND HYDROMULCHED WITHIN 10 DAYS OF COMPLETION OF FORMATION.
11. AFTER REVEGETATION OF THE SITE IS COMPLETE AND THE SITE IS STABLE IN THE OPINION OF A SUITABLY QUALIFIED PERSON ALL TEMPORARY WORK SUCH AS SILT FENCE, DIVERSION DRAINS ETC SHALL BE REMOVED.
12. ALL TOPSOIL STOCKPILES ARE TO BE SUITABLY COVERED TO THE SATISFACTION OF THE SITE MANAGER TO PREVENT WIND AND WATER EROSION.
13. ANY AREA THAT IS NOT APPROVED BY THE CONTRACT ADMINISTRATOR FOR CLEARING OR DISTURBANCE BY THE CONTRACTOR'S ACTIVITIES SHALL BE CLEARLY MARKED AND SIGN POSTED, FENCED OFF OR OTHERWISE APPROPRIATELY PROTECTED AGAINST ANY SUCH DISTURBANCE.
14. ALL STOCKPILE SITES SHALL BE SITUATED IN AREAS APPROVED FOR SUCH USE BY THE SITE MANAGER. A 6m BUFFER ZONE SHALL EXIST BETWEEN STOCKPILE SITES AND ANY STREAM OR FLOW PATH. ALL STOCKPILES SHALL BE ADEQUATELY PROTECTED FROM EROSION AND CONTAMINATION OF THE SURROUNDING AREA BY USE OF THE MEASURES APPROVED IN THE EROSION AND SEDIMENTATION CONTROL PLAN.
15. ACCESS AND EXIT AREAS SHALL INCLUDE SHAKE-DOWN OR OTHER METHODS APPROVED BY THE SITE MANAGER FOR THE REMOVAL OF SOIL MATERIALS FORM MOTOR VEHICLES.
16. THE CONTRACTOR IS TO ENSURE RUNOFF FROM ALL AREAS WHERE THE NATURAL SURFACE IS DISTURBED BY CONSTRUCTION, INCLUDING ACCESS ROADS, DEPOT AND STOCKPILE SITES, SHALL BE FREE OF POLLUTANTS BEFORE IT IS EITHER DISPERSED TO STABLE AREAS OR DIRECTED TO NATURAL WATERCOURSES.
17. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SLOPES, CROWNS AND DRAINS ON ALL EXCAVATIONS AND EMBANKMENTS TO ENSURE SATISFACTORY DRAINAGE AT ALL TIMES WATER SHALL NOT BE ALLOWED TO POND ON THE WORKS UNLESS SUCH PONDING IS PART OF AN APPROVED ESCP / SWMP.

SEDIMENTATION BASIN NOTE:

FOR SEDIMENT & EROSION CONTROL DETAILS REFER TO DRAWING C0114 92.17-DA25.

SEDIMENTATION BASIN SIZING BASED ON RECOMMENDATIONS OF 'SOILS AND CONSTRUCTION, MANAGING URBAN STORMWATER-THE BLUE BOOK'.
CAPACITY BASED UPON 5 DAY RAINFALL DEPTH AT 85th PERCENTILE INTENSITY (32.2mm).

APPROXIMATE AREA OF DISTURBED SITE = 19.3 Ha

SEDIMENTATION BASINS TO COLLECT RUN-OFF IN EXTREME RAINFALL EVENTS. COLLECTED RUN-OFF TO BE ASSESSED BY A QUALIFIED LABORATORY FOR DOUSING RATES OF ALUM OR GYPSUM TO ENSURE COAGULATION OF SEDIMENTS PRIOR TO WATER BEING DISCHARGED TO COUNCIL STORMWATER SYSTEM.

EACH BASIN IS TO HAVE A MARKER PLACED AS PER THE DETAIL TO INDICATE WHEN SEDIMENT IS TO BE REMOVED. REMOVED SEDIMENT IS TO BE CLASSED AND DEWATERED PRIOR TO REMOVAL FROM SITE.

ALLOWANCE TO BE MADE DURING BENCHING OF SITE TO ENSURE RUN-OFF IS DIRECTED TO SEDIMENTATION BASINS.

NOTES:
1. ASSUME TYPE D SOIL (CLAY/SILTY CLAY)
2. ASSUME GROUP D SOIL (HIGH PLASTICITY AND SHRINK/SWELL PROPERTIES)

SOIL TYPE ASSESSED FROM GEOTECHNICAL REPORT PROVIDED BY PSM TITLED PSM 1869-009R DATED 10 MAY 2012.

LEGEND:

PROVIDE 1m RETURNS TO SILT FENCE AT 30m MAX. INTERVALS.
TYPICAL (N.S.O.P.)

- DENOTES DIRECTION OF OVERLAND FLOW
- DENOTES SILT FENCE WITH CATCH DRAIN
- DENOTES SILT FENCE ONLY
- DENOTES DIVERSION DRAIN
- SGGP, SINGLE GRATED GULLY PIT
- SJP, SEALED JUNCTION PIT
- KIP, KERB INLET PIT
- 50.00 – FINISHED PAVEMENT CONTOUR (MAJOR) 1.00m INTERVALS
- 50.25 – FINISHED PAVEMENT CONTOUR (MINOR) 0.25m INTERVALS

FOR DEVELOPMENT APPLICATION

EROSION AND SEDIMENT CONTROL PLAN
SCALE 1:750

7.5m 0 15 30 45 60 75m
SCALE 1:750 AT A0 SIZE PLOT

AMENDMENTS	DATE	ISSUE
REVISED FOR SITE CHANGES	28.02.20	C
REVISED FOR SITE CHANGES	05.02.20	B
ISSUED FOR DEVELOPMENT APPLICATION	11.12.19	A

ARCHITECT: LEFFLER SIMES ARCHITECTS

CLIENT: Charter Hall

PROJECT: SSD7764 MASTERPLAN MOD1
HDBP STAGE 2
COWPASTURE ROAD, WETHERILL PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co114 92.17-DA20

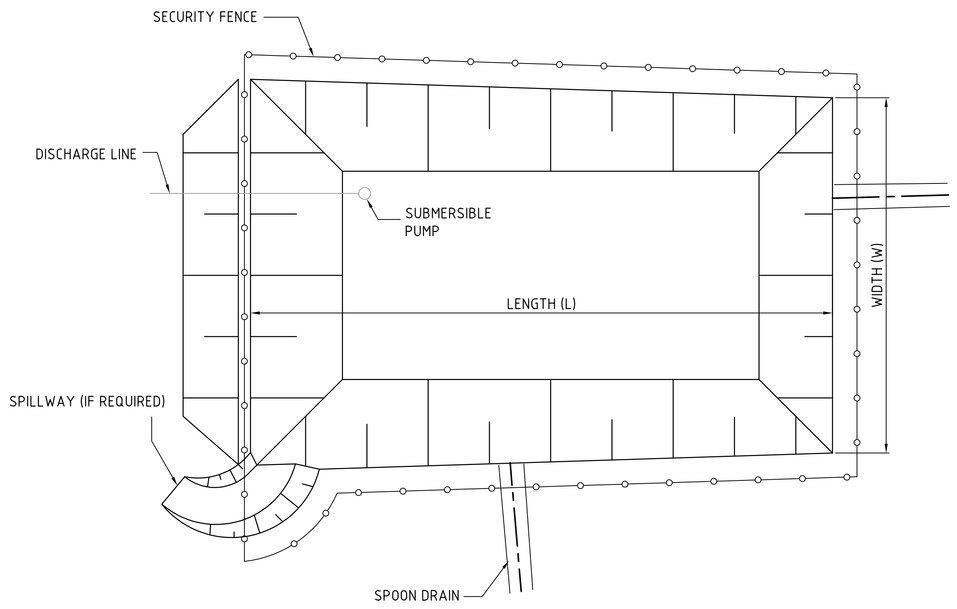
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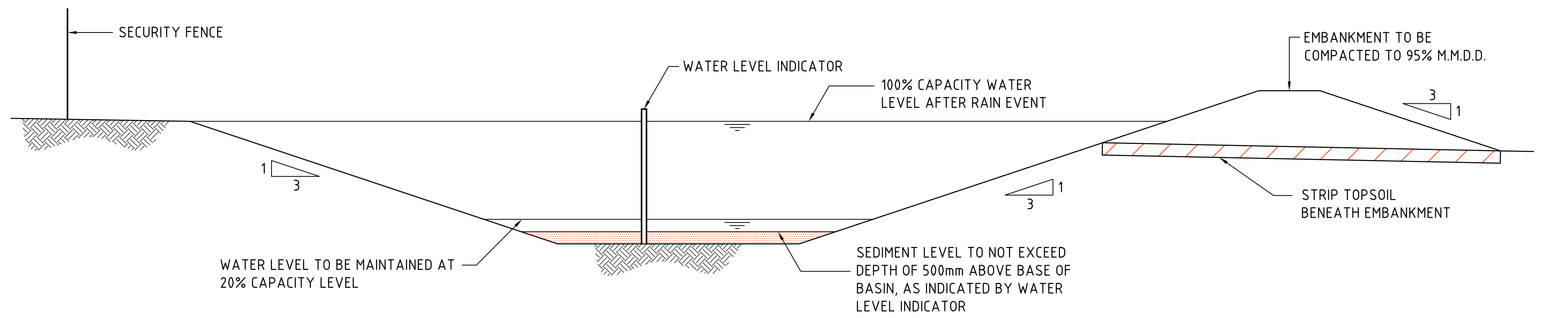
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DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLAN

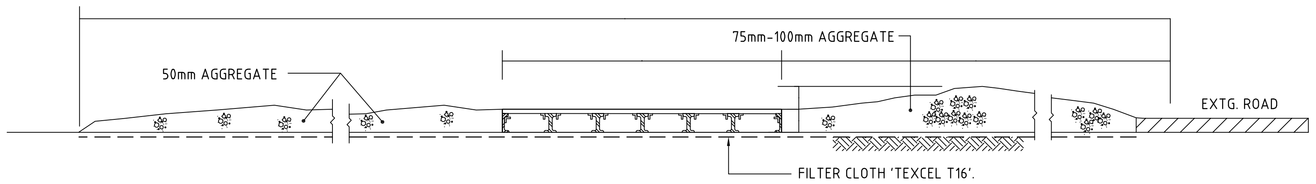
DRAWING No: Co114 92.17-DA20 ISSUE: C



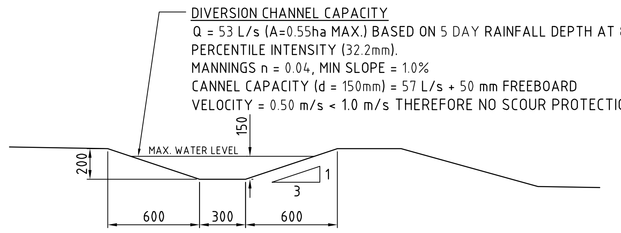
TYPICAL SEDIMENT CONTROL POND PLAN
SCALE 1:250



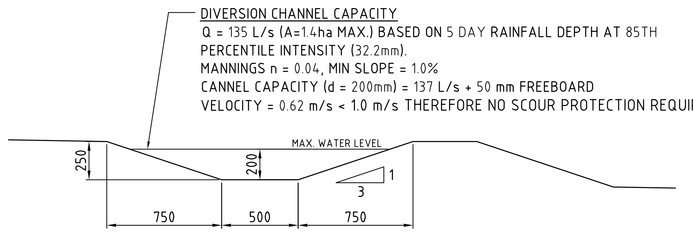
TYPICAL SEDIMENT CONTROL BASIN SECTION
SCALE 1:50



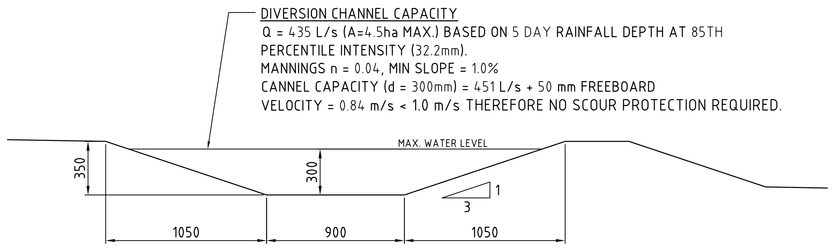
SECTION 1:20 (1 / -) : STABILISED CONSTRUCTION ENTRANCE 'TRUCK SHAKER'



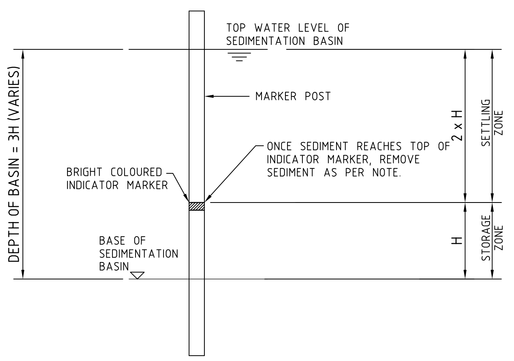
1500 WIDE DIVERSION DRAIN SECTION
SCALE 1:20



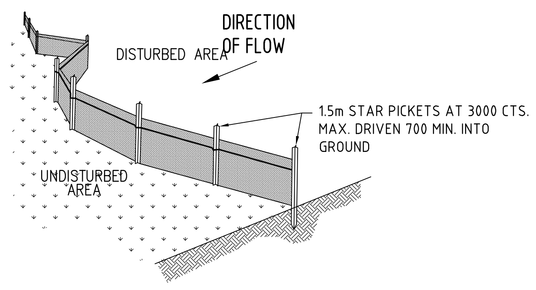
2000 WIDE DIVERSION DRAIN SECTION
SCALE 1:20



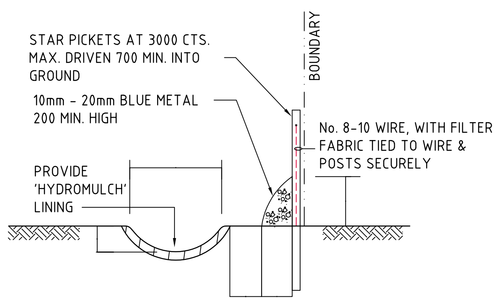
3000 WIDE DIVERSION DRAIN SECTION
SCALE 1:20



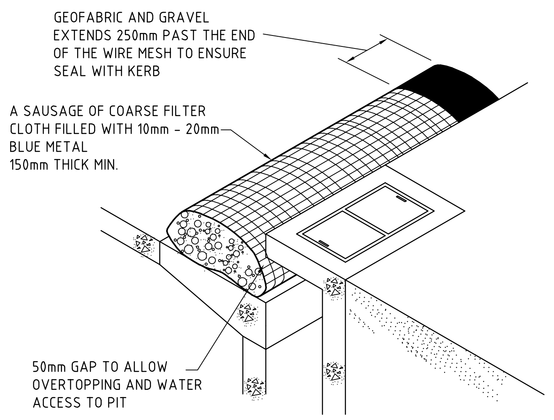
SEDIMENT STORAGE MARKER
SCALE 1:20



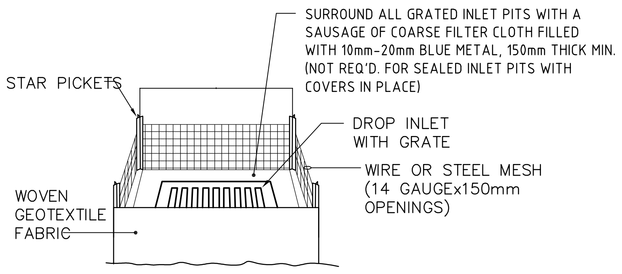
TYPICAL SILT FENCE DETAIL
N.T.S.
PROVIDE 1m RETURNS AT 30m INTERVALS.
TYPICAL



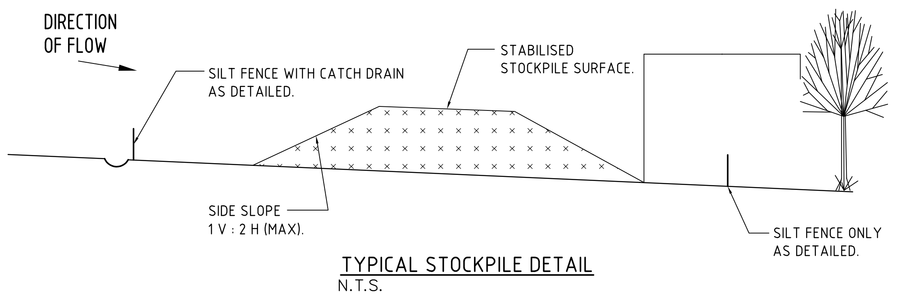
TYPICAL OPEN DRAIN & SILT FENCE
SCALE 1:20



KERB INLET PIT CONTROL
N.T.S



GRATED INLET PIT FILTER DETAIL
N.T.S



TYPICAL STOCKPILE DETAIL
N.T.S.

STOCKPILE NOTES

1. PLACE ALL STOCKPILES IN LOCATIONS MORE THAN 5m FROM EXISTING VEGETATION, ROADS & HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT ELONGATED MOUNDS. SIDE SLOPE TO BE 1 V: 2 H MAX.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2m IN HEIGHT.
4. WHERE STOCKPILES ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, SUITABLY STABILISE OR COVER THE STOCKPILES.
5. CONSTRUCT SILT FENCE WITH CATCH DRAIN ON UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES & SILT FENCE ONLY 1 TO 2m DOWNSLOPE AS SHOWN.

NOTES:

ALL EROSION & SEDIMENT CONTROL MEASURES TO BE INSPECTED & MAINTAINED DAILY BY SITE MANAGER.

MINIMISE DISTURBED AREAS.

ROADS & FOOTPATHS TO BE SWEPT DAILY.

1.2m TURF TO BE PLACED BEHIND KERBS.

DUST MINISIMISATION CONTROL BY WATERING TO BE IMPLEMENTED BY SITE MANAGER AS REQUIRED OR AS DIRECTED BY THE EPA.

NOTE : ADOPT ABOVE DETAILS AROUND ALL PITS WITHIN AREA ENCOMPASSED BY SILT FENCE & TO PITS ON THE ROAD ADJACENT TO SITE BOUNDARY.

200mm 0 500 1000 1500 2000mm
1:20 AT A0 SIZE PLOT
500mm 0 1 2 3 4 5m
1:50 AT A0 SIZE PLOT
2m 0 5 10 15 20 25m
1:250 AT A0 SIZE PLOT

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
ISSUED FOR DEVELOPMENT APPLICATION	11.12.19	A

ARCHITECT: LEFFLER SIMES ARCHITECTS

CLIENT: Charter Hall

PROJECT: SSD7764 MASTERPLAN MOD1
HDBP STAGE 2
COWPASTURE ROAD, WETHERILL PARK, NSW

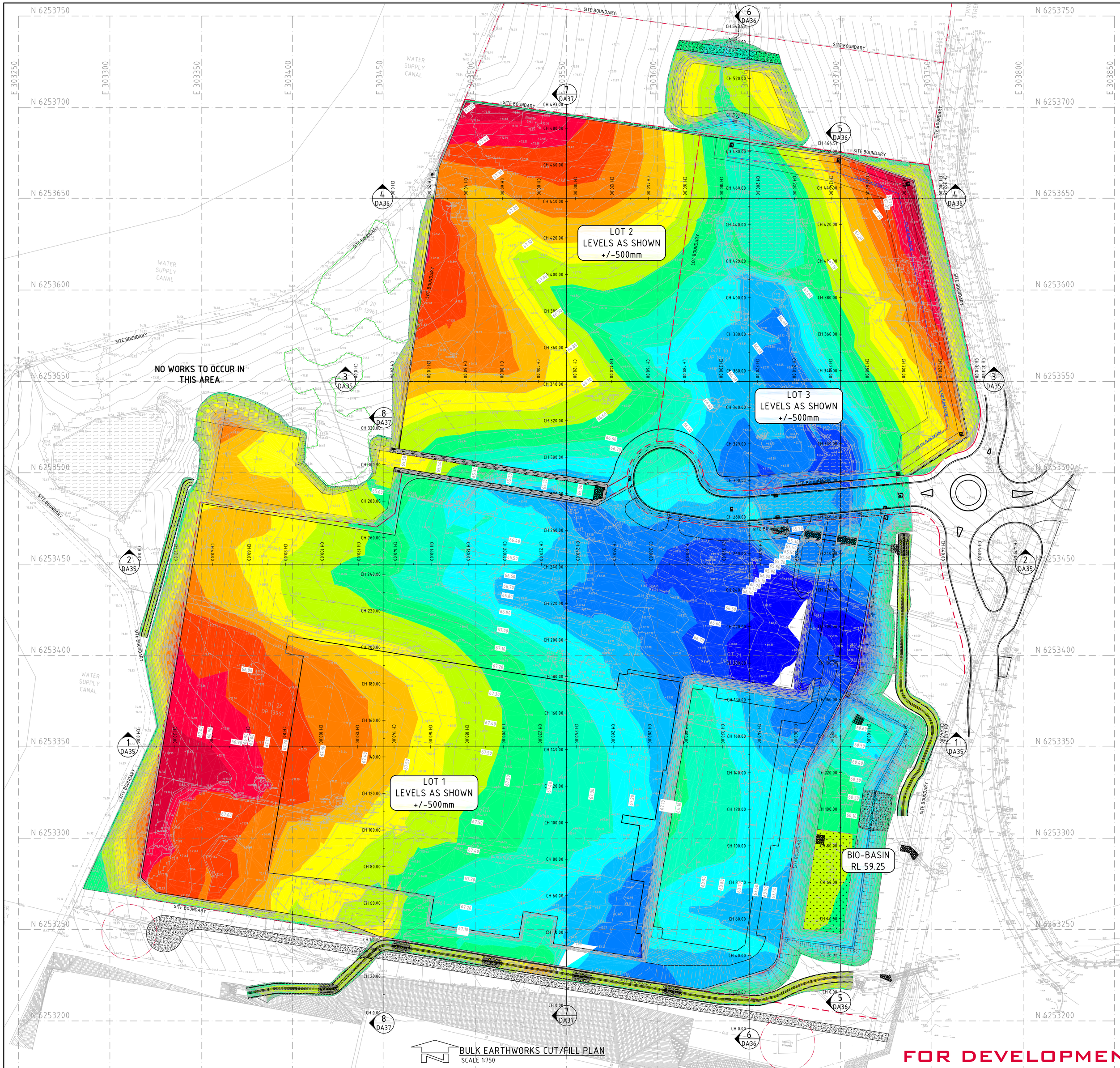
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M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co11492.17-DA25

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DRAWING TITLE: EROSION & SEDIMENT CONTROL DETAILS

DRAWING NO: Co11492.17- DA25 | ISSUE: A



BULK EARTHWORKS CUT/FILL PLAN
SCALE 1:750

DEPTH RANGE			
No.	FROM DEPTH	TO DEPTH	COLOUR
1	-8.000	-7.000	
2	-7.000	-6.000	
3	-6.000	-5.000	
4	-5.000	-4.000	
5	-4.000	-3.000	
6	-3.000	-2.000	
7	-2.000	-1.000	
8	-1.000	0.000	
9	0.000	1.000	
10	1.000	2.000	
11	2.000	3.000	
12	3.000	4.000	
13	4.000	5.000	
14	5.000	6.000	
15	6.000	7.000	

POND DEWATERING NOTES:

1. DRAIN PONDS OF WATER & DISCHARGE CLEAN WATER TO STORMWATER DRAINAGE SYSTEM (AS PER NOTES 2 & 3) - REFER TO PLAN FOR LOCATIONS.
2. DEWATERING TO BE PERFORMED IN SUCH A MANNER AS TO REMOVE CLEAN WATER WITHOUT REMOVING OR OR DISTURBING SILT, SEDIMENT OR OTHER ORGANIC MATERIAL FROM THE BASE OF THE PONDS.
3. DISCHARGE OF WATER FROM PONDS TO HAVE A PH RANGE OF 6.5-8.5 AND TSS < 50mg/L. PONDS TO BE DOSED WITH GYPSUM (APPROX. 30mg PER CUBIC METRE) TO ACCELERATE SETTLEMENT OF SUSPENDED SOLIDS.
4. REMOVE ALL SILT, ORGANIC AND WATER LOGGED MATERIAL FROM BASE OF POND (NOM. DEPTH 0.5-1.0m) AND DISPOSE OF IN ACCORDANCE WITH THE NSW DEPT. OF ENVIRONMENT CLIMATE CHANGE AND WATER REQUIREMENTS.
5. EXPOSE NATURAL SITE SOILS AND COMPACT SUBGRADE IN ACCORDANCE WITH THE SITE PREPARATION NOTES REMOVING ANY SOFT ZONES AS REQ'D.
6. PLACE AND COMPACT FILL AS PER SITE PREPARATION NOTES.

LEGEND

LEVELS DATUM IS AHD.

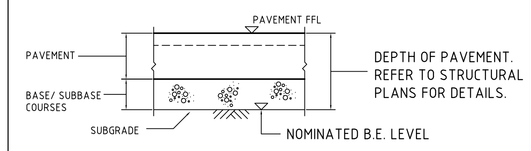
EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY MONTEATH AND POWYS DATED 20.06.16

60 - EXISTING CONTOUR

+0.36 - EXISTING SPOT HEIGHT

30.50 - B.E.L. CONTOUR (MAJOR - 0.5m)

30.40 - B.E.L. CONTOUR (MINOR - 0.1m)



NOMINATED B.E.L. DETAIL
N.T.S.

EARTHWORKS VOLUMES

TOPSOIL VOLUME:

CUT	= - 32 700 m^3

EARTHWORKS VOLUMES:

CUT	= - 181 600 m^3
FILL	= + 243 200 m^3
DETAILED EXCAVATION (750 m^3/Ha)	= - 12 500 m^3
RETAINING WALL BACKFILL	= - 8 000 m^3
BULKING OF CUT	= - 8 500 m^3
BALANCE	= + 32 600 m^3 (IMPORT)

EARTHWORK VOLUMES ARE APPROXIMATE ONLY & ARE CALCULATED ASSUMING AN AVERAGE TOPSOIL STRIP OF 200mm. NO ALLOWANCE HAS BEEN MADE FOR EROSION AND SEDIMENT CONTROL, BULKING, COMPACTION OF FILLED SOILS.

REFER TO DRAWING DA20 FOR EROSION AND SEDIMENT CONTROL PLAN.

THE EXISTING SURFACE IS BASED ON SURVEY & DESIGN INFORMATION PROVIDED. THIS SURVEY IS MOST CURRENT HOWEVER IT MAY NOT ACCURATELY REFLECT ACTUAL GROUND LEVELS OR STOCKPILES ETC ON SITE. IT IS THE CONTRACTORS RESPONSIBILITY TO CONFIRM VOLUMES AND ALLOWANCES FOR EARTHWORKS.

SITE PREPARATION NOTES:

1. ALL EARTHWORKS SHALL BE COMPLETED GENERALLY IN ACCORDANCE WITH THE GUIDELINES SPECIFIED BY THE GEOTECHNICAL REPORT GTE914-R002 PROVIDED BY GROUND TECHNOLOGIES GEOTECHNICAL ENGINEERS DATED 13.10.16.
2. EXISTING LEVELS ARE BASED ON INFORMATION PROVIDED BY MONTEATH & POWYS TITLED DETAIL SURVEY OF LOTS 18-23 DP 13961 COWPASTURE ROAD, WETHERILL PARK DATED 27.05.16.
3. STRIP ANY TOP SOIL OR DELETERIOUS MATERIAL AND DISPOSE OF FROM SITE OR STORE AS DIRECTED.
4. COMPLETE CUT TO FILL EARTHWORKS TO ACHIEVE THE REQUIRED LEVELS AS INDICATED ON THE DRAWINGS WITHIN A TOLERANCE OF +0mm/-10mm THROUGH BUILDING PADS/PAVEMENTS AND +0mm/-20mm ELSEWHERE.
5. PREPARE STEEP BATTERS TO RECEIVE FILL BY CONSTRUCTING BENCHING TO FACILITATE FILL PLACEMENT AND COMPACTION.
6. AREAS TO RECEIVE FILL (THAT ARE NOT ON BENCHED BATTERS) AND AREAS IN CUT SHALL BE PROOF ROLLED TO IDENTIFY ANY SOFT HEAVING MATERIAL. SOFT MATERIAL SHALL BE BOXED OUT AND REMOVED PRIOR TO FILL PLACEMENT.
7. SITE WON FILL TO BE PLACED IN MAXIMUM 300mm LOOSE LAYERS AND COMPACTED TO 100% STANDARD AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT.
8. IMPORTED FILL SHALL BE PLACED IN MAXIMUM 300mm LOOSE LAYERS AND COMPACTED TO 100% STANDARD AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT.
9. MAXIMUM PARTICLE SIZE TO BE THE SMALLER OF 150mm OR HALF THE (LOOSE) LAYER THICKNESS AND/OR TWO THIRDS THE LAYER THICKNESS AFTER COMPACTION.
10. ALL EARTHWORKS SHALL BE COMPLETED UNDER LEVEL 1 CONTROL IN ACCORDANCE WITH AS 3798-2007.
11. PRIOR TO ANY EARTHWORKS, EROSION CONTROL AS OUTLINED IN THE EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE COMPLETED.
12. EXISTING ROCK, IF ANY, SHALL BE REMOVED BY HEAVY ROCK BREAKING OR RIPPING.
13. MATCH EXISTING LEVELS AT BATTER INTERFACE.
14. CONTRACTOR TO MATCH EXISTING LEVELS AT THE INTERFACE OF EARTHWORKS AND EXISTING SURFACE AT BATTER LOCATIONS OR WHERE NO RETAINING WALLS ARE PRESENT. ANY DISCREPANCY BETWEEN DESIGN AND EXISTING LEVELS TO BE REFERRED TO THE ENGINEER FOR DIRECTION OR ADJUSTMENTS TO DESIGN LEVELS.

7.5m 0 15 30 45 60 75m
SCALE 1:750 AT A0 SIZE PLOT

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
ISSUED FOR DEVELOPMENT APPLICATION	13.03.20	E
REVISED WESTERN BASIN	28.02.20	D
REVISED FOR SITE CHANGES	05.02.20	C
ISSUED FOR DEVELOPMENT APPLICATION	11.12.19	B
FOR INFORMATION ONLY	22.11.19	A

ARCHITECT: LEFFLER SIMES ARCHITECTS

CLIENT: Charter Hall

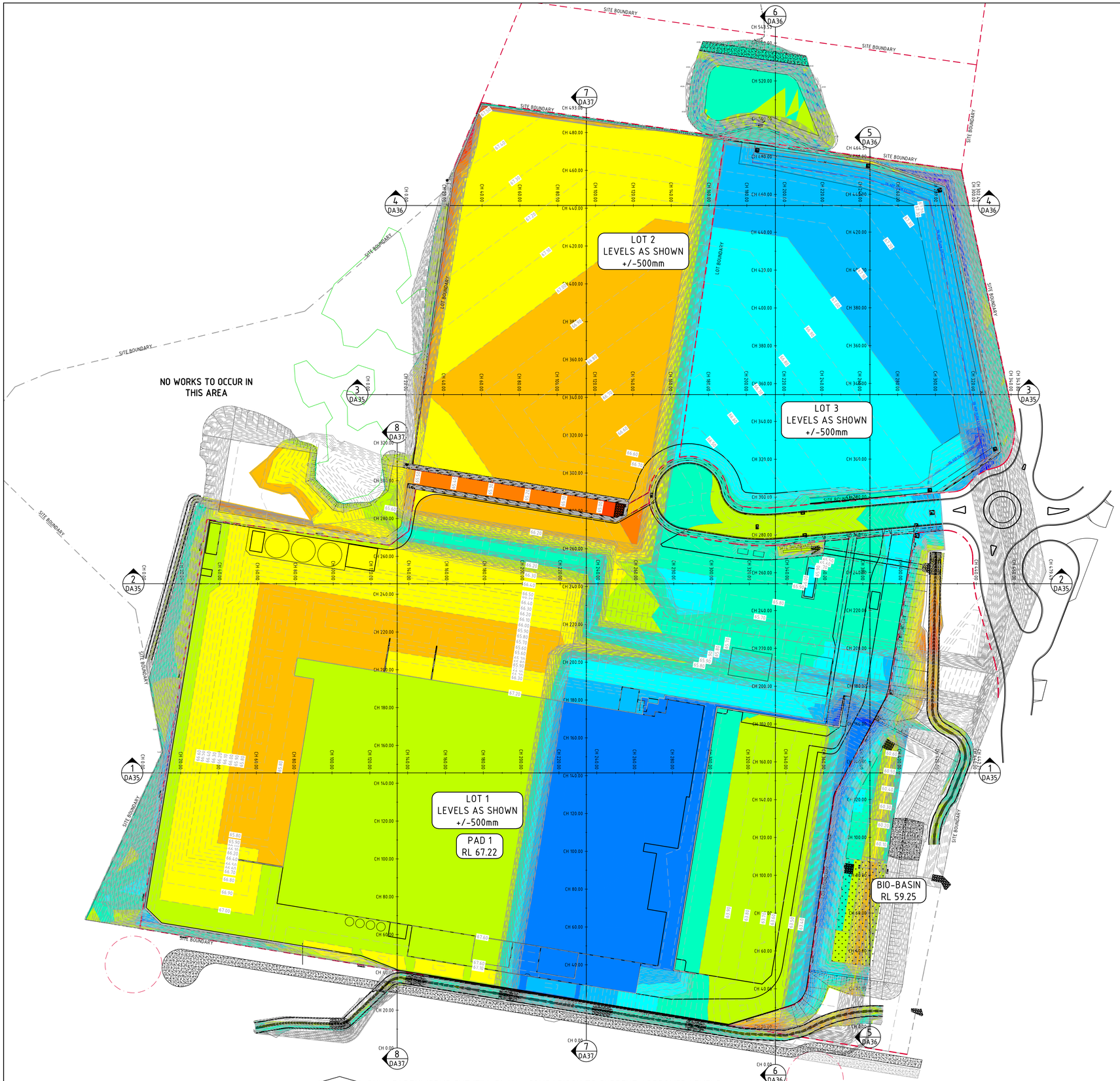
PROJECT: SSD7764 MASTERPLAN MOD1
HDBP STAGE 2
COWPASTURE ROAD, WETHERILL PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF.
M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co114.92.17-DA30

Costin Roe Consulting Pty Ltd.
Consulting Engineers ACN 001 888 668
Level 1, 8 Windmill Street
Walsh Bay, Sydney NSW 2000
Tel: (02) 9251-7699 Fax: (02) 9241-3721
email: mail@costinroe.com.au ©

Costin Roe Consulting
PRECISION | COMMUNICATION | ACCOUNTABILITY

DRAWING TITLE: BULK EARTHWORKS CUT/FILL PLAN
DRAWING No: Co114.92.17-DA30
ISSUE: E



BULK EARTHWORKS CUT/FILL PLAN - COMPARISON TO CURRENT APPROVED LEVELS
SCALE 1:750

DEPTH RANGE

No.	FROM DEPTH	TO DEPTH	COLOUR
1	-7.000	-6.000	
2	-6.000	-5.000	
3	-5.000	-4.000	
4	-4.000	-3.000	
5	-3.000	-2.000	
6	-2.000	-1.000	
7	-1.000	0.000	
8	0.000	1.000	
9	1.000	2.000	
10	2.000	3.000	
11	3.000	4.000	
12	4.000	5.000	
13	5.000	6.000	
14	6.000	7.000	
15	7.000	8.000	
16	8.000	9.000	

POND DEWATERING NOTES:

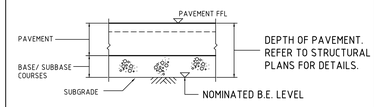
1. DRAIN PONDS OF WATER & DISCHARGE CLEAN WATER TO STORMWATER DRAINAGE SYSTEM (AS PER NOTES 2 & 3) - REFER TO PLAN FOR LOCATIONS.
2. DEWATERING TO BE PERFORMED IN SUCH A MANNER AS TO REMOVE CLEAN WATER WITHOUT REMOVING OR OR DISTURBING SILT, SEDIMENT OR OTHER ORGANIC MATERIAL FROM THE BASE OF THE PONDS.
3. DISCHARGE OF WATER FROM PONDS TO HAVE A PH RANGE OF 6.5-8.5 AND TSS < 50mg/L. PONDS TO BE DOSED WITH GYPSUM (APPROX. 30mg PER CUBIC METRE) TO ACCELERATE SETTLEMENT OF SUSPENDED SOLIDS.
4. REMOVE ALL SILT, ORGANIC AND WATER LOGGED MATERIAL FROM BASE OF POND (NOM. DEPTH 0.5-1.0m) AND DISPOSE OF IN ACCORDANCE WITH THE NSW DEPT. OF ENVIRONMENT CLIMATE CHANGE AND WATER REQUIREMENTS.
5. EXPOSE NATURAL SITE SOILS AND COMPACT SUBGRADE IN ACCORDANCE WITH THE SITE PREPARATION NOTES REMOVING ANY SOFT ZONES AS REQ'D.
6. PLACE AND COMPACT FILL AS PER SITE PREPARATION NOTES.

LEGEND

LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY MONTEATH AND POWYS DATED 20.06.16

- 60 - EXISTING CONTOUR
- 65.30 - EXISTING SPOT HEIGHT
- 30.50 - B.E.L. CONTOUR (MAJOR - 0.5m)
- 30.40 - B.E.L. CONTOUR (MINOR - 0.1m)



NOMINATED B.E.L. DETAIL
N.T.S.

EARTHWORKS VOLUMES

TOPSOIL VOLUME:

CUT	= - 32 700 m^3

EARTHWORKS VOLUMES:

CUT	= - 130 900 m^3
FILL	= + 125 100 m^3
DETAILED EXCAVATION (750 m^3/Ha)	= - 12 500 m^3
RETAINING WALL BACKFILL	= - 5 000 m^3
BULKING OF CUT	= - 8 500 m^3
BALANCE	= -31 800 m^3 (EXPORT)

EARTHWORK VOLUMES ARE APPROXIMATE ONLY & ARE CALCULATED ASSUMING AN AVERAGE TOPSOIL STRIP OF 200mm. NO ALLOWANCE HAS BEEN MADE FOR EROSION AND SEDIMENT CONTROL, BULKING, COMPACTION OF FILLED SOILS.

REFER TO DRAWING DA20 FOR EROSION AND SEDIMENT CONTROL PLAN.

THE EXISTING SURFACE IS BASED ON CURRENT APPROVED DESIGN INFORMATION PROVIDED. THESE LEVELS DO NOT ACCURATELY REFLECT ACTUAL GROUND LEVELS OR STOCKPILES ETC ON SITE. IT IS THE CONTRACTORS RESPONSIBILITY TO CONFIRM VOLUMES AND ALLOWANCES FOR EARTHWORKS.

SITE PREPARATION NOTES:

1. ALL EARTHWORKS SHALL BE COMPLETED GENERALLY IN ACCORDANCE WITH THE GUIDELINES SPECIFIED BY THE GEOTECHNICAL REPORT GTE914-R002 PROVIDED BY GROUND TECHNOLOGIES GEOTECHNICAL ENGINEERS DATED 13.10.16.
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FOR DEVELOPMENT APPLICATION

7.5m 0 15 30 45 60 75m
SCALE 1:750 AT A0 SIZE PLOT

ISSUED FOR DEVELOPMENT APPLICATION	23.06.20	A
AMENDMENTS	DATE	ISSUE

ARCHITECT: LEFFLER SIMES ARCHITECTS

CLIENT: Charter Hall

PROJECT: SSD7764 MASTERPLAN MOD1
HDBP STAGE 2
COWPASTURE ROAD, WETHERILL PARK, NSW

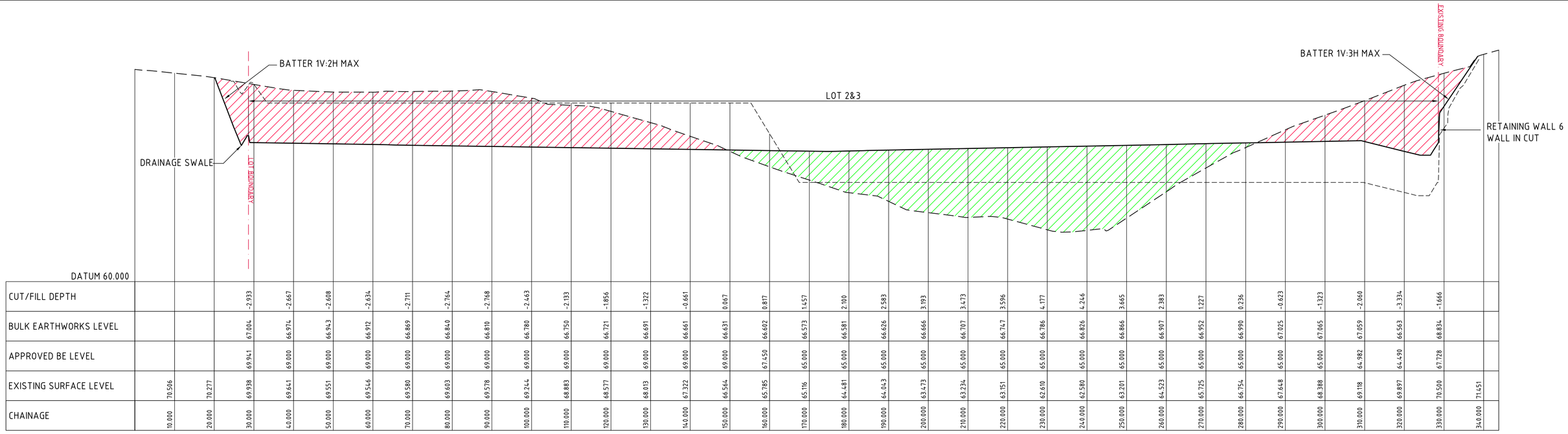
DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co114.92.17-DA31

Costin Roe Consulting Pty Ltd.
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Costin Roe Consulting
PRECISION | COMMUNICATION | ACCOUNTABILITY

DRAWING TITLE: BULK EARTHWORKS CUT/FILL PLAN - COMPARISON TO CURRENT APPROVED LEVELS

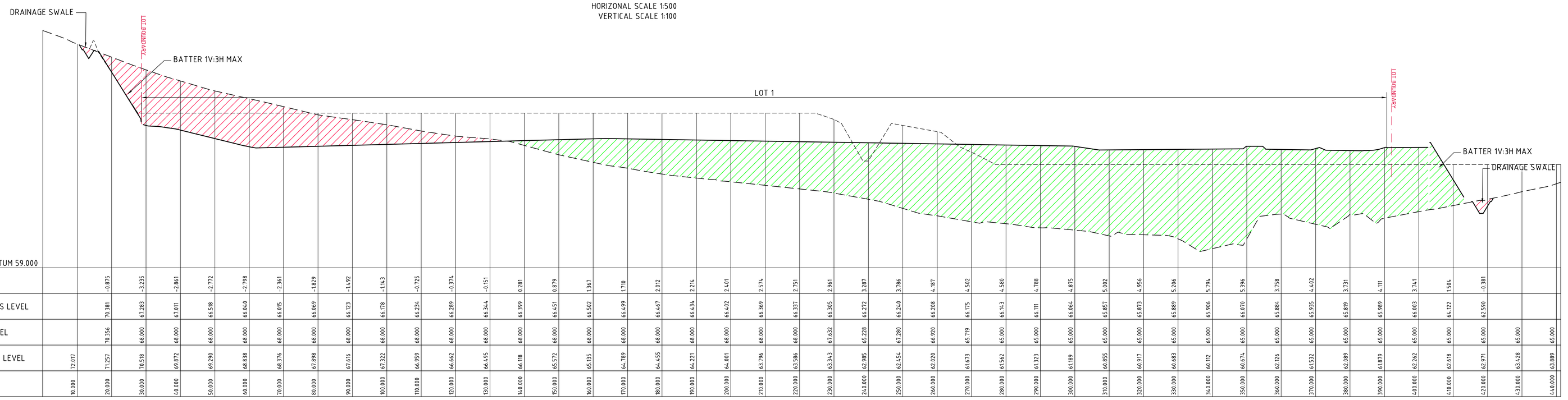
DRAWING NO: Co11492.17-DA31 ISSUE: A



DATUM 60.000

CHAINAGE	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	260.000	270.000	280.000	290.000	300.000	310.000	320.000	330.000	340.000	350.000
EXISTING SURFACE LEVEL	70.946	70.277	69.938	69.641	69.551	69.546	69.580	69.603	69.578	69.244	68.883	68.577	68.193	67.322	66.544	65.785	65.116	64.481	64.043	63.473	63.234	63.151	62.610	62.580	63.201	64.523	65.725	66.754	67.648	68.388	69.118	69.877	70.500	71.451	
APPROVED BE LEVEL			69.941	69.900	69.900	69.900	69.900	69.900	69.900	69.900	69.900	69.900	69.900	69.900	69.900	67.450	66.500	65.600	65.600	65.600	65.600	65.600	65.600	65.600	65.600	65.600	65.600	65.600	65.600	65.600	65.600	64.982	64.490	64.563	67.728	
BULK EARTHWORKS LEVEL			67.004	66.974	66.943	66.912	66.869	66.840	66.810	66.780	66.750	66.721	66.691	66.661	66.631	66.602	66.573	66.581	66.626	66.666	66.707	66.747	66.786	66.826	66.866	66.907	66.952	66.990	67.025	67.065	67.059	66.562	66.563	68.834		
CUT/FILL DEPTH			-2.933	-2.667	-2.608	-2.634	-2.711	-2.764	-2.768	-2.443	-2.133	-1.856	-1.322	-0.661	0.067	0.817	1.457	2.100	2.583	3.193	3.473	3.596	4.177	4.246	3.665	2.383	1.227	0.236	-0.623	-1.323	-2.040	-3.334	-1.666			

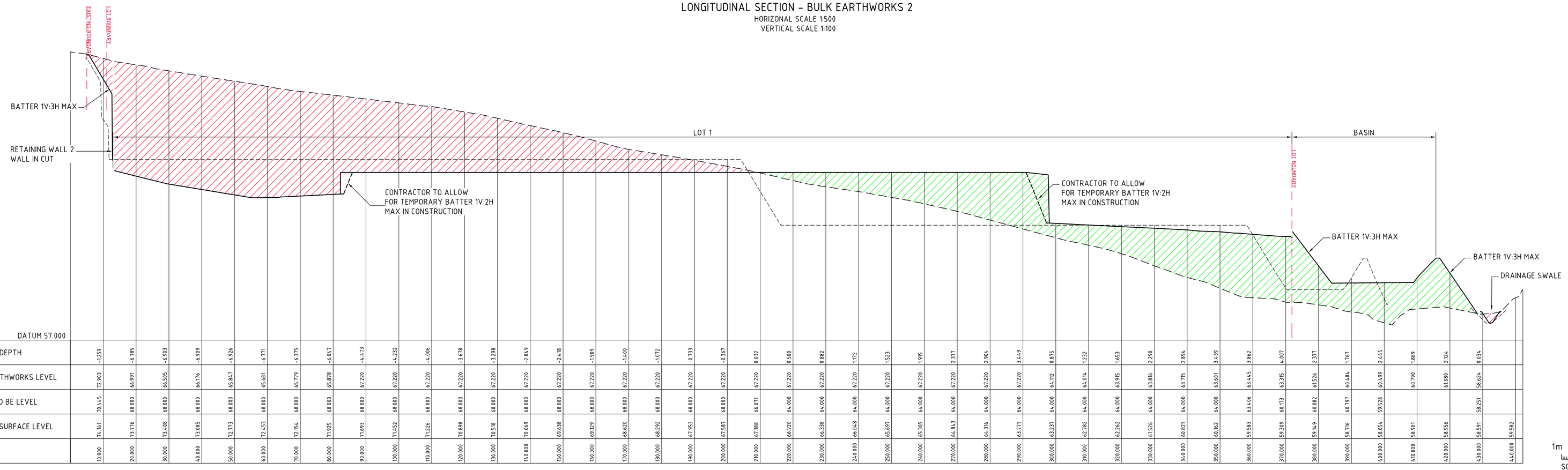
LONGITUDINAL SECTION - BULK EARTHWORKS 3
HORIZONAL SCALE 1:500
VERTICAL SCALE 1:100



DATUM 59.000

CHAINAGE	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	260.000	270.000	280.000	290.000	300.000	310.000	320.000	330.000	340.000	350.000	360.000	370.000	380.000	390.000	400.000	410.000	420.000	430.000	440.000
EXISTING SURFACE LEVEL	72.617	71.257	70.518	69.872	69.290	68.838	68.376	67.898	67.606	67.332	66.959	66.462	66.095	66.118	65.572	65.135	64.789	64.455	64.221	64.001	63.796	63.586	63.343	62.985	62.454	62.028	61.673	61.562	61.323	61.089	60.855	60.917	60.683	60.172	60.674	62.126	61.532	62.089	61.879	62.262	62.618	62.971	63.428	63.889
APPROVED BE LEVEL		70.356	68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	66.402	66.369	66.337	66.305	66.272	66.240	66.208	66.175	66.143	66.111	66.044	65.957	65.923	65.889	65.856	65.670	65.884	65.595	65.819	65.989	66.003	65.900	65.900	65.900	65.900	65.900
BULK EARTHWORKS LEVEL		70.381	67.983	67.011	66.518	66.040	66.015	66.069	66.123	66.178	66.234	66.289	66.344	66.399	66.451	66.502	66.499	66.467	66.434	66.402	66.369	66.337	66.305	66.272	66.240	66.208	66.175	66.143	66.111	66.044	65.957	65.923	65.889	65.856	65.670	65.884	65.595	65.819	65.989	66.003	66.262	62.618	62.971	63.428	63.889
CUT/FILL DEPTH		-0.975	-3.235	-2.861	-2.772	-2.798	-2.361	-1.829	-1.492	-1.143	-0.735	-0.374	-0.951	0.281	0.879	1.367	1.710	2.012	2.214	2.401	2.574	2.751	2.961	3.287	3.786	4.187	4.502	4.580	4.788	4.875	5.902	4.956	5.206	5.794	5.396	3.758	4.402	3.731	4.111	3.741	1.504	-0.381			

LONGITUDINAL SECTION - BULK EARTHWORKS 2
HORIZONAL SCALE 1:500
VERTICAL SCALE 1:100



DATUM 57.000

CHAINAGE	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	260.000	270.000	280.000	290.000	300.000	310.000	320.000	330.000	340.000	350.000	360.000	370.000	380.000	390.000	400.000	410.000	420.000	430.000	440.000
EXISTING SURFACE LEVEL	74.161	73.776	73.408	73.085	72.773	72.453	72.054	71.925	71.693	71.452	71.126	70.898	70.598	70.569	69.638	69.129	68.620	68.292	67.953	67.587	67.188	66.720	66.338	66.048	65.697	65.305	64.843	64.376	63.771	63.237	62.782	62.362	61.926	60.821	60.562	59.583	59.309	59.149	58.776	58.054	58.901	58.956	58.591	59.562
APPROVED BE LEVEL		68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	68.000	66.011	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.000	63.456	63.173	62.882	60.797	59.528	60.790	61.060	58.624	58.251	
BULK EARTHWORKS LEVEL		73.776	73.408	73.085	72.773	72.453	72.054	71.925	71.693	71.452	71.126	70.898	70.598	70.569	69.638	69.129	68.620	68.292	67.953	67.587	67.188	66.720	66.338	66.048	65.697	65.305	64.843	64.376	63.771	63.237	62.782	62.362	61.926	60.821	60.562	59.583	59.309	59.149	58.776	58.054	58.901	58.956	58.591	59.562	
CUT/FILL DEPTH		-6.155	-6.785	-6.913	-6.909	-6.926	-6.771	-6.375	-6.047	-4.473	-4.232	-4.096	-3.678	-3.298	-2.869	-2.418	-1.969	-1.400	-1.072	-0.733	-0.367	0.032	0.500	0.882	1.172	1.523	1.915	2.377	2.904	3.449	4.102	4.014	4.232	4.653	4.290	3.862	4.007	2.377	1.767	2.445	1.889	2.124	0.034		

LONGITUDINAL SECTION - BULK EARTHWORKS 1
HORIZONAL SCALE 1:500
VERTICAL SCALE 1:100

LEGEND:

- BULK EARTHWORKS PROFILE
- EXISTING SURFACE PROFILE
- APPROVED BULK EARTHWORKS PROFILE
- DENOTES AREA IN CUT
- DENOTES AREA IN FILL

1m 0 1 2 3 4 5 6 7 8 9 10m
SCALE 1:100 AT A0 SIZE PLOT

5m 0 10 20 30 40 50m
SCALE 1:500 AT A0 SIZE PLOT

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
PREVIOUS APPROVAL LEVELS SHOWN	23.06.20	D
REVISED FOR SITE CHANGES	28.02.20	C
REVISED FOR SITE CHANGES	05.02.20	B
ISSUED FOR DEVELOPMENT APPLICATION	11.12.19	A

ARCHITECT
LEFFLER SIMES ARCHITECTS

CLIENT
Charter Hall

PROJECT
SSD7764 MASTERPLAN MOD1
HDBP STAGE 2
COWPASTURE ROAD, WETHERILL PARK, NSW

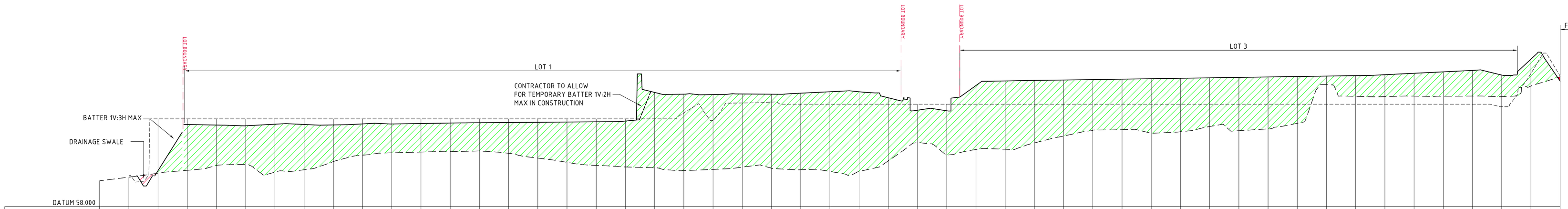
DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co11492.17-DA35

Costin Roe Consulting Pty Ltd.
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PRECISION | COMMUNICATION | ACCOUNTABILITY

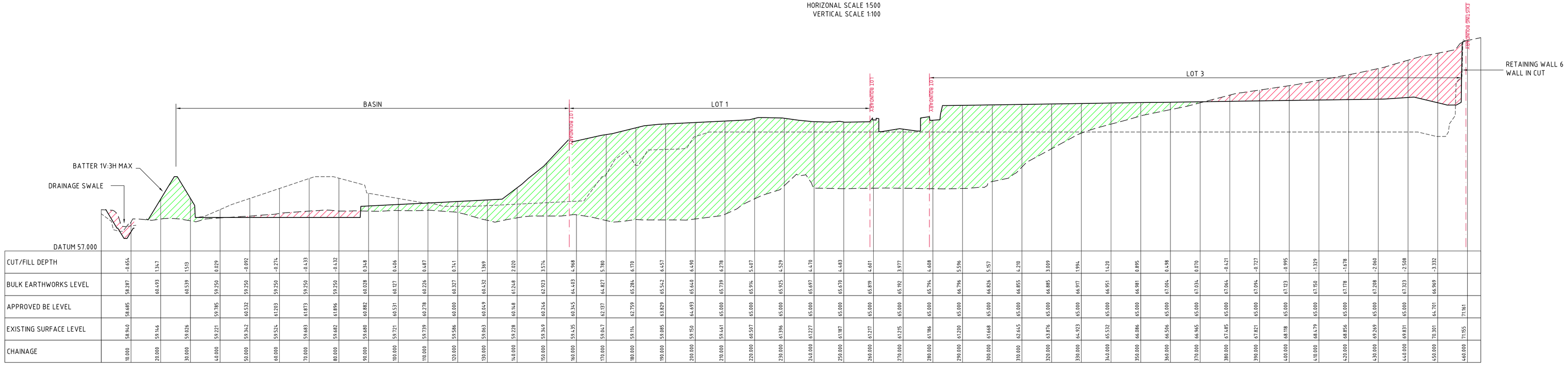
DRAWING TITLE
BULK EARTHWORKS SECTIONS
SHEET 1

DRAWING No Co11492.17- DA35
ISSUE D



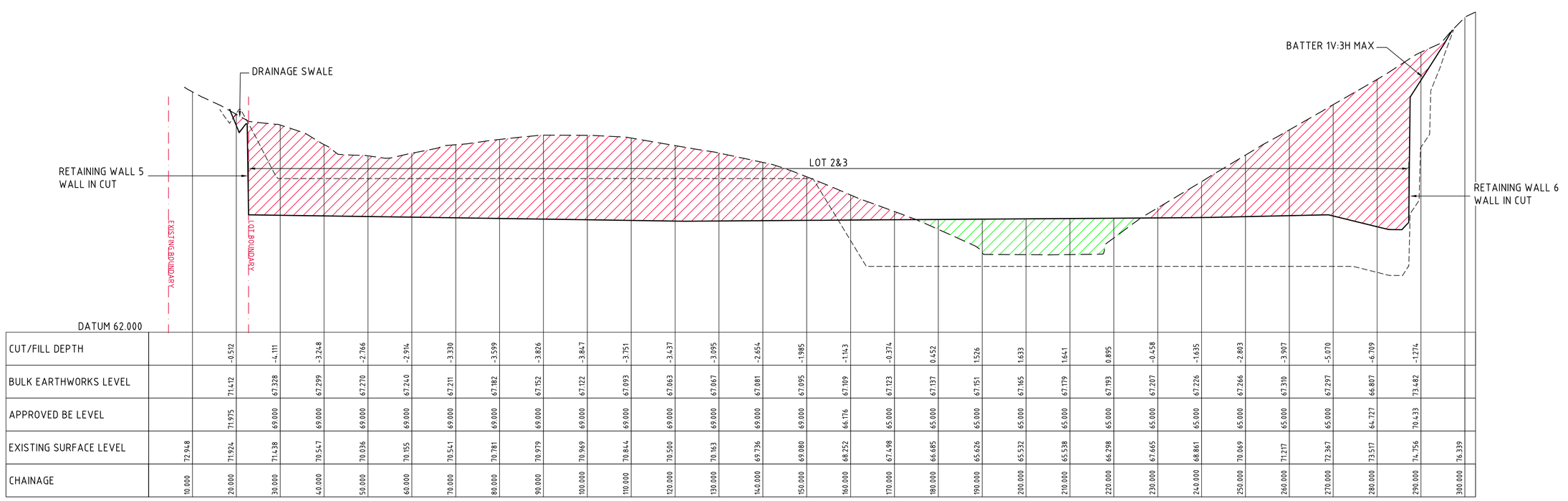
CHAINAGE	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	260.000	270.000	280.000	290.000	300.000	310.000	320.000	330.000	340.000	350.000	360.000	370.000	380.000	390.000	400.000	410.000	420.000	430.000	440.000	450.000	460.000	470.000	480.000	490.000
EXISTING SURFACE LEVEL	60.010	60.283	60.471	60.811	60.887	60.953	60.914	61.076	61.511	61.674	61.727	61.753	61.799	61.644	61.193	61.023	60.975	60.708	60.649	60.455	60.539	60.695	60.622	60.514	60.399	60.398	61.126	62.368	61.522	61.901	61.999	62.350	62.823	63.216	63.259	63.109	63.114	63.475	63.989	63.311	63.695	66.337	65.538	65.520	65.552	65.549	65.557	65.516	64.829
APPROVED BE LEVEL	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.000	64.408	63.885	65.085	65.145	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	64.991	64.000
BULK EARTHWORKS LEVEL	63.990	63.717	63.529	63.189	63.113	63.047	63.086	62.924	62.489	62.326	62.273	62.247	62.201	62.356	62.807	62.977	63.025	63.292	63.351	63.545	63.461	63.315	63.378	63.486	63.601	63.602	63.874	64.632	64.478	64.099	64.001	63.650	63.177	62.784	62.741	62.891	62.886	62.525	62.011	62.689	62.305	59.663	59.462	59.480	59.448	59.451	59.443	59.484	59.171
CUT/FILL DEPTH	0.177	0.567	3.137	2.765	2.637	3.280	3.102	2.508	2.142	1.975	1.954	1.961	1.934	2.195	2.453	2.758	2.983	3.141	5.159	5.233	5.122	5.087	5.863	5.242	5.455	5.455	4.315	2.223	3.030	4.379	4.674	4.281	3.833	3.470	3.458	3.727	3.661	3.329	3.645	3.553	3.199	0.588	1.416	1.498	1.565	1.117	1.668	1.758	1.478	1.841

LONGITUDINAL SECTION - BULK EARTHWORKS 6
HORIZONAL SCALE 1:500
VERTICAL SCALE 1:100



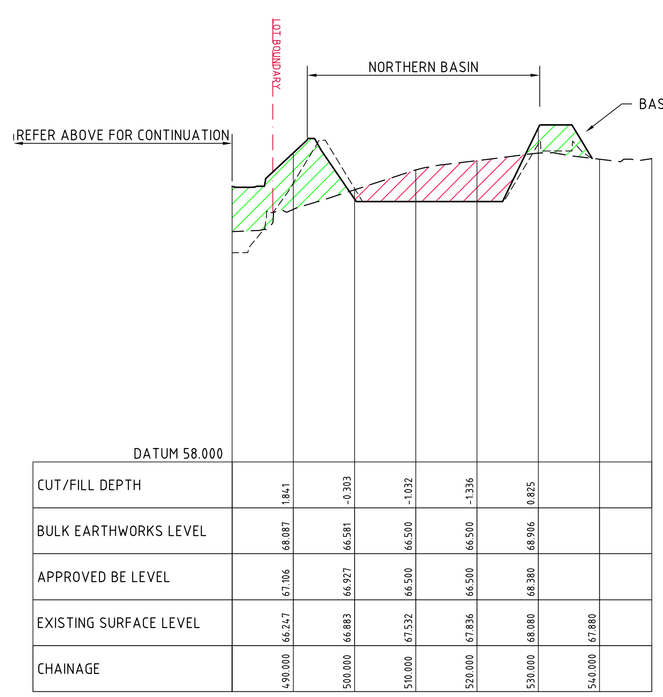
CHAINAGE	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	260.000	270.000	280.000	290.000	300.000	310.000	320.000	330.000	340.000	350.000	360.000	370.000	380.000	390.000	400.000	410.000	420.000	430.000	440.000	450.000	460.000
EXISTING SURFACE LEVEL	58.962	59.164	59.026	59.221	59.342	59.524	59.683	59.682	59.680	59.721	59.739	59.586	59.063	59.228	59.349	59.435	59.467	59.114	59.085	59.150	59.441	59.597	61.396	61.227	61.187	61.217	61.215	61.186	61.200	61.668	62.645	63.876	64.923	65.532	66.086	66.586	66.965	67.485	67.821	68.118	68.479	68.856	69.269	69.831	70.301	70.955	71.161
APPROVED BE LEVEL	58.685			59.185	59.532	61.093	61.873	61.896	60.882	60.531	60.278	60.000	60.049	60.148	60.246	60.345	61.317	62.759	63.829	64.493	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	64.701	64.969
BULK EARTHWORKS LEVEL	58.962	59.164	59.026	59.221	59.342	59.524	59.683	59.682	59.680	59.721	59.739	59.586	59.063	59.228	59.349	59.435	59.467	59.114	59.085	59.150	59.441	59.597	61.396	61.227	61.187	61.217	61.215	61.186	61.200	61.668	62.645	63.876	64.923	65.532	66.086	66.586	66.965	67.485	67.821	68.118	68.479	68.856	69.269	69.831	70.301	70.955	71.161
CUT/FILL DEPTH	-0.654	1.347	1.513	0.039	-0.992	-0.274	-0.433	-0.432	0.348	0.446	0.487	0.741	1.369	2.020	3.574	4.968	5.780	6.170	6.457	6.490	6.278	5.407	4.529	4.470	4.483	4.401	3.977	4.608	5.596	5.157	4.210	3.009	1.994	1.420	0.895	0.498	0.070	-0.421	-0.727	-0.995	-1.329	-1.678	-2.060	-2.508	-3.332				

LONGITUDINAL SECTION - BULK EARTHWORKS 5
HORIZONAL SCALE 1:500
VERTICAL SCALE 1:100



CHAINAGE	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	260.000	270.000	280.000	290.000	300.000
EXISTING SURFACE LEVEL	72.948	71.924	71.638	70.547	70.036	70.155	70.541	70.781	70.979	70.969	70.844	70.560	70.163	69.736	69.080	68.292	67.498	66.685	65.626	65.532	65.538	66.298	67.665	68.861	70.069	71.217	72.367	73.517	74.754	76.339
APPROVED BE LEVEL	69.600	69.600	69.600	69.600	69.600	69.600	69.600	69.600	69.600	69.600	69.600	69.600	69.600	69.600	69.600	66.716	65.900	65.900	65.900	65.900	65.900	65.900	65.900	65.900	65.900	65.900	65.900	64.727	64.233	
BULK EARTHWORKS LEVEL	67.328	67.399	67.270	67.240	67.211	67.182	67.152	67.122	67.093	67.063	67.067	67.081	67.095	67.109	67.123	67.137	67.151	67.165	67.179	67.193	67.207	67.226	67.266	67.310	67.297	67.300	67.297	66.807	73.682	
CUT/FILL DEPTH	-4.111	-3.248	-2.766	-2.974	-3.330	-3.599	-3.826	-3.847	-3.751	-3.437	-3.095	-2.654	-1.985	-1.163	-0.374	0.452	1.526	1.633	1.641	0.895	-0.458	-1.635	-2.803	-3.907	-5.070	-5.917	-6.709	-1.271		

LONGITUDINAL SECTION - BULK EARTHWORKS 4
HORIZONAL SCALE 1:500
VERTICAL SCALE 1:100



CHAINAGE	490.000	500.000	510.000	520.000	530.000	540.000
EXISTING SURFACE LEVEL	66.247	66.883	67.532	67.836	68.080	67.880
APPROVED BE LEVEL	67.196	66.927	66.500	66.500	66.380	
BULK EARTHWORKS LEVEL	67.196	66.581	66.500	66.500	66.196	
CUT/FILL DEPTH	1.841	0.303	-1.032	-1.336	0.825	

LONGITUDINAL SECTION - BULK EARTHWORKS 6
HORIZONAL SCALE 1:500
VERTICAL SCALE 1:100

LEGEND:
- BULK EARTHWORKS PROFILE
- EXISTING SURFACE PROFILE
- APPROVED BULK EARTHWORKS PROFILE
- DENOTES AREA IN CUT
- DENOTES AREA IN FILL

1m 0 1 2 3 4 5 6 7 8 9 10m
SCALE 1:100 AT A0 SIZE PLOT

5m 0 10 20 30 40 50m
SCALE 1:500 AT A0 SIZE PLOT

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
PREVIOUS APPROVAL LEVEL SHOWN	23.06.20	D
REVISED FOR SITE CHANGES	28.02.20	C
REVISED FOR SITE CHANGES	05.02.20	B
ISSUED FOR DEVELOPMENT APPLICATION	11.12.19	A

ARCHITECT: LEFFLER SIMES ARCHITECTS

CLIENT: Charter Hall

PROJECT: SSD7764 MASTERPLAN MOD1
HDBP STAGE 2
COWPASTURE ROAD, WETHERILL PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co11492.17-DA36

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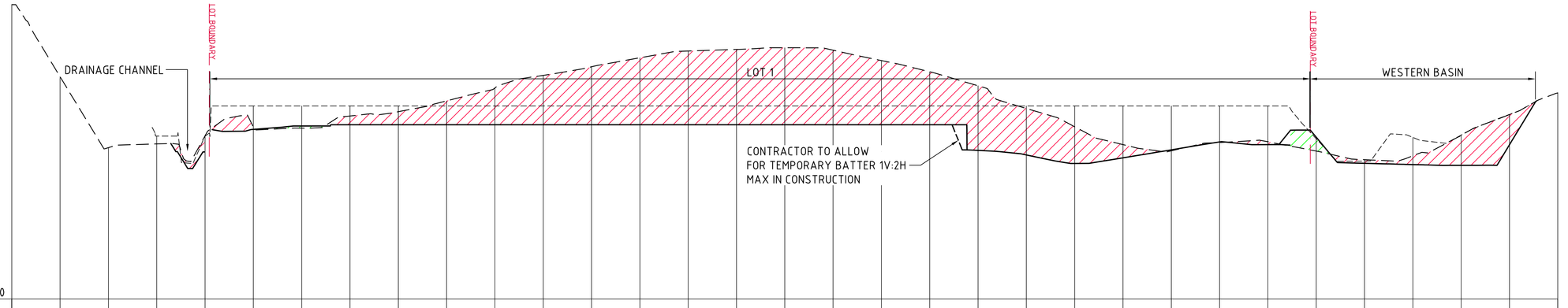
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DRAWING TITLE: BULK EARTHWORKS SECTIONS SHEET 2

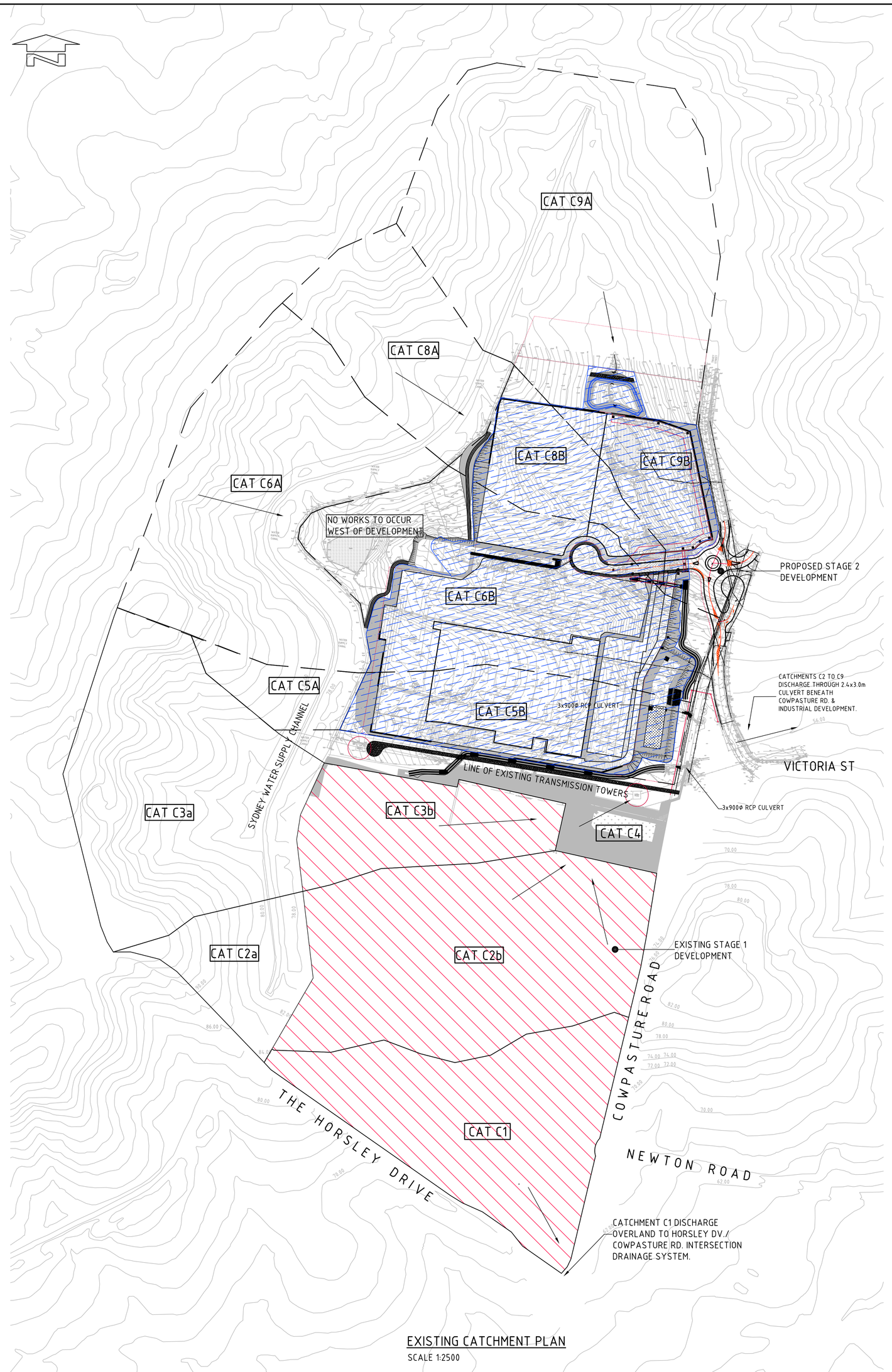
DRAWING No: Co11492.17- DA36 ISSUE: D

LEGEND:

- BULK EARTHWORKS PROFILE
- EXISTING SURFACE PROFILE
- APPROVED BULK EARTHWORKS PROFILE
- DENOTES AREA IN CUT
- DENOTES AREA IN FILL



| DATUM 60.000 | | |



EXISTING CATCHMENT PLAN
SCALE 1:2500

EXISTING CATCHMENT SCHEDULE

No.	AREA (Ha)	Tc (MINS)
CAT C 1	7.56	8
CAT C 2a	2.67	6
CAT C 2b	10.16	12
CAT C 3a	9.51	12
CAT C 3b	3.72	6
CAT C 4	0.96	5
CAT C 5A	1.40	5
CAT C 5B	4.59	7
CAT C 6A	10.61	16
CAT C 6B	9.76	12
CAT C 8A	4.62	8
CAT C 8B	2.70	6
CAT C 9A	14.70	20
CAT C 9B	2.74	6
TOTAL	91.16	

FOR DEVELOPMENT APPLICATION

20m 0 50 100 150 200 250m
SCALE 1:2500 AT A0 PLOT

AMENDMENTS	DATE	ISSUE
ISSUED FOR DEVELOPMENT APPLICATION	11.12.19	B
FOR INFORMATION ONLY	22.11.19	A

ARCHITECT
LEFFLER SIMESARCHITECTS

CLIENT
Charter Hall

PROJECT
SSD7764 MASTERPLAN MOD1
HDBP STAGE 2
COWPASTURE ROAD, WETHERILL PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF.
M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co11492.17-DA40

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DRAWING TITLE
EXISTING STORMWATER CATCHMENT PLAN

DRAWING No Co11492.17- DA40 ISSUE B

LEGEND:

LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY MONTEATH & POWYS DATED 20.06.16.

- SGGP, SINGLE GRATED GULLY PIT
- SJP, SEALED JUNCTION PIT
- KIP, KERB INLET PIT
- SW – DRAINAGE LINE
- SW – EXISTING DRAINAGE LINE
- OVERLAND FLOW PATH
- 50.00 – FINISHED PAVEMENT CONTOUR (MAJOR) 0.5m INTERVALS
- 50.10 – FINISHED PAVEMENT CONTOUR (MINOR) 0.1m INTERVALS

PIT SCHEDULE

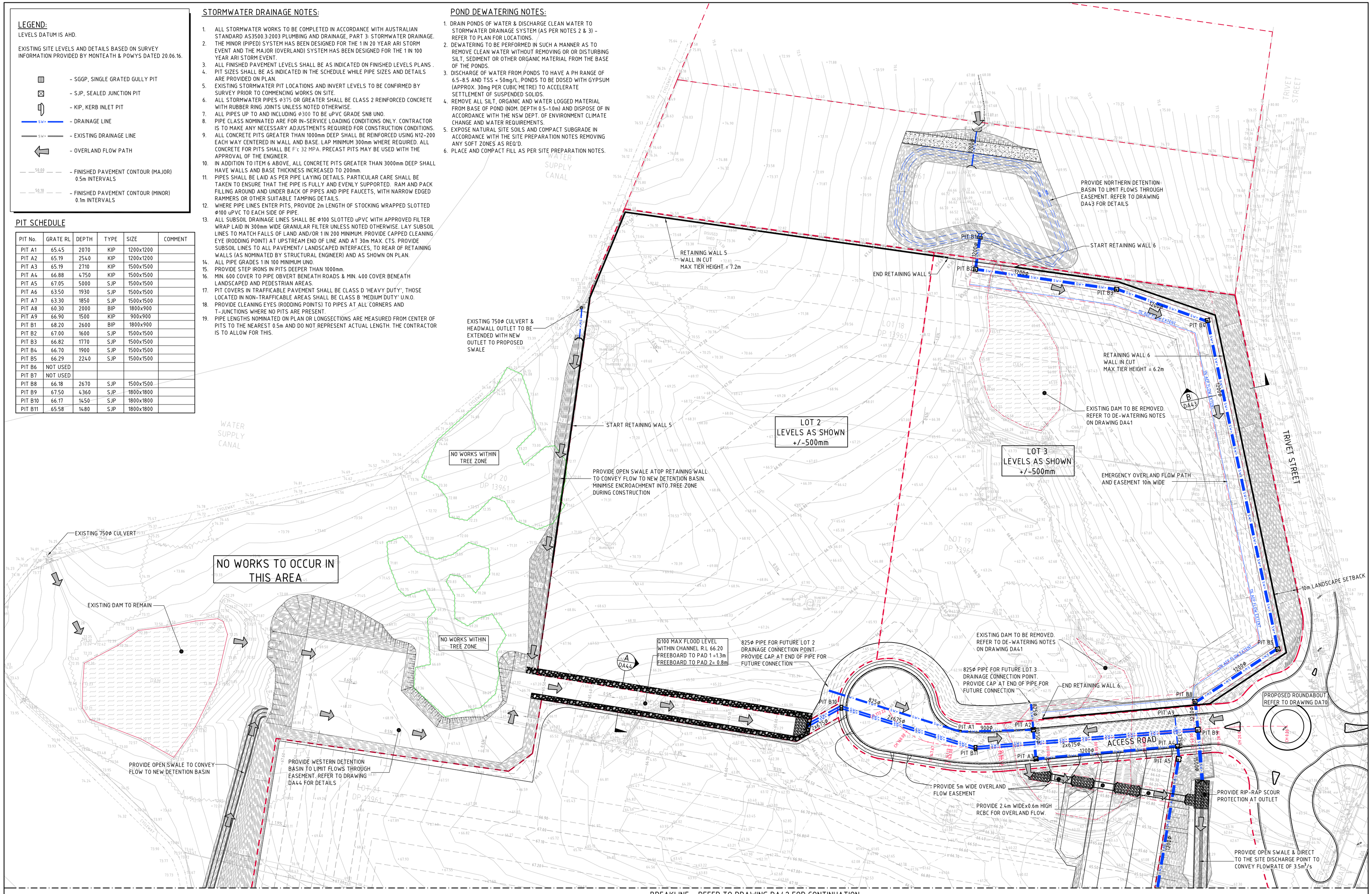
PIT No.	GRATE RL	DEPTH	TYPE	SIZE	COMMENT
PIT A1	65.45	2070	KIP	1200x1200	
PIT A2	65.19	2540	KIP	1200x1200	
PIT A3	65.19	2710	KIP	1500x1500	
PIT A4	66.88	4750	KIP	1500x1500	
PIT A5	67.05	5000	SJP	1500x1500	
PIT A6	63.50	1930	SJP	1500x1500	
PIT A7	63.30	1850	SJP	1500x1500	
PIT A8	60.30	2000	BIP	1800x900	
PIT A9	66.90	1500	KIP	900x900	
PIT B1	68.20	2600	BIP	1800x900	
PIT B2	67.00	1600	SJP	1500x1500	
PIT B3	66.82	1770	SJP	1500x1500	
PIT B4	66.70	1900	SJP	1500x1500	
PIT B5	66.29	2240	SJP	1500x1500	
PIT B6	NOT USED				
PIT B7	NOT USED				
PIT B8	66.18	2670	SJP	1500x1500	
PIT B9	67.50	4360	SJP	1800x1800	
PIT B10	66.17	1450	SJP	1800x1800	
PIT B11	65.58	1480	SJP	1800x1800	

STORMWATER DRAINAGE NOTES:

1. ALL STORMWATER WORKS TO BE COMPLETED IN ACCORDANCE WITH AUSTRALIAN STANDARD AS3500.3-2003 PLUMBING AND DRAINAGE, PART 3: STORMWATER DRAINAGE.
2. THE MINOR (PIPED) SYSTEM HAS BEEN DESIGNED FOR THE 1 IN 20 YEAR ARI STORM EVENT AND THE MAJOR (OVERLAND) SYSTEM HAS BEEN DESIGNED FOR THE 1 IN 100 YEAR ARI STORM EVENT.
3. ALL FINISHED PAVEMENT LEVELS SHALL BE AS INDICATED ON FINISHED LEVELS PLANS .
4. PIT SIZES SHALL BE AS INDICATED IN THE SCHEDULE WHILE PIPE SIZES AND DETAILS ARE PROVIDED ON PLAN.
5. EXISTING STORMWATER PIT LOCATIONS AND INVERT LEVELS TO BE CONFIRMED BY SURVEY PRIOR TO COMMENCING WORKS ON SITE.
6. ALL STORMWATER PIPES Φ375 OR GREATER SHALL BE CLASS 2 REINFORCED CONCRETE WITH RUBBER RING JOINTS UNLESS NOTED OTHERWISE.
7. ALL PIPES UP TO AND INCLUDING Φ300 TO BE uPVC GRADE SN8 UNO.
8. PIPE CLASS NOMINATED ARE FOR IN-SERVICE LOADING CONDITIONS ONLY. CONTRACTOR IS TO MAKE ANY NECESSARY ADJUSTMENTS REQUIRED FOR CONSTRUCTION CONDITIONS.
9. ALL CONCRETE PITS GREATER THAN 1000mm DEEP SHALL BE REINFORCED USING N12-200 EACH WAY CENTERED IN WALL AND BASE. LAP MINIMUM 300mm WHERE REQUIRED. ALL CONCRETE FOR PITS SHALL BE F'c 32 MPA. PRECAST PITS MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
10. IN ADDITION TO ITEM 6 ABOVE, ALL CONCRETE PITS GREATER THAN 3000mm DEEP SHALL HAVE WALLS AND BASE THICKNESS INCREASED TO 200mm.
11. PIPES SHALL BE LAID AS PER PIPE LAYING DETAILS. PARTICULAR CARE SHALL BE TAKEN TO ENSURE THAT THE PIPE IS FULLY AND EVENLY SUPPORTED. RAM AND PACK FILLING AROUND AND UNDER BACK OF PIPES AND PIPE FAUCETS, WITH NARROW EDGED RAMMERS OR OTHER SUITABLE TAMPING DETAILS.
12. WHERE PIPE LINES ENTER PITS, PROVIDE 2m LENGTH OF STOCKING WRAPPED SLOTTED Φ100 uPVC TO EACH SIDE OF PIPE.
13. ALL SUBSOIL DRAINAGE LINES SHALL BE Φ100 SLOTTED uPVC WITH APPROVED FILTER WRAP LAID IN 300mm WIDE GRANULAR FILTER UNLESS NOTED OTHERWISE. LAY SUBSOIL LINES TO MATCH FALLS OF LAND AND/OR 1 IN 200 MINIMUM. PROVIDE CAPPED CLEANING EYE (RODDING POINT) AT UPSTREAM END OF LINE AND AT 30m MAX. CTS. PROVIDE SUBSOIL LINES TO ALL PAVEMENT/ LANDSCAPED INTERFACES, TO REAR OF RETAINING WALLS (AS NOMINATED BY STRUCTURAL ENGINEER) AND AS SHOWN ON PLAN.
14. ALL PIPE GRADES 1 IN 100 MINIMUM UNO.
15. PROVIDE STEP IRONS IN PITS DEEPER THAN 1000mm.
16. MIN. 600 COVER TO PIPE OBVERT BENEATH ROADS & MIN. 400 COVER BENEATH LANDSCAPED AND PEDESTRIAN AREAS.
17. PIT COVERS IN TRAFFICABLE PAVEMENT SHALL BE CLASS D 'HEAVY DUTY', THOSE LOCATED IN NON-TRAFFICABLE AREAS SHALL BE CLASS B 'MEDIUM DUTY' U.N.O.
18. PROVIDE CLEANING EYES (RODDING POINTS) TO PIPES AT ALL CORNERS AND T-JUNCTIONS WHERE NO PITS ARE PRESENT.
19. PIPE LENGTHS NOMINATED ON PLAN OR LONGSECTIONS ARE MEASURED FROM CENTER OF PITS TO THE NEAREST 0.5m AND DO NOT REPRESENT ACTUAL LENGTH. THE CONTRACTOR IS TO ALLOW FOR THIS.

POND DEWATERING NOTES:

1. DRAIN PONDS OF WATER & DISCHARGE CLEAN WATER TO STORMWATER DRAINAGE SYSTEM (AS PER NOTES 2 & 3) - REFER TO PLAN FOR LOCATIONS.
2. DEWATERING TO BE PERFORMED IN SUCH A MANNER AS TO REMOVE CLEAN WATER WITHOUT REMOVING OR OR DISTURBING SILT, SEDIMENT OR OTHER ORGANIC MATERIAL FROM THE BASE OF THE PONDS.
3. DISCHARGE OF WATER FROM PONDS TO HAVE A PH RANGE OF 6.5-8.5 AND TSS < 50mg/L. PONDS TO BE DOSED WITH GYPSUM (APPROX. 30mg PER CUBIC METRE) TO ACCELERATE SETTLEMENT OF SUSPENDED SOLIDS.
4. REMOVE ALL SILT, ORGANIC AND WATER LOGGED MATERIAL FROM BASE OF POND (NOM. DEPTH 0.5-1.0m) AND DISPOSE OF IN ACCORDANCE WITH THE NSW DEPT. OF ENVIRONMENT CLIMATE CHANGE AND WATER REQUIREMENTS.
5. EXPOSE NATURAL SITE SOILS AND COMPACT SUBGRADE IN ACCORDANCE WITH THE SITE PREPARATION NOTES REMOVING ANY SOFT ZONES AS REQ'D.
6. PLACE AND COMPACT FILL AS PER SITE PREPARATION NOTES.



BREAKLINE - REFER TO DRAWING DA42 FOR CONTINUATION

CONCEPT CIVIL WORKS PLAN - SHEET 1
SCALE 1:500

FOR DEVELOPMENT APPLICATION

5m 0 10 20 30 40 50m
SCALE 1:500 AT A0 SIZE PLOT

AMENDMENTS	DATE	ISSUE
FOR DEVELOPMENT APPLICATION	13.03.20	E
REVISED WEST BASIN	28.02.20	D
REVISED FOR SITE CHANGES	05.02.20	C
FOR DEVELOPMENT APPLICATION	11.12.19	B
FOR INFORMATION ONLY	22.11.19	A

ARCHITECT: LEFFLER SIMES ARCHITECTS

CLIENT: Charter Hall

PROJECT: SSD7764 MASTERPLAN MOD1
HDBP STAGE 2
COWPASTURE ROAD, WETHERILL PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co11492.17-DA41

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DRAWING TITLE: CONCEPT CIVIL WORKS PLAN SHEET 1

DRAWING NO: Co11492.17- DA41 | ISSUE: E

BREAKLINE - REFER TO DRAWING DA41 FOR CONTINUATION

END RETAINING WALL 2

RETAINING WALL 2
WALL IN-CUT
MAX HEIGHT = 5.2m

LOT 1
LEVELS AS SHOWN
+/-500mm

EXISTING DAM TO BE REMOVED.
REFER TO DE-WATERING NOTES
ON DRAWING DA41

START RETAINING WALL 2

PROVIDE 10m RADIUS
TURNING HEAD

PROVIDE ROCK DROP SILL
(TYPICAL). REFER DETAIL

START RETAINING WALL 1

RETAINING WALL 1
WALL IN FILL
MAX HEIGHT = 3.0m

END RETAINING WALL 1

TOWER EXCLUSION ZONE.
NO EXCAVATIONS WITHIN
THIS ZONE

OUTLET FROM EASEMENT AS
PART OF STAGE 1
DEVELOPMENT

PROVIDE 3x900ø CLASS 3
CULVERTS UNDER ACCESS TRACK
TO CATER FOR 2.8m³/s WITH 50%
BLOCKAGE. REFER DETAIL

PROVIDE MIN 400 COVER TO
CULVERTS. ACCESS TRACK TO BE
RAISED LOCALLY OVER CULVERT
CROSSING

Q100 MAX FLOOD LEVEL
WITHIN CHANNEL R.L 63.30
FREEBOARD TO PAD 1 =2.4m

PROVIDE SWALE TO CONVEY
UPSTREAM Q100 FLOW 2.8m3/S.
BASE WIDTH = 1.0m
DEPTH = 0.7m

PROVIDE ROCK DROP SILL
(TYPICAL). REFER DETAIL

EXISTING ENDEAVOR
ENERGY TRANSMISSION
LINE & EASEMENT.

PROVIDE 4.5m WIDE
MAINTENANCE ACCESS
TRACK ON EXISTING
GRADE. REFER DETAIL

TOWER EXCLUSION ZONE.
NO EXCAVATIONS WITHIN
THIS ZONE

STAGE 1 BASIN
FSL 61.00

PROVIDE OPEN SWALE & DIRECT
TO THE SITE DISCHARGE POINT TO
CONVEY FLOWRATE OF 3.5m³/s

PIT A6

PIT A7

OSD/BIO-RETENTION BASIN
REFER DRAWING DA45

PROVIDE OPEN SWALE & DIRECT TO
THE SITE DISCHARGE POINT TO
CONVEY FLOWRATE OF 3.5m3/S

1200ø PIPE FOR FUTURE LOT 1
DRAINAGE CONNECTION POINT.
PROVIDE CAP AT END OF PIPE FOR
FUTURE CONNECTION

CONCRETE
OVERFLOW WEIR
20m WIDE

ALIGN NEW CHANNEL WITH EXISTING
CULVERT INLET AND MATCH LEVELS

PIT A8

OSD/BIO BASIN
RL 60.00

EXISTING TREE
TO BE RETAINED

Q100 MAX FLOOD LEVEL
WITHIN BASIN R.L 62.00

SITE DISCHARGE POINT.
PROVIDE OUTLET ENERGY DISSIPATER AND
ALIGN WITH EXISTING CHANNEL DISCHARGING
INTO THE EXISTING 3x900ø PIPES

PROVIDE ROCK MATRESS AT
EXISTING INLET

CONNECT AND DISCHARGE TO
EXISTING SWALE. ALIGN AND
MATCH LEVELS

ALIGN ACCESS TRACK
WITH EXISTING TRACK
AND MATCH LEVELS

PROPOSED HORSLEY DRIVE
BUSINESS PARK STAGE 2

EXISTING HORSLEY DRIVE
BUSINESS PARK STAGE 1

EXISTING HORSLEY DRIVE
BUSINESS PARK DETENTION &
WATER QUALITY BASIN 2.

Q100 MAX FLOOD LEVEL
WITHIN COWPASTURE
ROAD R.L 58.90

COWPASTURE ROAD

WATER
SUPPLY
CANAL

LOT 21
DP 13961

LOT 22
DP 13961

LOT 23
DP 13961

LOT 62
DP 13961

BLACKBERRY

ROAD

3m STORMWATER EASEMENT

EX1050ø

EX 3x900ø R.C.P

EX 2x1500ø R.C.P

EX 3mx2.4m BOX CULVERT

EX900ø

11
DA47

LEGEND:

LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY MONTEATH & POWYS DATED 20.06.16.

- SGGP, SINGLE GRATED GULLY PIT
- SJP, SEALED JUNCTION PIT
- KIP, KERB INLET PIT
- DRAINAGE LINE
- EXISTING DRAINAGE LINE
- OVERLAND FLOW PATH
- FINISHED PAVEMENT CONTOUR (MAJOR) 0.5m INTERVALS
- FINISHED PAVEMENT CONTOUR (MINOR) 0.1m INTERVALS

CONCEPT CIVIL WORKS PLAN - SHEET 2
SCALE 1:500

FOR DEVELOPMENT APPLICATION

5m 0 10 20 30 40 50m
SCALE 1:500 AT A0 SIZE PLOT

AMENDMENTS	DATE	ISSUE
FOR DEVELOPMENT APPLICATION	13.03.20	D
REVISED FOR SITE CHANGES	05.02.20	C
FOR DEVELOPMENT APPLICATION	11.12.19	B
FOR INFORMATION ONLY	22.11.19	A

ARCHITECT: LEFFLER SIMES ARCHITECTS

CLIENT: Charter Hall

PROJECT: SSD7764 MASTERPLAN MOD1
HDBP STAGE 2
COWPASTURE ROAD, WETHERILL PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co11492.17-DA42

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DRAWING TITLE: CONCEPT CIVIL WORKS PLAN SHEET 2

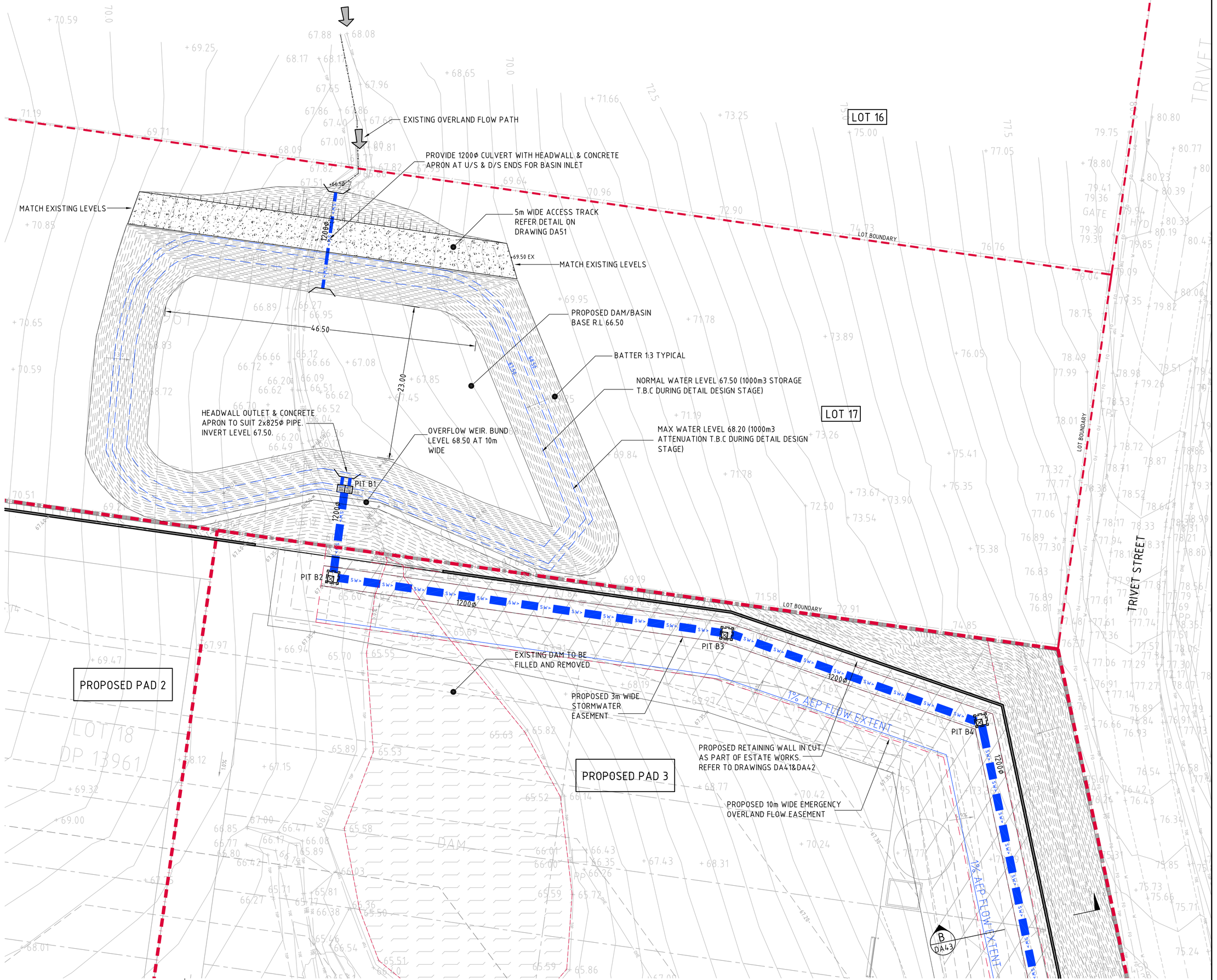
DRAWING No: Co11492.17- DA42 ISSUE: D

LEGEND:

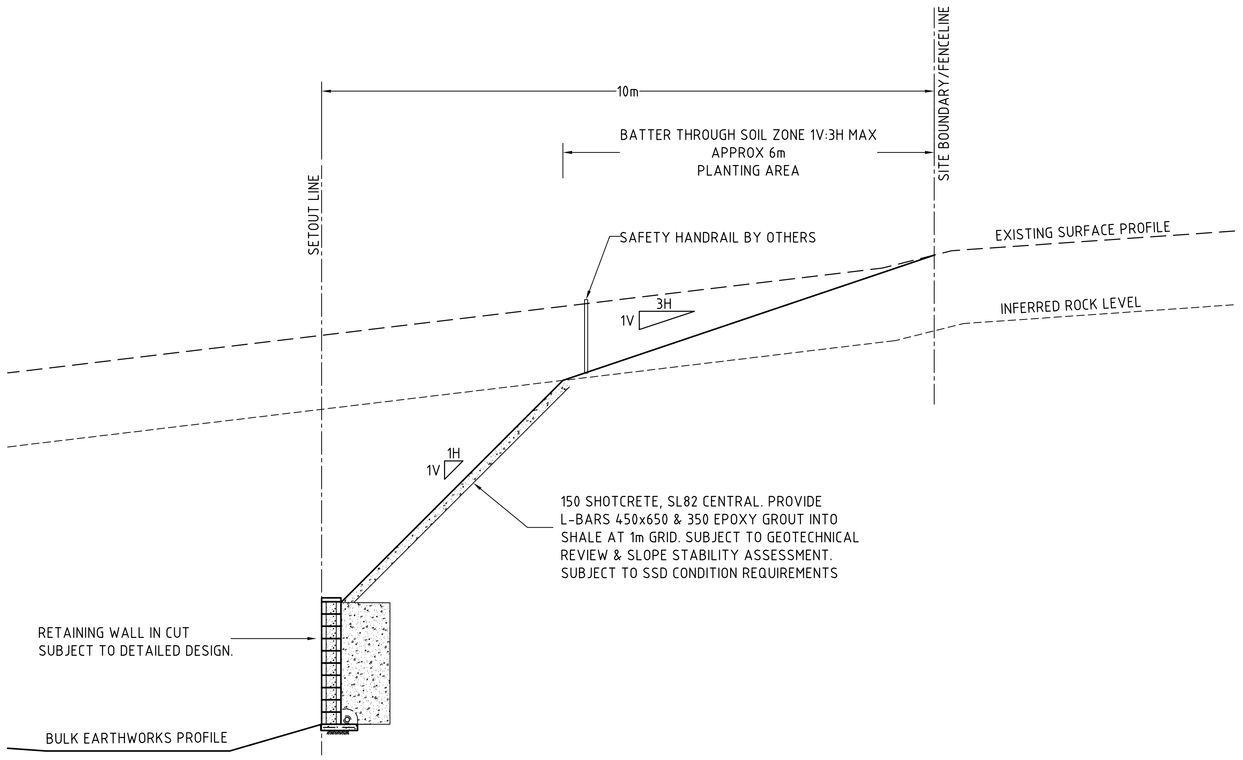
LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY MONTEATH & POWYS DATED 20.06.16.

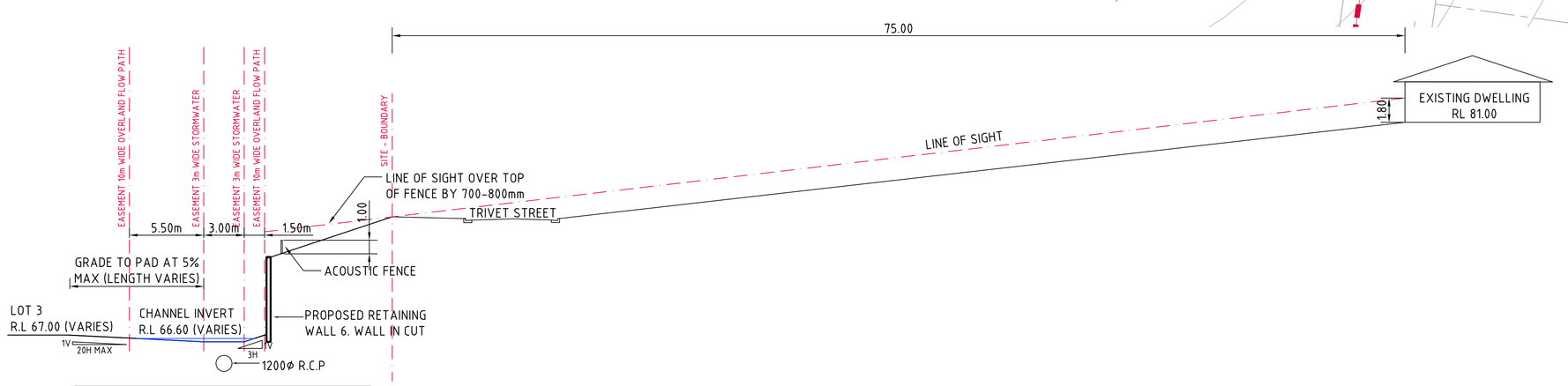
- SGGP, SINGLE GRATED GULLY PIT
- SJP, SEALED JUNCTION PIT
- KIP, KERB INLET PIT
- DRAINAGE LINE
- EXISTING DRAINAGE LINE
- OVERLAND FLOW PATH
- +50.00 – FINISHED LEVEL SPOT HEIGHT



CONCEPT BASIN 2 PLAN – NORTHERN BASIN
SCALE 1:250



SECTION 1:50 B DA43 ALTERNATE SECTION THROUGH RETAINING WALL 6 – CH 140-225



OVERLAND FLOW CHANNEL CAPACITY
Q100 = 3.27 m^3/s – TO BE ACTIVATED ON NORTHERN BASIN OUTLET BLOCKAGE ONLY
MANNINGS n = 0.012, MIN SLOPE = 0.3%
CANNEL CAPACITY (d = 250mm) = 3.46 m^3/s
VELOCITY = 2.00 m/s – CONCRETE LINED T.B.C DURING DETAILED DESIGN

SECTION 1:200 B DA43

FOR DEVELOPMENT APPLICATION

2m 0 5 10 15 20 25m
SCALE 1:250 AT A0 SIZE PLOT

AMENDMENTS	DATE	ISSUE
REVISED FOR SITE CHANGES	05.02.20	D
FOR DEVELOPMENT APPLICATION	16.12.19	C
FOR DEVELOPMENT APPLICATION	11.12.19	B
FOR INFORMATION ONLY	22.11.19	A

ARCHITECT: LEFFLER SIMES ARCHITECTS

CLIENT: Charter Hall

PROJECT: SSD7764 MASTERPLAN MOD1
HDBP STAGE 2
COWPASTURE ROAD, WETHERILL PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF.
M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co114.92.17-DA43

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DRAWING TITLE: CONCEPT 2 BASIN PLAN NORTHERN BASIN

DRAWING No: Co11492.17-DA43 ISSUE: D

NO WORKS TO OCCUR IN THIS AREA

MAX WATER LEVEL
WATER TO POND R.L 66.50

EXISTING DAM TO REMAIN

EXISTING OVERLAND
FLOWPATH REMAINS

PROVIDE OPEN SWALE TO
CONVEY FLOW TO NEW
DETENTION BASIN

PROPOSED OPEN CUT DRAINAGE
SWALE FOR UPSTREAM CATCHMENT
AS PART OF ESTATE WORKS.
REFER TO DRAWINGS DA41&DA42

PROPOSED LOT 2

PROPOSED LOT 1

A
DA44

DISCHARGE CONTROL
HEADWALL, ROCK
MATRESS AND INLET
TO 2x675ø R.C.P.
INVERT LEVEL 64.95

PIT B10

2x675ø

OVERFLOW WEIR
LEVEL R.L 66.20

MIN TOP OF WALL
LEVEL/BUND LEVEL
R.L 66.50

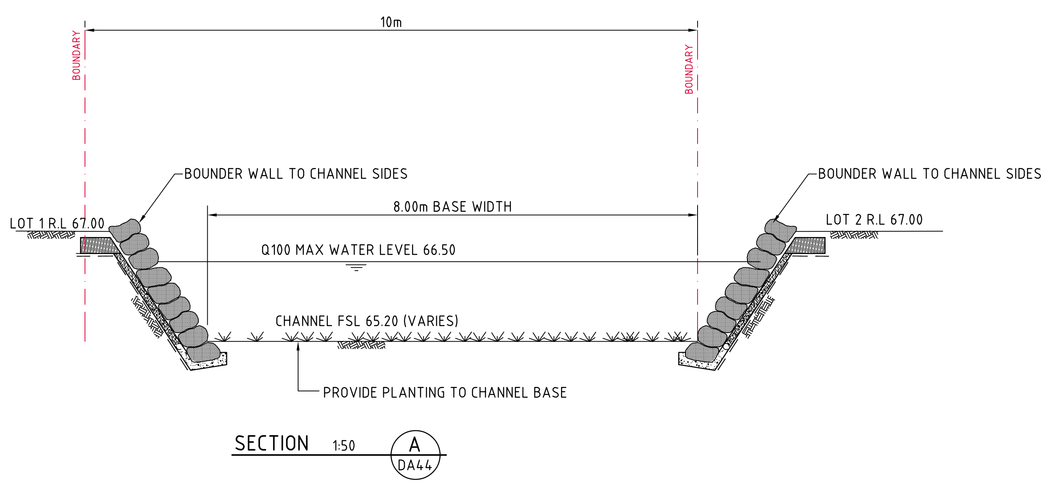
PROPOSED BOULDER WALL
TO EDGE OF CHANNEL

BATTER 1:3 TYPICAL

LOT BOUNDARY

LOT 21
DP 13961

CONCEPT BASIN PLAN - WESTERN BASIN
SCALE 1:250



SECTION 1:50 A DA44

LEGEND:

LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY MONTEATH & POWYS DATED 20.06.16.

- SGGP, SINGLE GRATED GULLY PIT
- SJP, SEALED JUNCTION PIT
- KIP, KERB INLET PIT
- DRAINAGE LINE
- EXISTING DRAINAGE LINE
- OVERLAND FLOW PATH
- FINISHED LEVEL SPOT HEIGHT

500mm 0 1 2 3 4 5m
SCALE 1:50 AT A0 SIZE PLOT

2m 0 5 10 15 20 25m
SCALE 1:250 AT A0 SIZE PLOT

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
REVISED FOR SITE CHANGES	28.02.20	C
REVISED FOR SITE CHANGES	05.02.20	B
FOR DEVELOPMENT APPLICATION	11.12.19	A

ARCHITECT: LEFFLER SIMES ARCHITECTS

CLIENT: Charter Hall

PROJECT: SSD7764 MASTERPLAN MOD1
HDBP STAGE 2
COWPASTURE ROAD, WETHERILL PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co11492.17-DA44

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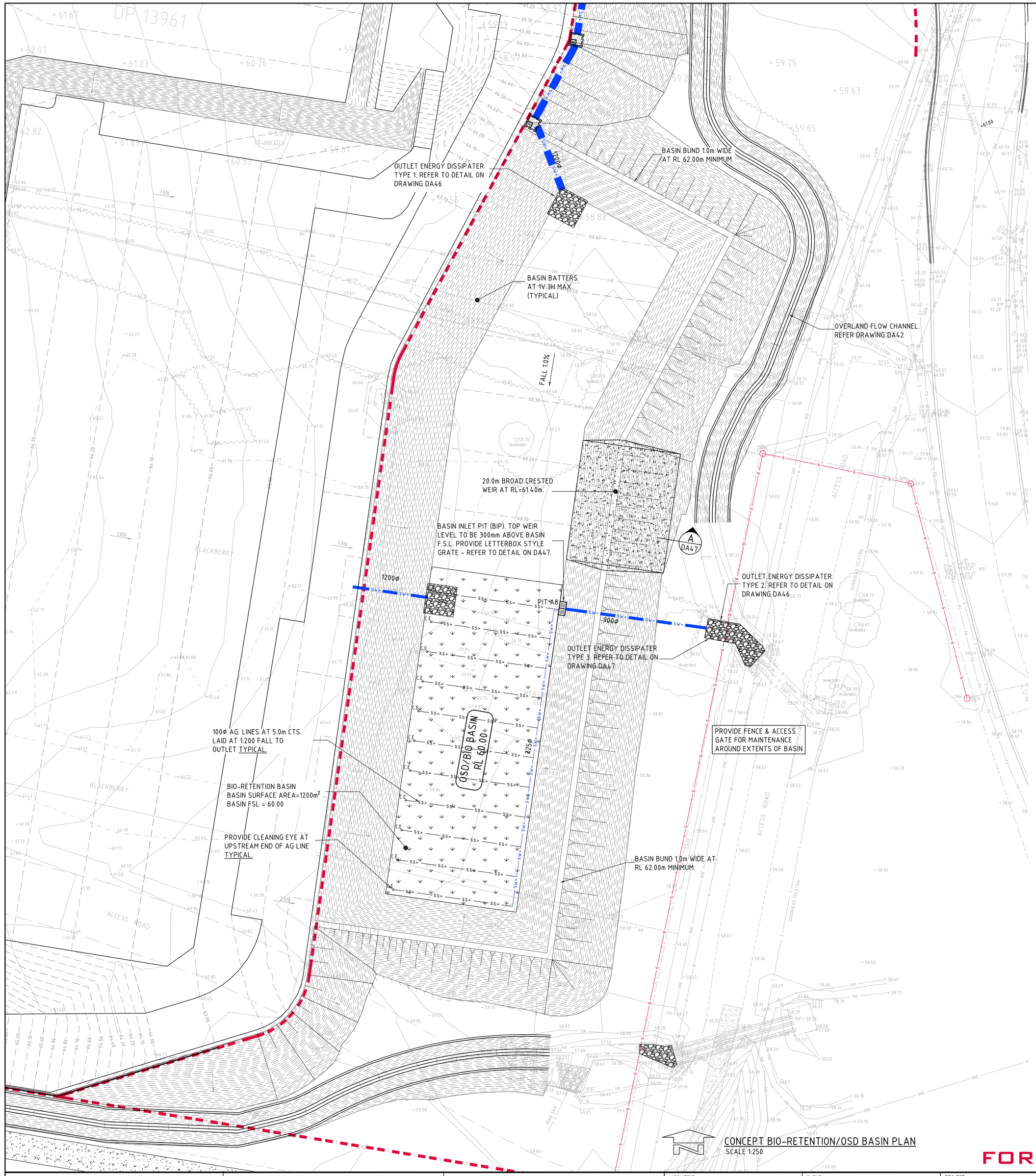
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DRAWING TITLE: CONCEPT BASIN 3 PLAN WESTERN BASIN

DRAWING No: Co11492.17-DA44

ISSUE: C



BASIN - WATER QUALITY DETAILS

STORMWATER TREATMENT MEASURE:	BIORETENTION
STORAGE PROPERTIES	
EXTENDED DETENTION DEPTH:	300mm
STORAGE SURFACE AREA:	2700sqm MIN.
FILTER & MEDIA PROPERTIES	
FILTRATION AREA:	1200sqm MIN
SAT. HYDRAULIC CONDUCTIVITY:	100mm/hr
FILTER DEPTH:	500mm

REFER TO DRG. DA46 FOR BIO-RENTION NOTES AND DETAILS.

BIO-RETENTION/OSD BASIN - HYDROLOGIC DETAILS

REFER TO CIVIL ENGINEERING REPORT 11492.17-02.rpt FOR OSD BASIN HYDROLOGIC DETAILS.

CONCEPT BIO-RETENTION/OSD BASIN PLAN

SCALE 1:250

FOR DEVELOPMENT APPLICATION

2m 0 5 10 15 20 25m

SCALE 1:250 AT A0 SIZE PLOT

AMENDMENTS	DATE	ISSUE
REVISED FOR SITE CHANGES	05.02.20	C
FOR DEVELOPMENT APPLICATION	11.12.19	B
FOR INFORMATION ONLY	22.11.19	A

ARCHITECT: LEFFLER SIMES ARCHITECTS

CLIENT: Charter Hall

PROJECT: SSD7764 MASTERPLAN MOD1
HDBP STAGE 2
COWPASTURE ROAD, WETHERILL PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co11492.17-DA45

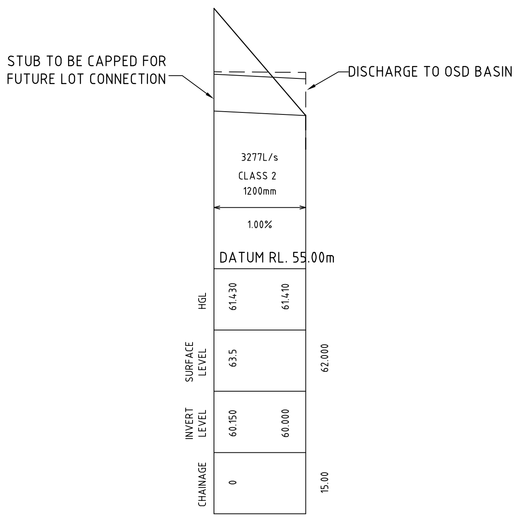
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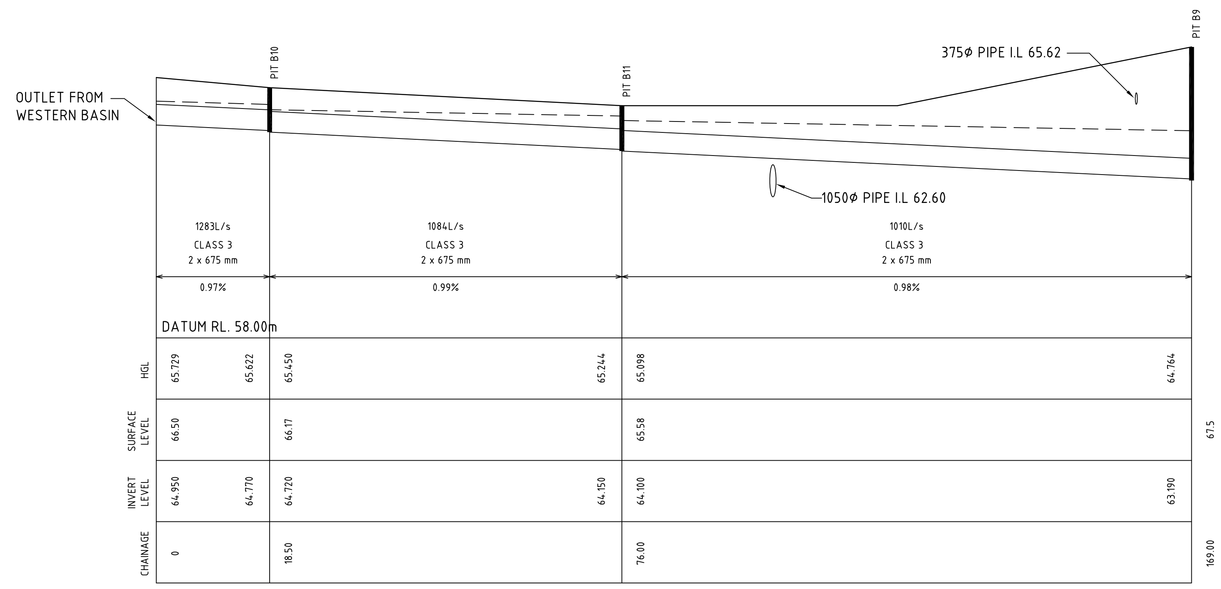
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DRAWING No: Co11492.17-DA45 ISSUE: C



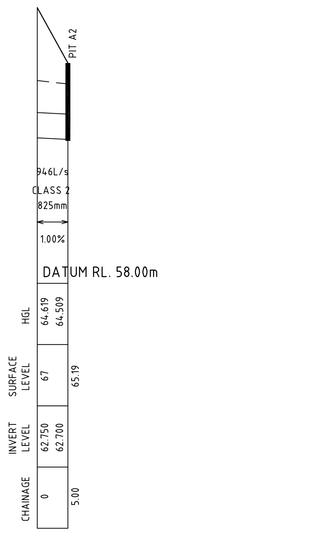
LONG SECTION - LOT 1 DRAINAGE STUB

SCALE 1:500 HORIZONTAL
1:100 VERTICAL



LONG SECTION - WESTERN BASIN TO PIT B9

SCALE 1:500 HORIZONTAL
1:100 VERTICAL
NOTE: H.G.L SHOWN FOR Q100 ARI STORM EVENT



LONG SECTION - LOT 3 DRAINAGE STUB

SCALE 1:500 HORIZONTAL
1:100 VERTICAL

LONG SECTION - PIT A9 TO PIT A4

SCALE 1:500 HORIZONTAL
1:100 VERTICAL

LONG SECTION - NORTHERN BASIN TO PIT B9

SCALE 1:500 HORIZONTAL
1:100 VERTICAL
NOTE: H.G.L SHOWN FOR Q100 ARI STORM EVENT

LONG SECTION - PIT A8 TO OUTLET

SCALE 1:500 HORIZONTAL
1:100 VERTICAL

LONG SECTION - PIT A1 TO BASIN

SCALE 1:500 HORIZONTAL
1:100 VERTICAL

H.G.L SHOWN FOR Q20 ARI STORM EVENT
UNLESS NOTED OTHERWISE

1m 0 1 2 3 4 5 6 7 8 9 10m
SCALE 1:100 AT A0 SIZE PLOT

5m 0 10 20 30 40 50m
SCALE 1:500 AT A0 SIZE PLOT

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
PIT B6&B7 REMOVED	28.02.20	B
ISSUED FOR DEVELOPMENT APPLICATION	11.12.19	A

ARCHITECT: LEFFLER SIMES ARCHITECTS

CLIENT: Charter Hall

PROJECT: SSD7764 MASTERPLAN MOD1
HDBP STAGE 2
COWPASTURE ROAD, WETHERILL PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co11492.17-DA48

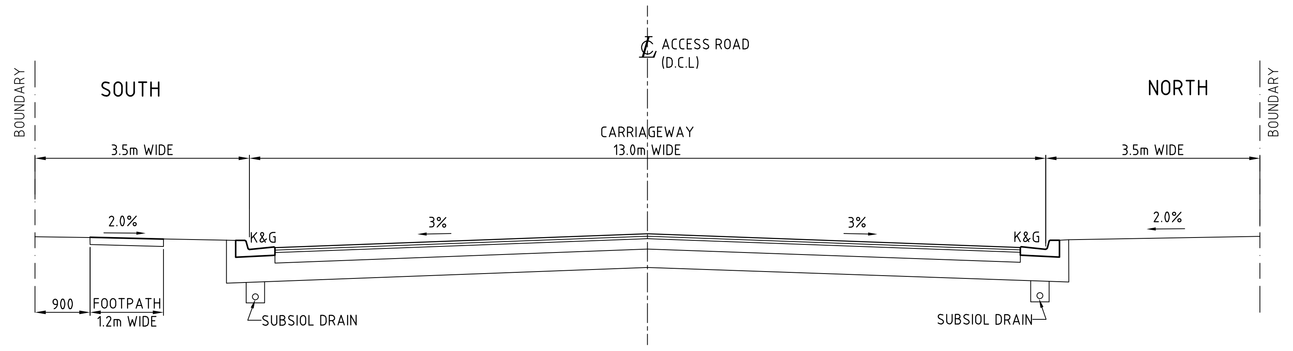
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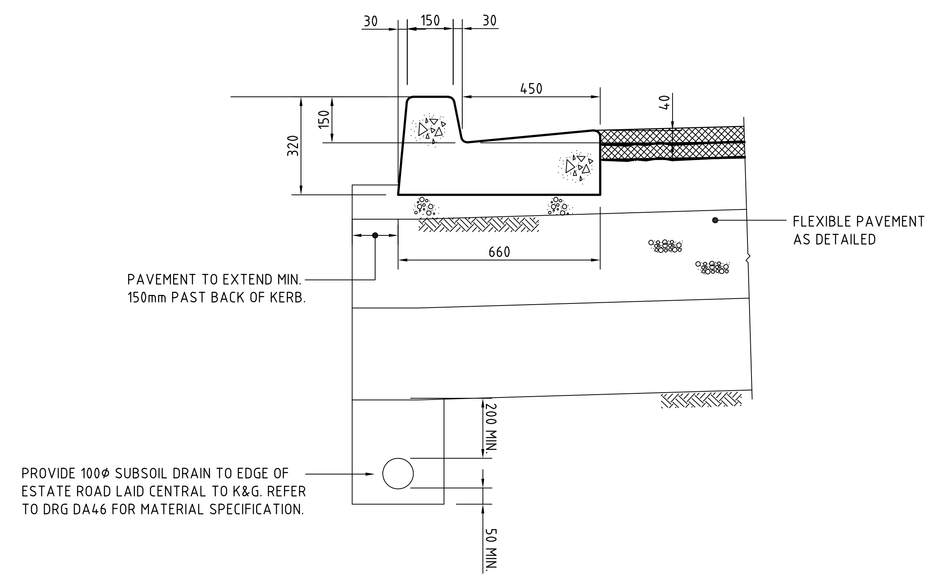
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DRAWING TITLE: STORMWATER DRAINAGE
LONG SECTIONS

DRAWING No: Co11492.17- DA48 | ISSUE: B

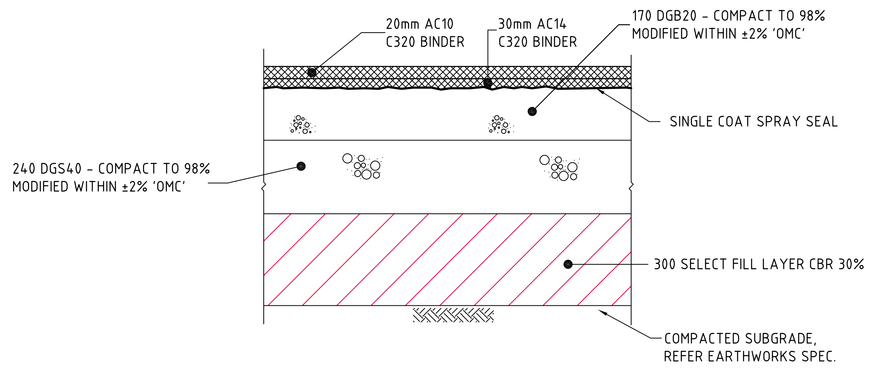


TYPICAL CROSS SECTION - ACCESS ROAD
SCALE 1:50

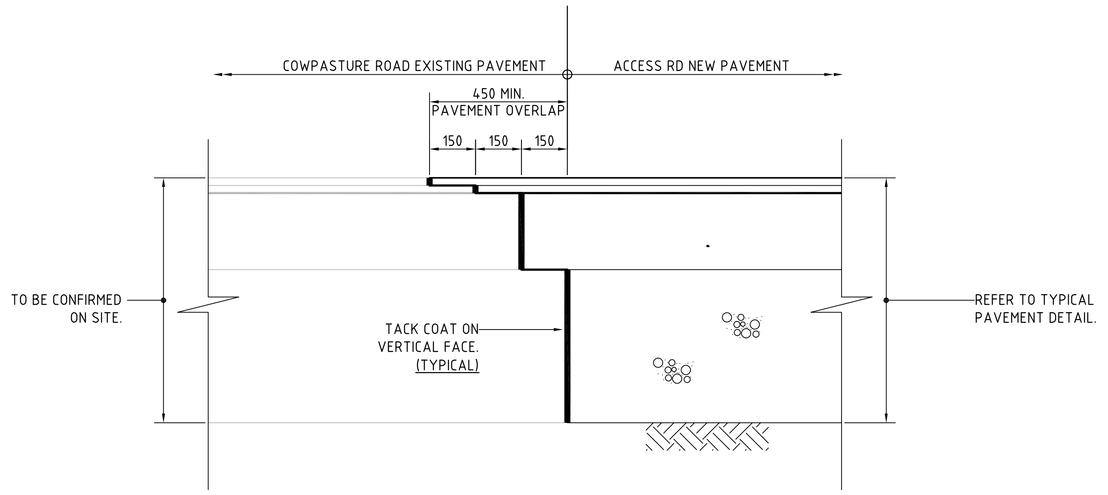


KERB & GUTTER (KG) & SUBSOIL DETAIL
SCALE 1:10

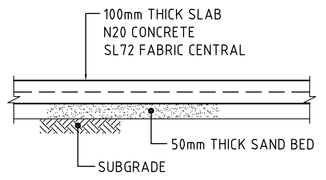
PROVIDE JOINTS IN KERB TO
MATCH JOINTS IN PAVEMENT



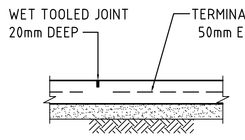
ACCESS ROAD PAVEMENT DETAIL
SCALE 1:10
DESIGN TRAFFIC $1x10^7$ ESA's
DESIGN CBR VALUE OF 3%



TYPICAL NEW / EXISTING
PAVEMENT INTERFACE DETAIL
SCALE 1:10

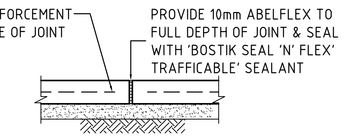


PEDESTRIAN SLAB
SCALE 1:10



WET TOOLED JOINT
SCALE 1:10

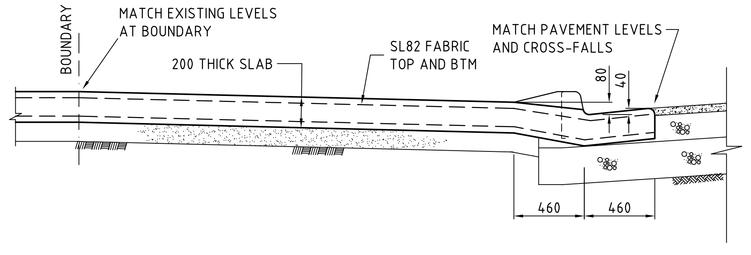
NOTE: PROVIDE SAWCUT
JOINTS AT 2000 MAX. CTS.



BUTT JOINT
SCALE 1:10

NOTE : PROVIDE EXPANSION
JOINTS AT 6000 MAX. CTS.

PEDESTRIAN SLAB DETAILS



INDUSTRIAL VEHICULAR CROSS OVER DETAIL - IVC
SCALE 1:20

100mm 0 200 400 600 800 1000mm
SCALE 1:10 AT A1 SIZE PLOT

500mm 0 1 2 3 4 5m
SCALE 1:50 AT A1 SIZE PLOT

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
ISSUED FOR DEVELOPMENT APPLICATION	11.12.19	A
ISSUED FOR INFORMATION	22.11.19	A

ARCHITECT
LEFFLER SIMESARCHITECTS

CLIENT
Charter Hall

PROJECT
SSD7764 MASTERPLAN MOD1
HDBP STAGE 2
COWPASTURE ROAD, WETHERILL PARK, NSW

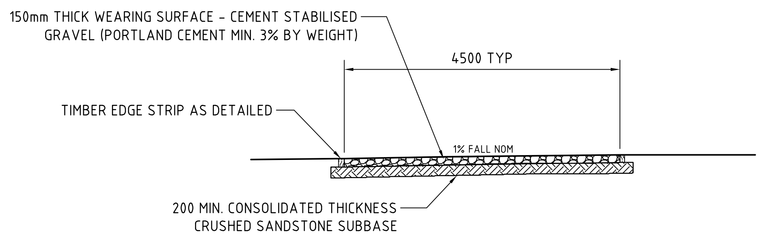
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M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co114.92.17-DA50

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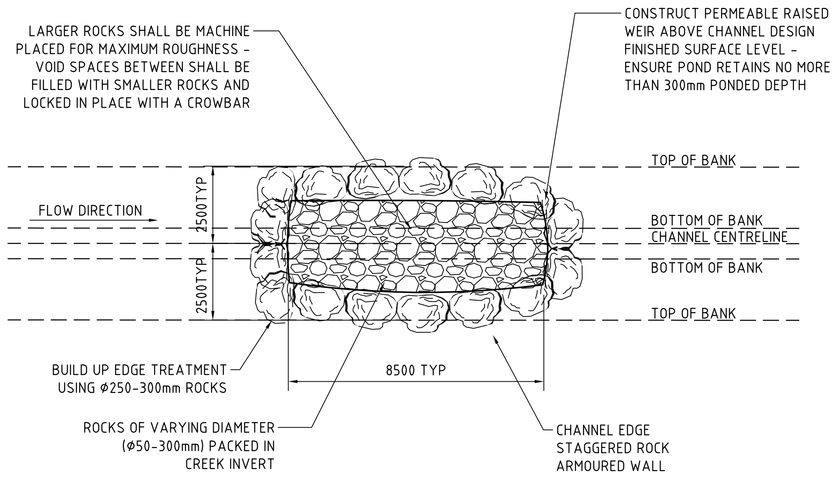
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DRAWING TITLE
ACCESS ROAD DETAILS

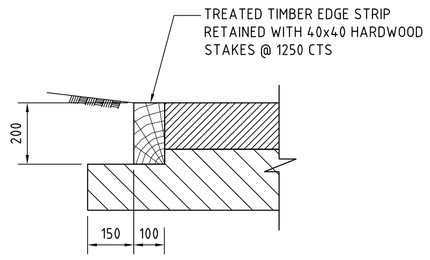
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ISSUE B



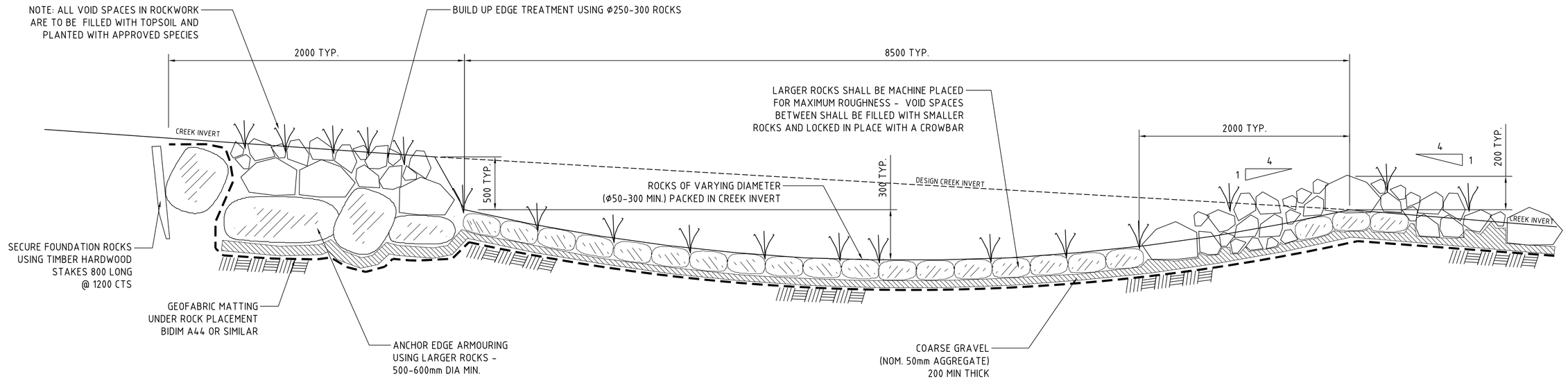
MAINTENANCE ACCESS TRACK PAVEMENT DETAIL
SCALE 1:50



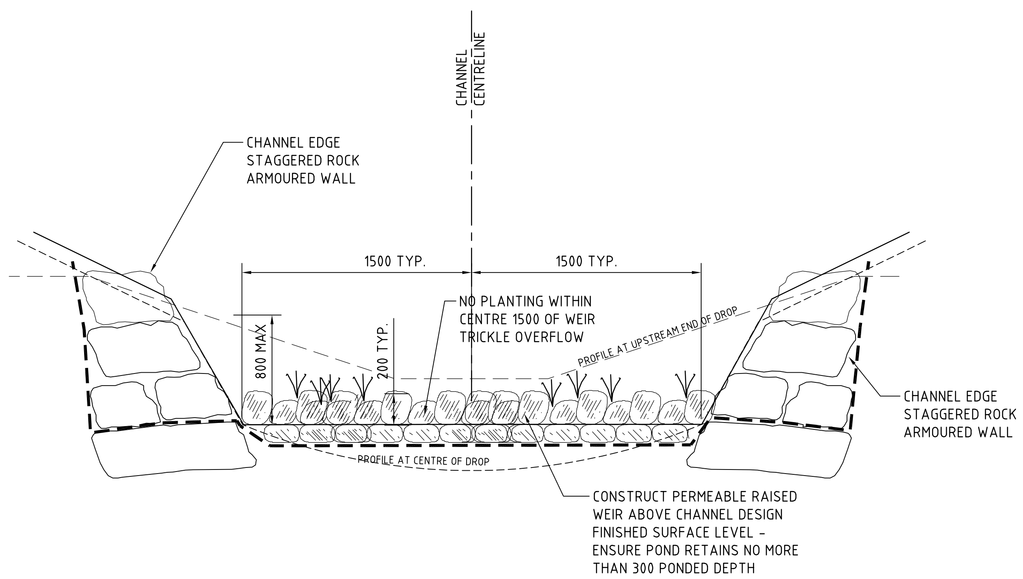
TYPICAL PLAN - ROCK DROP SILL
SCALE 1:100



TIMBER EDGE STRIP DETAIL
SCALE 1:10



TYPICAL DETAIL - ROCK DROP SILL AND WEIR
SCALE 1:20



TYPICAL DETAIL - ROCK DROP SILL AND WEIR
SCALE 1:20

1m 0 1 2 3 4 5 6 7 8 9 10m
SCALE 1:100 AT A0 SIZE PLOT

200mm 0 500 1000 1500 2000mm
SCALE 1:20 AT A0 SIZE PLOT

100mm 0 200 400 600 800 1000mm
SCALE 1:10 AT A0 SIZE PLOT

500mm 0 1 2 3 4 5m
SCALE 1:50 AT A0 SIZE PLOT

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
ISSUED FOR DEVELOPMENT APPLICATION	11.12.19	A

ARCHITECT
LEFFLER SIMESARCHITECTS

CLIENT
Charter Hall

PROJECT
SSD7764 MASTERPLAN MOD1
HDBP STAGE 2
COWPASTURE ROAD, WETHERILL PARK, NSW

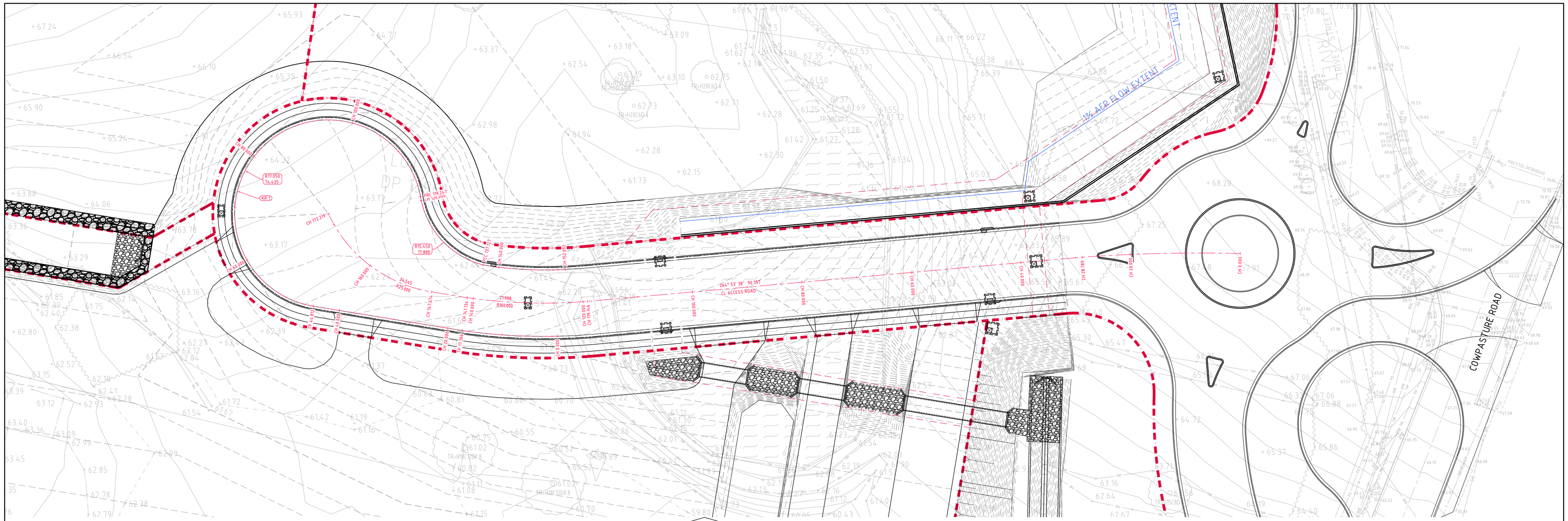
DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co114.92.17- DA51

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DRAWING TITLE
ACCESS TRACK & CHANNEL DETAILS

DRAWING No. Co11492.17- DA51
ISSUE A



ROAD ALIGNMENT PLAN
SCALE 1:250

DATUM 56.000

HORIZONTAL GEOMETRY			R300.000 A28.789			90.357 264°53'38"																R100.000 A21.988		6.540 279°18'13"	R25.000 A24.545		
CUT/FILL DEPTH	0.764		0.951		1.262	1.301	1.452	1.458	1.715	2.148	2.177	2.829	3.187	4.109	4.773	4.577	4.353	4.214	4.194	4.193	4.295	3.893	3.781	3.786	4.265	3.918	3.842	3.688	3.672	3.441	2.964	2.823
DESIGN LEVEL	68.808		68.568		68.233	68.199	67.987	67.883	67.838	67.413	67.378	66.878	66.628	66.390	65.990	65.690	65.578	65.498	65.398	65.378	65.398	65.428	65.618	65.478	65.578	65.678	65.689	65.755	65.778	65.878	65.978	66.008
EXISTING LEVEL	68.044		67.555		66.97	66.90	66.04	66.24	66.12	65.29	65.20	64.05	63.24	62.28	61.22	61.23	61.23	61.22	61.20	61.19	61.19	61.54	62.39	62.39	61.31	61.77	61.85	62.07	62.11	62.42	63.03	63.38
CHAINAGE	0.000		10.000		18.905	20.000	28.789	28.905	30.000	38.905	40.000	50.000	55.000	60.000	70.000	80.000	85.000	90.000	100.000	105.001	110.000	115.000	119.166	120.000	130.000	140.000	141.104	142.674	150.000	160.000	170.000	172.270

LONGITUDINAL SECTION - CL ACCESS ROAD
HORIZONAL SCALE 1:500
VERTICAL SCALE 1:100

DATUM 56.000

HORIZONTAL GEOMETRY		R105.592 A17.366			27.446 279°18'13"						R17.050 A74.435													R15.450 A17.880		R68.050 A14.965	
CUT/FILL DEPTH			4.236	4.159	4.077	3.985	3.625	3.459	3.272	2.839	2.764	2.232	1.878	1.871	1.666	1.598	1.525	1.465	2.407	3.711	2.725	2.985	3.324			
DESIGN LEVEL			65.486	65.510	65.538	65.638	65.736	65.784	65.836	65.936	65.948	66.018	66.022	66.022	66.017	65.956	65.945	65.855	65.754	65.646	65.653	65.551	65.479			
EXISTING LEVEL	61.108	61.107	61.25	61.37	61.46	61.65	62.11	62.33	62.56	63.12	63.38	63.78	64.14	64.15	64.35	64.45	64.42	64.81	63.95	62.95	62.93	62.57	62.15	61.95	61.54	64.54
CHAINAGE	0.000	10.000	15.000	17.366	20.000	30.000	40.000	44.912	50.000	60.000	61.140	70.000	76.031	76.140	80.000	90.000	91.140	100.000	110.000	119.247	120.000	130.000	137.127	140.000	150.000	152.092

LONGITUDINAL SECTION - KR 1
HORIZONAL SCALE 1:500
VERTICAL SCALE 1:100

2m 0 5 10 15 20 25m
SCALE 1:250 AT A0 SIZE PLOT

1m 0 1 2 3 4 5 6 7 8 9 10m
SCALE 1:100 AT A0 SIZE PLOT

5m 0 10 20 30 40 50m
SCALE 1:500 AT A0 SIZE PLOT

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
ISSUED FOR DEVELOPMENT APPLICATION	13.03.20	C
REVISED FOR SITE CHANGES	05.02.20	B
ISSUED FOR DEVELOPMENT APPLICATION	11.12.19	A

ARCHITECT
LEFFLER SIMES ARCHITECTS

CLIENT
Charter Hall

PROJECT
SSD7764 MASTERPLAN MOD1
HDBP STAGE 2
COWPASTURE ROAD, WETHERILL PARK, NSW

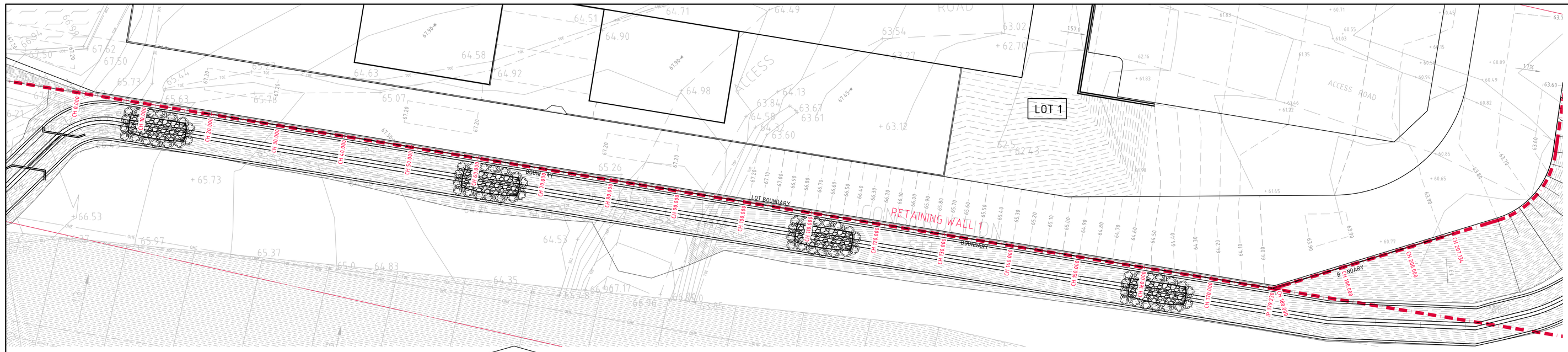
DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF.
M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co114.92.17-DA52

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DRAWING TITLE
ROAD ALIGNMENT PLAN AND LONG SECTIONS

DRAWING No. Co114.92.17- DA52 ISSUE C



RETAINING WALL 1 PLAN
SCALE 1:250

LEGEND:

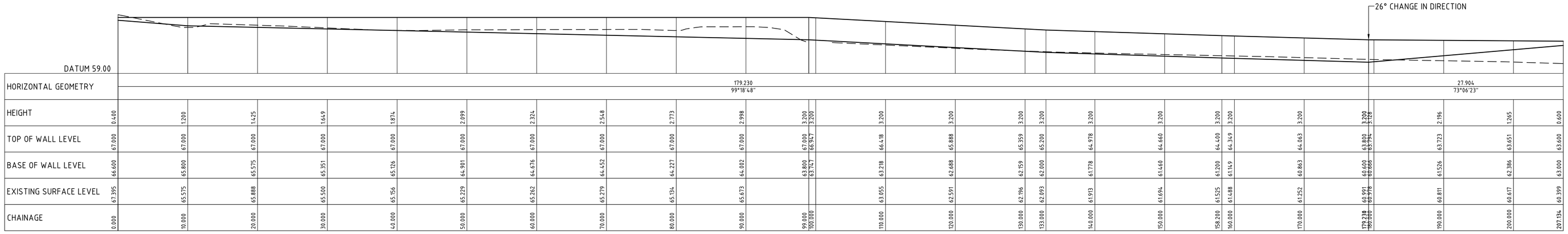
LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY MATTHEW FREEBURN SURVEYOR DATED DEC 2017.

- SGGP, SINGLE GRATED GULLY PIT
- SJP, SEALED JUNCTION PIT
- KIP, KERB INLET PIT
- GD, GRATED DRAIN (300W x 225D UNO)
- 50.00 – FINISHED PAVEMENT CONTOUR (MAJOR) 0.5m INTERVALS
- 50.10 – FINISHED PAVEMENT CONTOUR (MINOR) 0.1m INTERVALS
- +50.10 – FINISHED PAVEMENT SPOT HEIGHT

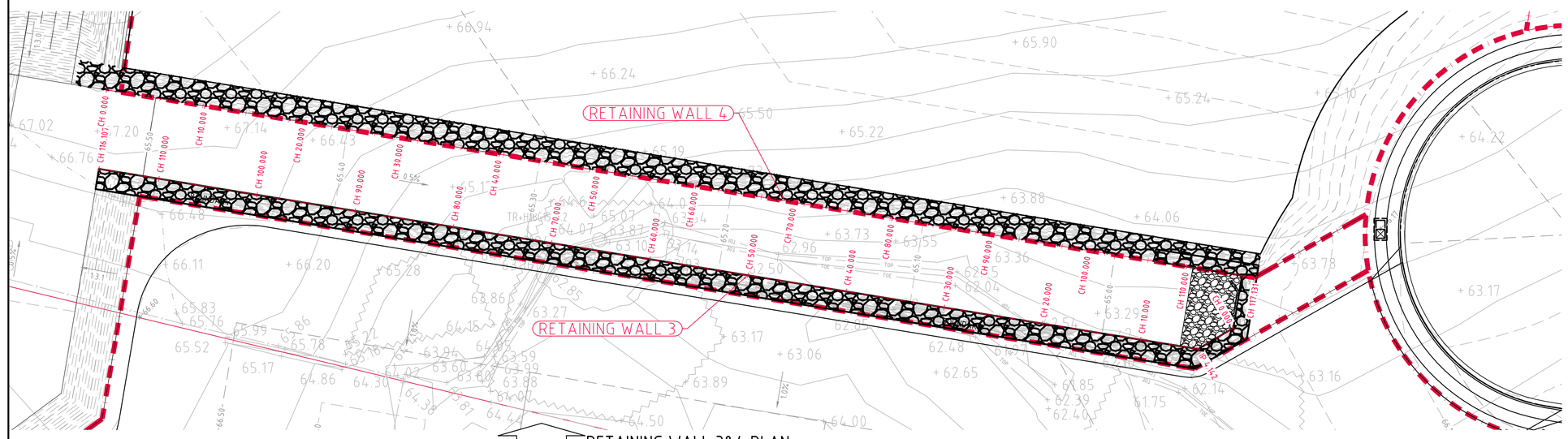
NOTE:

REFER TO D&C CONTRACTORS DETAILS FOR WALL STRUCTURAL DETAILS.



ELEVATION RETAINING WALL 1

SCALE 1:250
APPROXIMATE SURFACE AREA = 513m²
MAX EXPOSED WALL HEIGHT 3.0m
WALL HEIGHT ALLOWS FOR 0.2m FOOTING EMBEDMENT



RETAINING WALL 3&4 PLAN
SCALE 1:250
NOTE: REFER TO DRAWING EW62 FOR RETAINING WALL 3 & 4 ELEVATIONS

REINFORCED EARTH RETAINING WALL NOTES :

1. ALL COMPONENTS AND INSTALLATION SHALL COMPLY WITH AS4678 AND THE STANDARDS REFERRED TO THEREIN.
2. MINIMUM HEIGHT (H) TO GEOGRID REINFORCEMENT LENGTH (L) TO BE 1.0.
3. MINIMUM BEARING CAPACITY OF FOUNDATION (BASED ON MINIMUM H/L RATIO OF 1.0) TO BE AS FOLLOWS :
   a. H MAX. 2.0m = 100 kPa
   b. H MAX. 3.5m = 150 kPa
   c. H MAX. 5.0m = 200 kPa

   BEFORE COMMENCEMENT OF CONSTRUCTION THE FOUNDATION SHALL BE INSPECTED AND VERIFIED BY A QUALIFIED GEOTECHNICAL ENGINEER.
4. WHERE MINIMUM BEARING IS NOT ACHIEVABLE OR NOT MEETING DESIGN REQUIREMENT, THE FOUNDATION MATERIAL IS TO BE EXCAVATED AND REPLACED WITH APPROVED MATERIAL PLACED IN ACCORDANCE WITH THE FILLING SPECIFICATION TO A MINIMUM COMPACTION OF 100% SMDD AND PLACED WITHIN 2% OF OMC.
5. MINIMUM SURCHARGE LOADS TO BE APPLIED AS FOLLOWS U.N.O. ON PLAN:
   a. LIVE LOAD = 20 kPa
   b. DEAD LOAD = 5 kPa
   c. CONSTRUCTION TRAFFIC LIVE LOAD = 10 kPa
6. THE GEOGRIDS SHALL BE OF THE TYPE AND INDEX STRENGTH NOMINATED ON THE DRAWINGS. THE MINIMUM GEOGRIDS SHALL BE A SINGLE LENGTH IN THE DIRECTION OF DESIGN TENSION, NOT LAPPED, MAKING PROVISION FOR CONNECTION TO THE FACING ACROSS THE WHOLE WIDTH OF THE FACING AND PROVIDING FOR THE SPECIFIED ANCHORAGE WITHIN THE DESIGNATED ANCHORAGE ZONE. GEOGRIDS SHALL COVER THE WHOLE OF THE PLAN AREA BEHIND THE WALL FOR THE SPECIFIED ANCHORAGE LENGTH AND SHALL BE LAPPED WITH ADJACENT SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
7. MINIMUM WALL EMBEDMENT AT THE TOE OF THE WALL TO BE 300mm.
8. DESIGN LIFE OF STRUCTURE IS TO BE 100 YEARS.
9. SELECT BACKFILL MATERIAL WITHIN THE REINFORCED SOIL BLOCK SHALL BE SOUND GRANULAR MATERIAL OF NATURAL OR INDUSTRIAL ORIGIN, NON-EXPANSIVE, FREE FROM ORGANIC OR OTHER DELETERIOUS MATERIAL CONFORMING TO THE PHYSICAL, CHEMICAL AND ELECTROCHEMICAL LIMITS AS SPECIFIED AND SHALL NOT BE SUBJECT TO BREAKDOWN UNDER COMPACTION. THE SELECT BACKFILL MATERIAL IS TO HAVE THE FOLLOWING PARAMETERS:
   a. MINIMUM INTERNAL FRICTION, Ø = 34°
   b. EFFECTIVE COHESION, C'= 0 kPa
   c. UNIT WEIGHT = 21 kN/m³
   d. PH BETWEEN 4 AND 9.
10. SELECT BACKFILL IS TO BE PLACED AND COMPACTED IN LAYERS NOT MORE THAN 300mm (LOOSE). COMPACTION TO NOT LESS THAN 100% SMDD WILL BE ACHIEVED AND MATERIAL PLACED WITHIN 2% OF OMC. DENSITY TESTING SHALL BE PERFORMED IN EACH COMPACTED LIFT IN ACCORDANCE WITH AS3798.
11. PROVIDE A DRAINAGE LAYER DIRECTLY BEHIND THE FACING UNITS IN A MINIMUM 300mm WIDE 12–20mm AGGREGATE LAYER. FACING UNIT VOIDS TO BE FILLED WITH AGGREGATE. PROVIDE 100mm MINIMUM AG. DRAIN IN GEOTEXTILE SOCK AT TOE OF WALL FACING AND CONNECT TO DRAINAGE SYSTEM AT 30m MAX. SPACING.
12. THE NEED FOR A CHIMNEY DRAIN OR DRAINAGE AT THE REAR OF THE MASS SOIL BLOCK IS TO BE CONFIRMED ON SITE BY THE GEOTECHNICAL ENGINEER AND DESIGNER FOLLOWING PREPARATION OF THE FOUNDATION AND PRIOR TO CONSTRUCTION OF THE MASS SOIL BLOCK.
13. CONSTRUCTION EQUIPMENT WEIGHING MORE THAN 500kG STATIC WEIGHT IS TO BE KEPT BACK 1.5m FROM THE REAR FACE OF THE WALL FACING UNITS. COMPACTION OF THE SELECT FILL MATERIAL WITHIN THE 1.5m STRIP ADJACENT TO THE WALL SHALL BE ACHIEVED BY LIGHT MECHANICAL TAMPERS (VIBRATING PLATE, TRENCH COMPACTOR OR SIMILAR) TO GIVE THE SAME DENSITY AS IN THE REMAINDER OF THE SELECT FILL.
14. ALL DESIGN AND CONSTRUCT WALL SYSTEM TO BE COMPLETED IN ACCORDANCE WITH THESE NOTES.

RETAINING WALL NOTES :

1. ALL COMPONENTS AND INSTALLATION SHALL COMPLY WITH AS4678 AND THE STANDARDS REFERRED TO THEREIN.
2. MINIMUM BEARING CAPACITY OF FOUNDATION TO BE AS FOLLOWS :
   a. H MAX. 2.0m = 100 kPa
   b. H MAX. 3.5m = 150 kPa
   c. H MAX. 5.0m = 200 kPa

   BEFORE COMMENCEMENT OF CONSTRUCTION THE FOUNDATION SHALL BE INSPECTED AND VERIFIED BY A QUALIFIED GEOTECHNICAL ENGINEER.
3. WHERE MINIMUM BEARING IS NOT ACHIEVABLE OR NOT MEETING DESIGN REQUIREMENT, THE FOUNDATION MATERIAL IS TO BE EXCAVATED AND REPLACED WITH APPROVED MATERIAL PLACED IN ACCORDANCE WITH THE FILLING SPECIFICATION TO A MINIMUM COMPACTION OF 100% SMDD AND PLACED WITHIN 2% OF OMC.
4. MINIMUM SURCHARGE LOADS TO BE APPLIED AS FOLLOWS U.N.O.
5. ON PLAN :
   a. LIVE LOAD = 20 kPa
   b. DEAD LOAD = 5 kPa
   c. CONSTRUCTION TRAFFIC LIVE LOAD = 10 kPa
6. MINIMUM WALL EMBEDMENT AT THE TOE OF THE WALL TO BE 300mm MINIMUM UNLESS NOTED OTHERWISE.
7. DESIGN LIFE OF STRUCTURE IS TO BE 100 YEARS.
8. TIED WALLS ARE TO BE TEMPORARILY PROPPED AT TOP UNTIL SUCH TIME THE TOP OF WALL IS TIED TO THE SLAB AND 28-DAY CONCRETE STRENGTH HAS BEEN ACHIEVED.
9. CONSTRUCTION EQUIPMENT WEIGHING MORE THAN 500KG STATIC WEIGHT IS TO BE KEPT BACK 1.5m FROM THE REAR FACE OF THE WALL FACING UNITS. COMPACTION OF THE SELECT FILL MATERIAL WITHIN THE 1.5m STRIP ADJACENT TO THE WALL SHALL BE ACHIEVED BY LIGHT MECHANICAL TAMPERS (VIBRATING PLATE, TRENCH COMPACTOR OR SIMILAR) TO GIVE THE SAME DENSITY AS IN THE REMAINDER OF THE SELECT FILL.
10. ALL DESIGN AND CONSTRUCT WALL SYSTEM TO BE COMPLETED IN ACCORDANCE WITH THESE NOTES.

2m 0 5 10 15 20 25m
SCALE 1:250 AT A0 SIZE PLOT

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
FOR DEVELOPMENT APPLICATION	25.06.20	A

CLIENT: Charter Hall

PROJECT: HORSLEY DRIVE BUSINESS PARK STAGE 2-EARLY WORKS
COWPASTURE ROAD, WETHERILL PARK, NSW

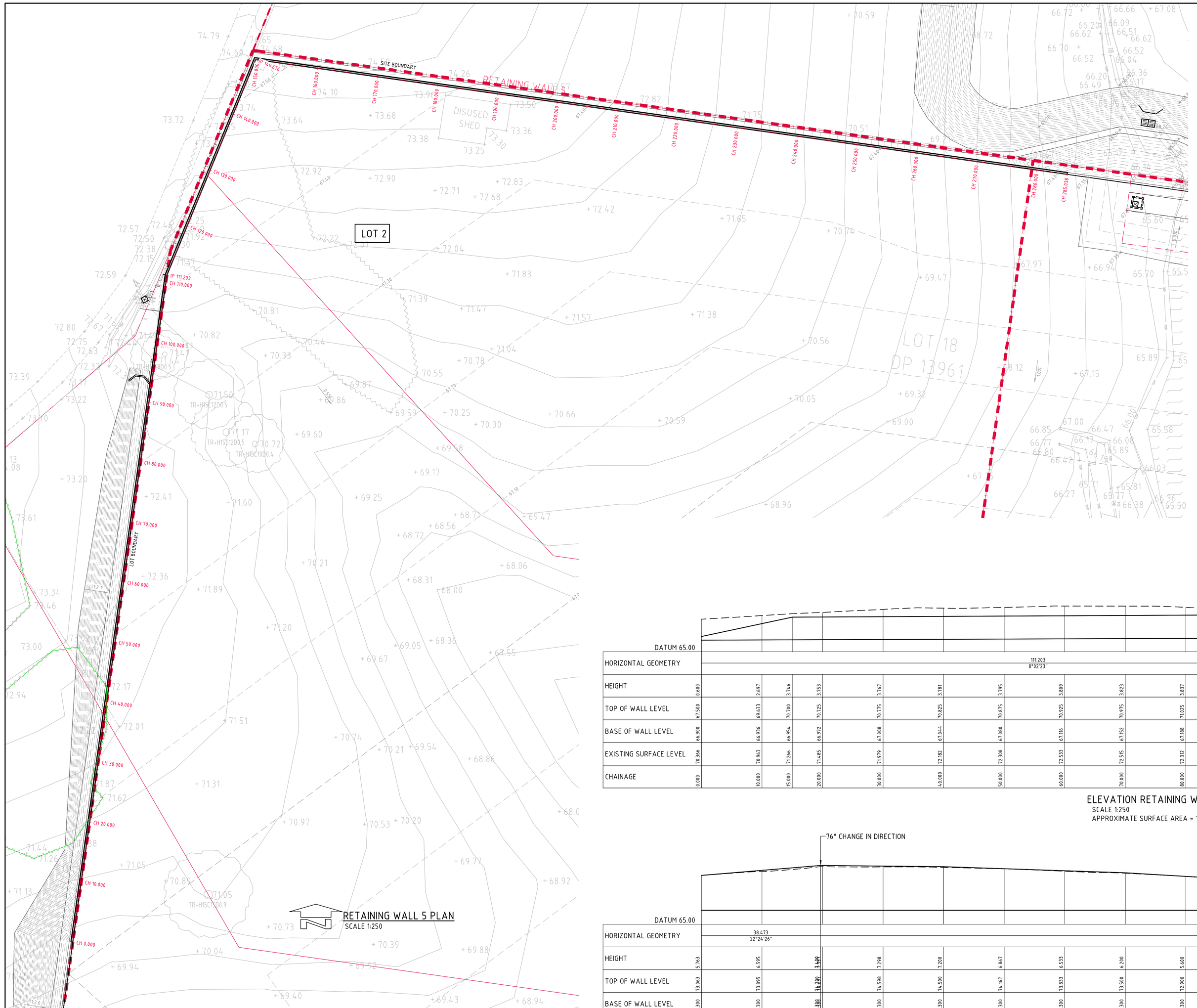
DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF.
M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co114-92.17-DA61

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DRAWING TITLE: RETAINING WALL PLAN AND ELEVATIONS SHEET 1

DRAWING No: Co11492.17-DA61 ISSUE: A



RETAINING WALL 5 PLAN
SCALE 1:250

LEGEND:

LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY MATTHEW FREEBURN SURVEYOR DATED DEC 2017.

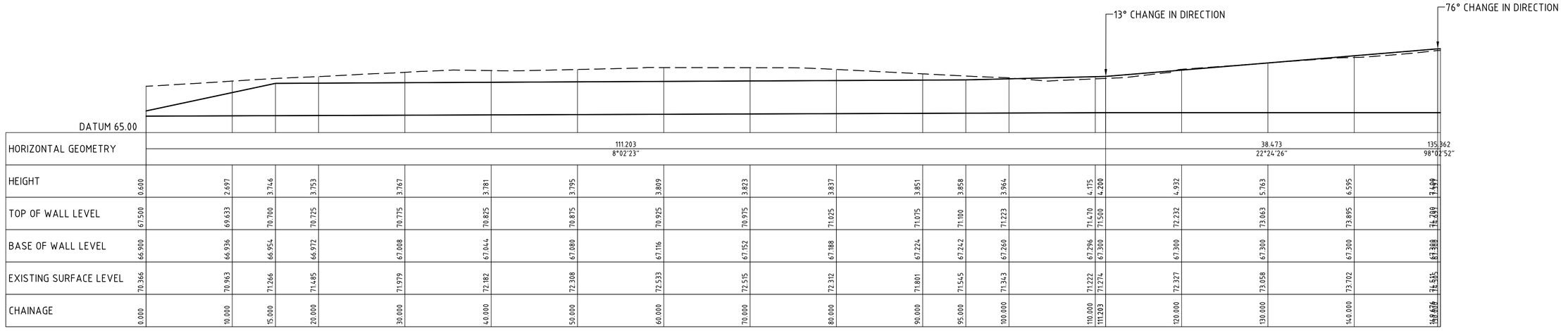
- SGGP, SINGLE GRATED GULLY PIT
- SJP, SEALED JUNCTION PIT
- KIP, KERB INLET PIT
- GD, GRATED DRAIN (300W x 225D UNO)
- 50.00 – FINISHED PAVEMENT CONTOUR (MAJOR) 0.5m INTERVALS
- 50.10 – FINISHED PAVEMENT CONTOUR (MINOR) 0.1m INTERVALS
- +50.10 – FINISHED PAVEMENT SPOT HEIGHT

NOTE:

REFER TO D&C CONTRACTORS DETAILS FOR WALL STRUCTURAL DETAILS.

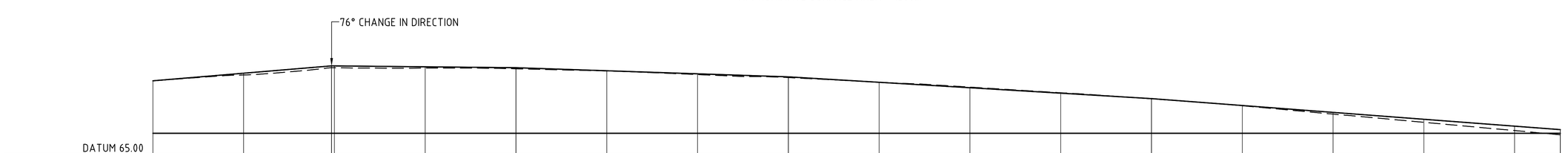
RETAINING WALL NOTES :

REFER TO DRAWING DA61 FOR RETAINING WALL NOTES



DATUM 65.00																									
HORIZONTAL GEOMETRY																									
HEIGHT	0.600		2.697	3.746	3.753		3.767		3.781		3.795		3.809		3.823		3.837		3.851		3.858		3.944		4.175	4.269		4.932		5.763		6.595		7.497
TOP OF WALL LEVEL	67.500		69.633	70.700	70.725		70.775		70.825		70.875		70.925		70.975		71.025		71.075		71.100		71.223		71.430	71.550		72.232		73.063		73.895		74.797
BASE OF WALL LEVEL	66.900		66.936	66.950	66.972		67.008		67.044		67.080		67.116		67.152		67.188		67.224		67.242		67.260		67.296	67.300		67.300		67.300		67.300		67.300
EXISTING SURFACE LEVEL	70.366		70.963	71.266	71.495		71.979		72.382		72.308		72.533		72.515		72.312		71.801		71.545		71.343		71.022	71.274		72.327		73.058		73.702		74.515
CHAINAGE	8.000		10.000	15.000	20.000		30.000		40.000		50.000		60.000		70.000		80.000		90.000		95.000		100.000		105.000	111.203		120.000		130.000		140.000		149.628

ELEVATION RETAINING WALL 5
SCALE 1:250
APPROXIMATE SURFACE AREA = 1300m²



DATUM 65.00																									
HORIZONTAL GEOMETRY																									
HEIGHT	5.763		6.595		7.497		7.298		7.200		6.867		6.533		6.200		5.600		5.000		4.400		3.800		3.645		2.298		1.535		0.780		0.400
TOP OF WALL LEVEL	73.063		73.895		74.797		74.598		74.500		74.167		73.833		73.500		72.900		72.300		71.700		71.100		70.345		69.590		68.835		68.080		67.700
BASE OF WALL LEVEL	67.300		67.300		67.300		67.300		67.300		67.300		67.300		67.300		67.300		67.300		67.300		67.300		67.300		67.300		67.300		67.300		67.300
EXISTING SURFACE LEVEL	73.058		73.702		74.515		74.456		74.382		74.141		73.747		73.472		72.912		72.373		71.759		71.079		70.322		69.484		68.502		67.600		67.109
CHAINAGE	130.000		140.000		149.628		150.000		160.000		170.000		180.000		190.000		200.000		210.000		220.000		230.000		240.000		250.000		260.000		270.000		280.000		285.938

ELEVATION RETAINING WALL 5
SCALE 1:250
APPROXIMATE SURFACE AREA = 1300m²

2m 0 5 10 15 20 25m
SCALE 1:250 AT A0 SIZE PLOT

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
FOR DEVELOPMENT APPLICATION	25.06.20	A

CLIENT: Charter Hall

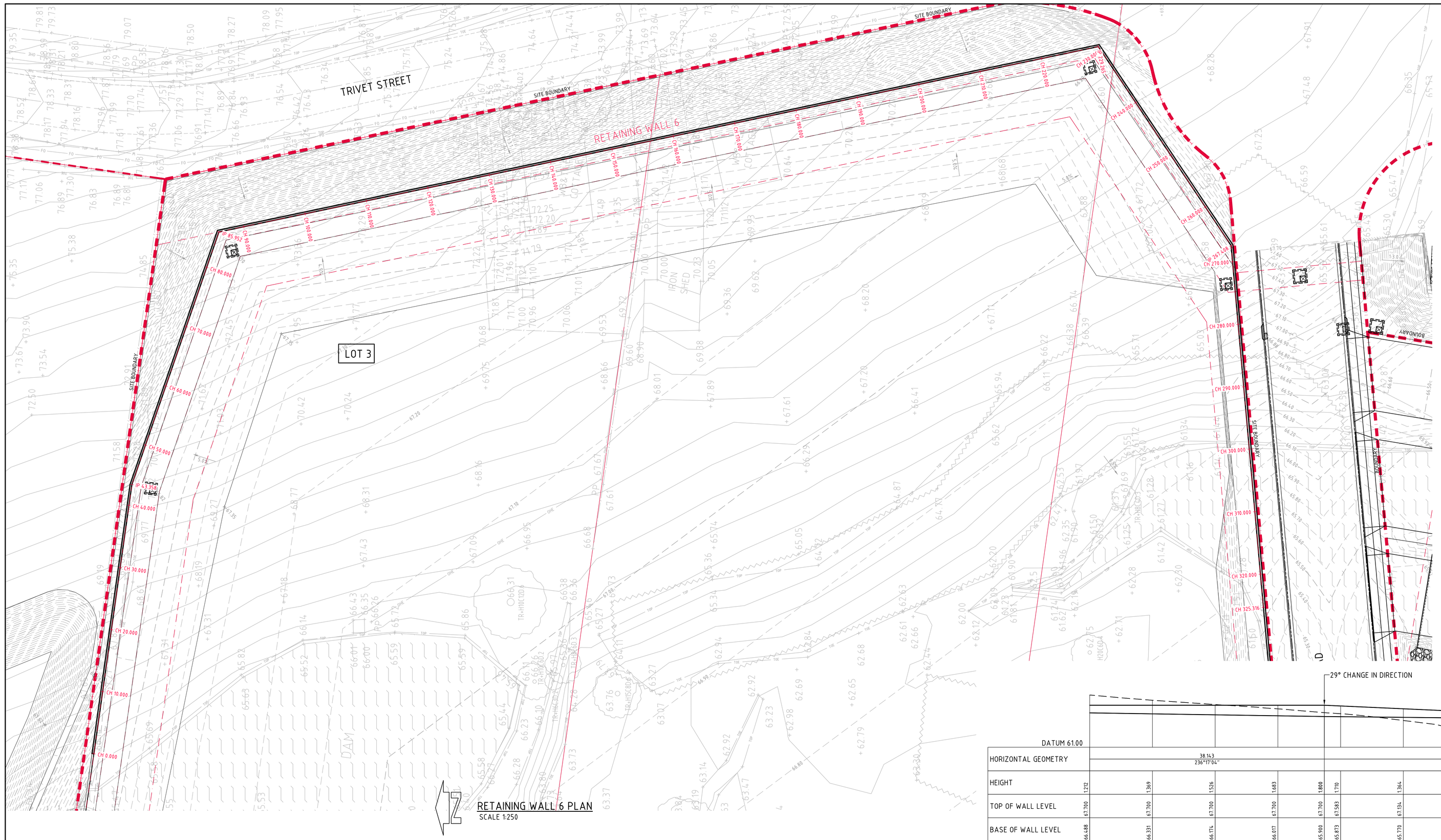
PROJECT: HORSLEY DRIVE BUSINESS PARK STAGE 2-EARLY WORKS
COWPASTURE ROAD, WETHERILL PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co11492.17-DA63

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Walsh Bay, Sydney NSW 2000
Tel: (02) 9251-7699 Fax: (02) 9241-3721
email: mail@costinroe.com.au ©

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DRAWING TITLE: RETAINING WALL PLAN AND ELEVATIONS SHEET 3
DRAWING No: Co11492.17-DA63
ISSUE: A



RETAINING WALL 6 PLAN
SCALE 1:250

LEGEND:

LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY MATTHEW FREEBURN SURVEYOR DATED DEC 2017.

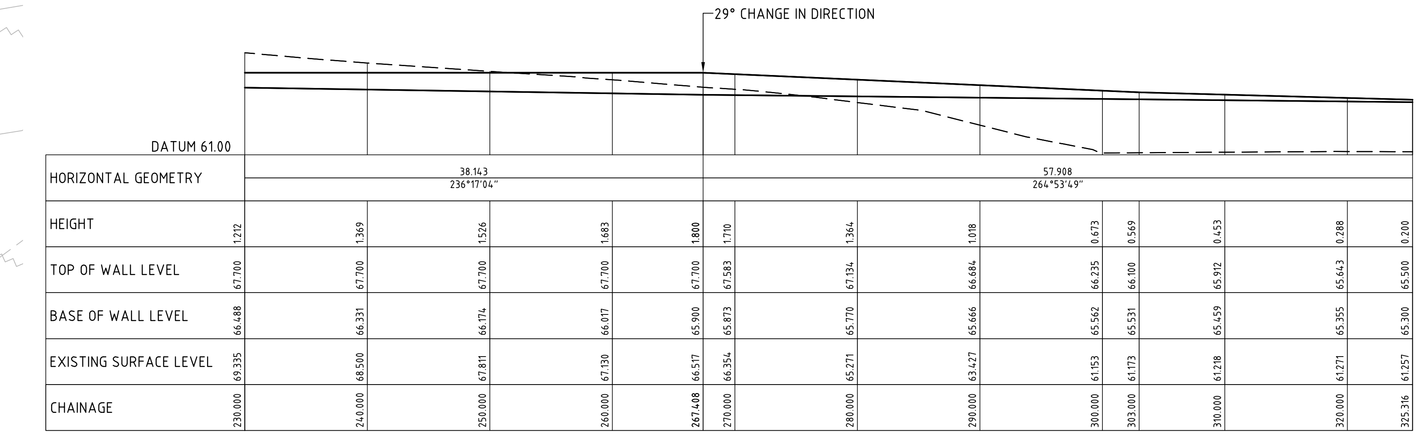
- SGGP, SINGLE GRATED GULLY PIT
- SJP, SEALED JUNCTION PIT
- KIP, KERB INLET PIT
- GD, GRATED DRAIN (300W x 225D UNO)
- 50.00 – FINISHED PAVEMENT CONTOUR (MAJOR) 0.5m INTERVALS
- 50.10 – FINISHED PAVEMENT CONTOUR (MINOR) 0.1m INTERVALS
- +50.10 – FINISHED PAVEMENT SPOT HEIGHT

NOTE:

REFER TO D&C CONTRACTORS DETAILS FOR WALL STRUCTURAL DETAILS.

RETAINING WALL NOTES :

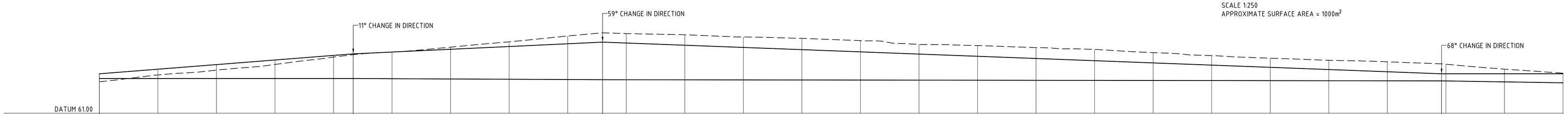
REFER TO DRAWING DA61 FOR RETAINING WALL NOTES



DATUM 61.00

HORIZONTAL GEOMETRY		38.143 236°17'04"				57.908 264°53'4.9"							
HEIGHT	1.212	1.369	1.526	1.683	1.800	1.770	1.364	1.018	0.673	0.569	0.453	0.288	0.200
TOP OF WALL LEVEL	67.700	67.700	67.700	67.700	67.700	67.583	67.134	66.684	66.235	66.100	65.972	65.643	65.500
BASE OF WALL LEVEL	66.488	66.331	66.174	66.017	65.900	65.813	65.770	65.666	65.562	65.531	65.459	65.355	65.300
EXISTING SURFACE LEVEL	69.335	68.500	67.811	67.139	66.517	66.354	65.271	63.427	61.053	61.173	61.298	61.271	61.257
CHAINAGE	230.000	240.000	250.000	260.000	267.648	270.000	280.000	290.000	300.000	303.000	310.000	320.000	325.316

ELEVATION RETAINING WALL 6
SCALE 1:250
APPROXIMATE SURFACE AREA = 1000m²



DATUM 61.00

HORIZONTAL GEOMETRY		43.358 98°02'52"				42.594 108°59'55"					143.313 168°06'00"													38.143 236°17'04"	
HEIGHT	0.800	1.584	2.368	3.153	3.937	4.209	4.543	5.060	5.576	6.093	6.400	6.253	5.990	5.527	5.165	4.802	4.439	4.076	3.713	3.350	2.988	2.625	2.262	1.899	1.536	1.200	1.112	1.369	1.526
TOP OF WALL LEVEL	67.700	68.484	69.268	70.053	70.837	71.100	71.412	71.881	72.351	72.821	73.100	72.947	72.571	72.194	71.817	71.440	71.063	70.687	70.310	69.933	69.556	69.179	68.803	68.426	68.049	67.700	67.700	67.700	67.700
BASE OF WALL LEVEL	66.900	66.900	66.900	66.900	66.900	66.900	66.869	66.822	66.775	66.728	66.700	66.694	66.680	66.666	66.652	66.639	66.625	66.611	66.597	66.583	66.569	66.555	66.541	66.527	66.513	66.500	66.488	66.331	66.174
EXISTING SURFACE LEVEL	66.348	67.597	68.331	69.297	70.554	70.963	71.408	72.247	73.153	74.145	74.699	74.557	74.351	73.971	73.735	73.359	72.702	72.514	72.164	71.858	71.316	70.805	70.368	70.000	69.748	69.400	69.335	68.500	67.811
CHAINAGE	0.000	10.000	20.000	30.000	40.000	43.358	50.000	60.000	70.000	80.000	85.952	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	229.215	230.000	240.000	250.000

ELEVATION RETAINING WALL 6
SCALE 1:250
APPROXIMATE SURFACE AREA = 1000m²

FOR DEVELOPMENT APPLICATION

2m 0 5 10 15 20 25m
SCALE 1:250 AT A0 SIZE PLOT

AMENDMENTS	DATE	ISSUE
FOR DEVELOPMENT APPLICATION	25.06.20	A

CLIENT: Charter Hall

PROJECT: HORSLEY DRIVE BUSINESS PARK STAGE 2-EARLY WORKS
COWPASTURE ROAD, WETHERILL PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co11492.17-DA64

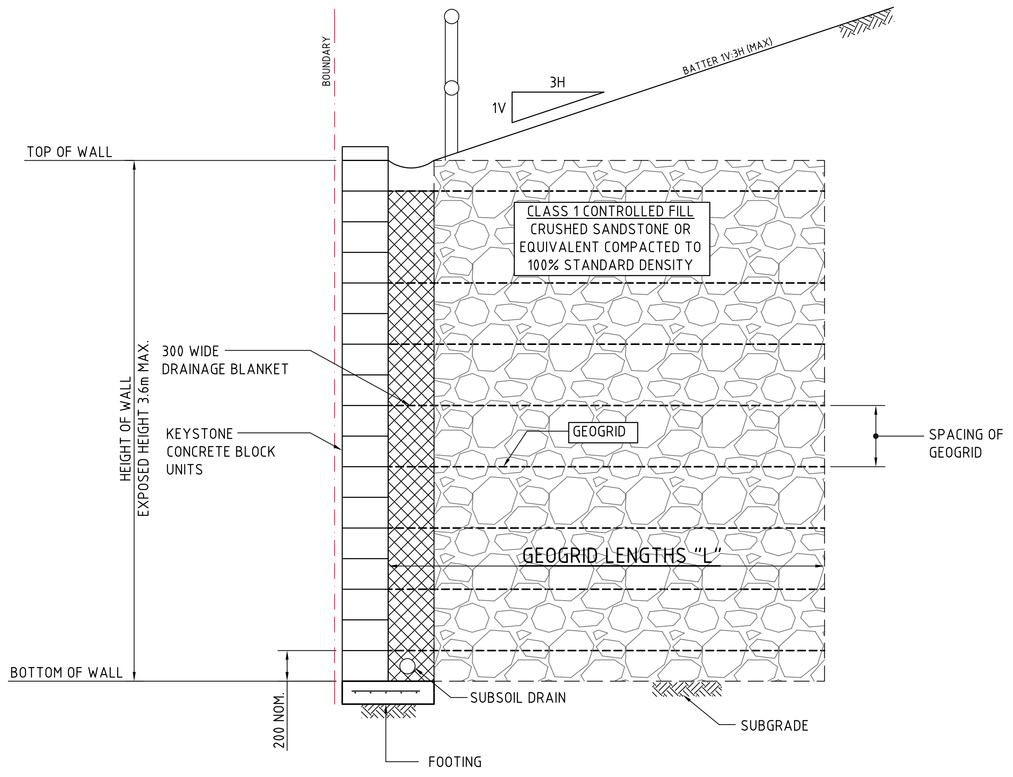
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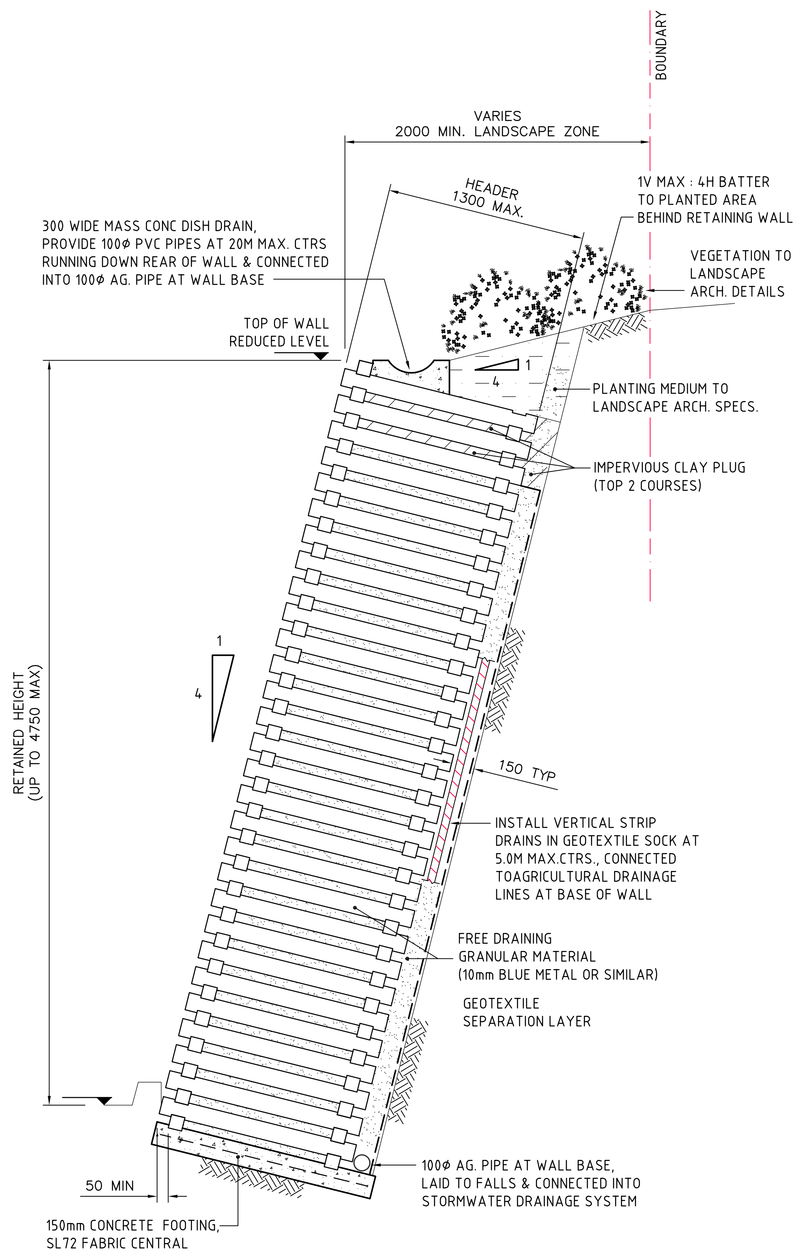
DRAWING TITLE: RETAINING WALL PLAN AND ELEVATIONS SHEET 4

DRAWING NO: Co11492.17-DA64 ISSUE: A



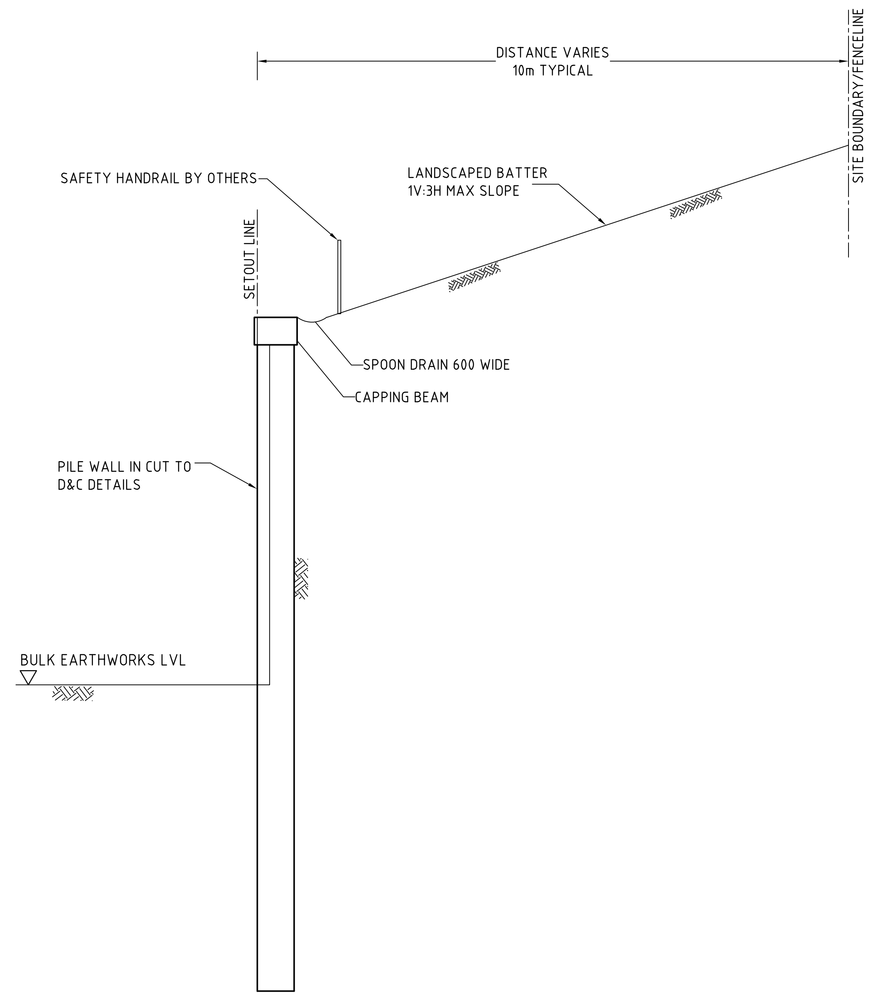
RETAINING WALL 1 - TYPICAL DETAIL
(REINFORCED EARTH WALL IN FILL)
SCALE 1:20

REINFORCED EARTH RETAINING WALL
STRUCTURAL DESIGN TO D&C DETAILS.

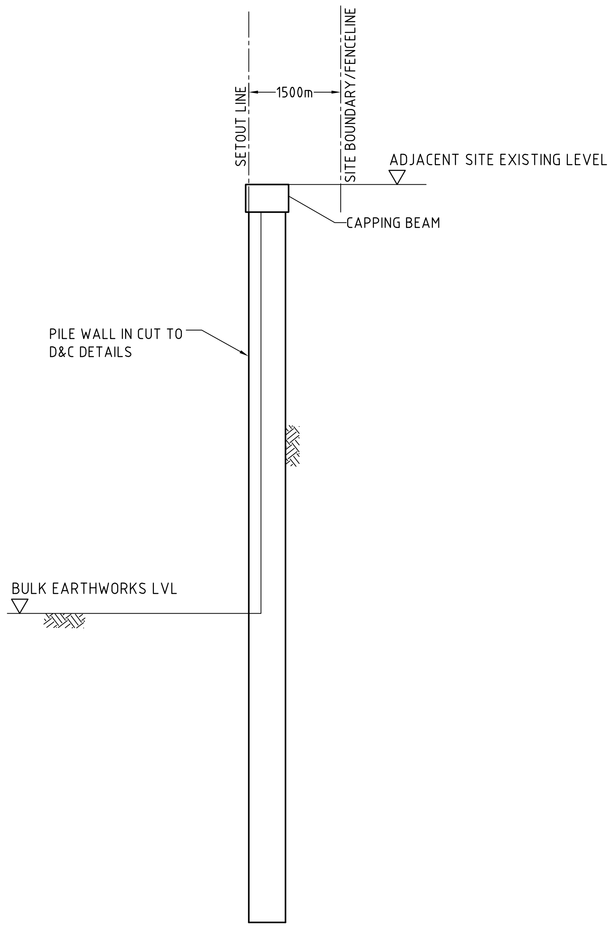


RETAINING WALL 2 - TYPICAL DETAIL
(CRIB WALL IN CUT)
SCALE 1:20

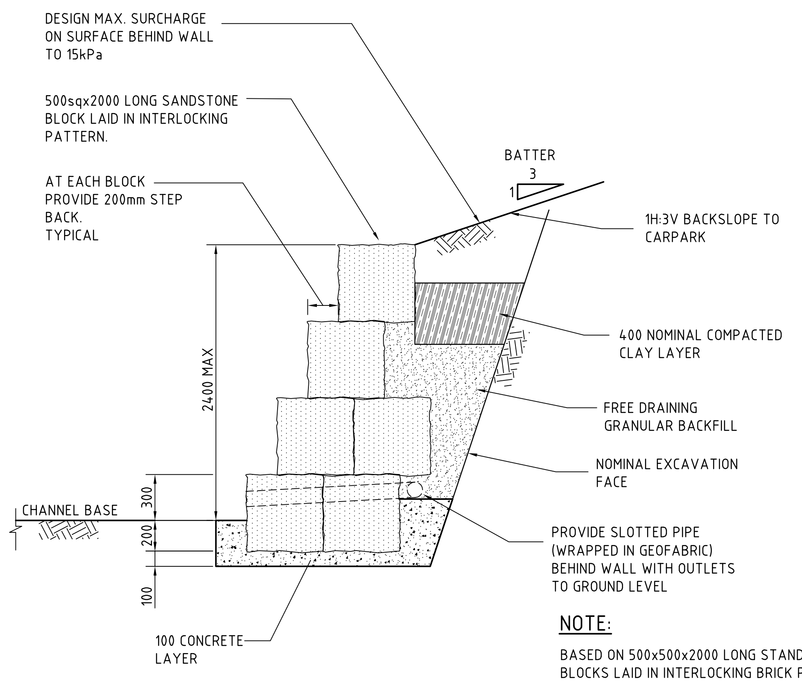
CRIB RETAINING WALL STRUCTURAL
DESIGN TO D&C DETAILS.



TYPICAL SECTION THROUGH RETAINING WALL 6
SCALE 1:50



TYPICAL SECTION THROUGH RETAINING WALL 5
SCALE 1:50



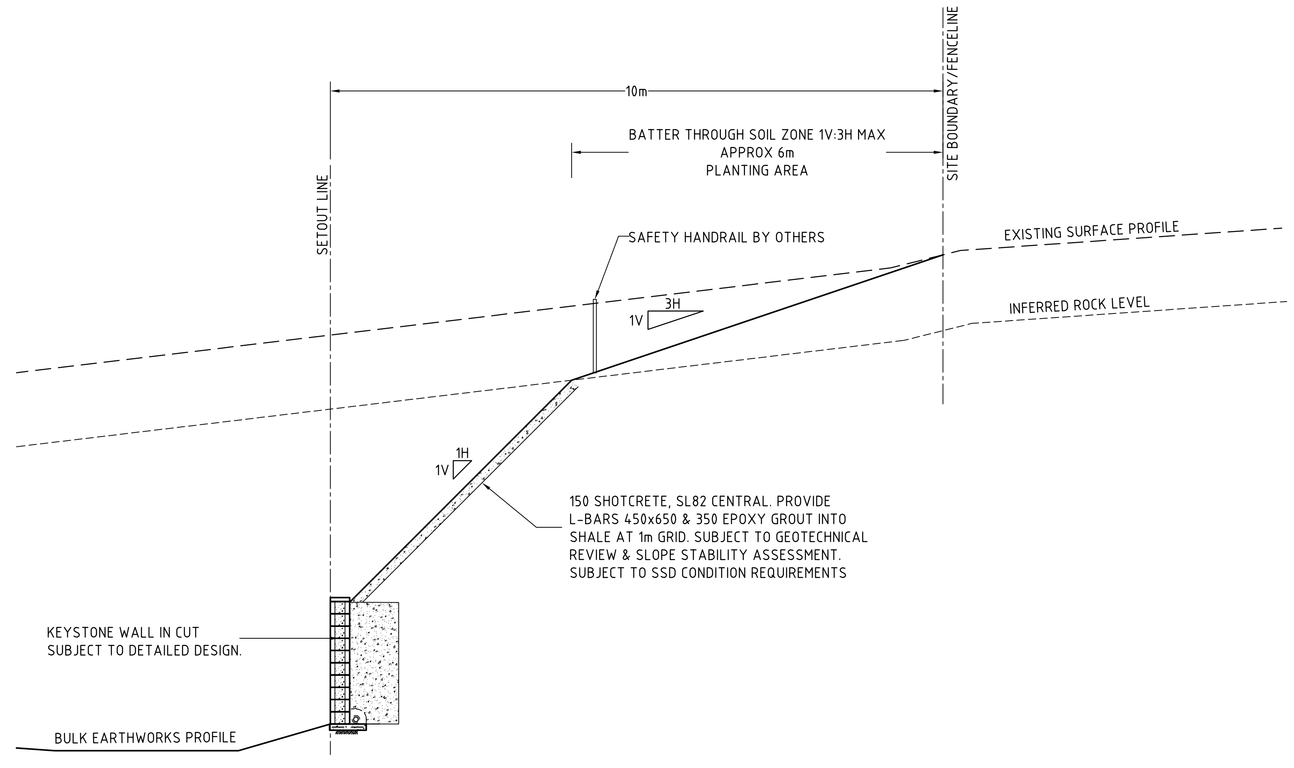
SANDSTONE WALL DETAIL -WALL 3 & 4
SCALE 1:20

STANDSTONE RETAINING WALL
STRUCTURAL DESIGN TO D&C DETAILS.

NOTE:

BASED ON 500x500x2000 LONG STANDARD CUT SANDSTONE BLOCKS LAID IN INTERLOCKING BRICK PATTERN:

- FIRST TWO COURSES TO BE 2xSANDSTONE BLOCKS IN 100 MASS CONCRETE BEDDING.
- THIRD & FOURTH COURSE TO BE 1 SANDSTONE BLOCK.
- STEP EACH SUCCESSIVE COURSES 200mm BACK



ALTERNATE SECTION THROUGH RETAINING WALL 6 - CH 140-225
SCALE 1:50

2m 0 5 10 15 20 25m
SCALE 1:250 AT A0 SIZE PLOT

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
FOR DEVELOPMENT APPLICATION	25.06.20	A

CLIENT: Charter Hall

PROJECT: HORSLEY DRIVE BUSINESS PARK STAGE 2-EARLY WORKS
COWPASTURE ROAD, WETHERILL PARK, NSW

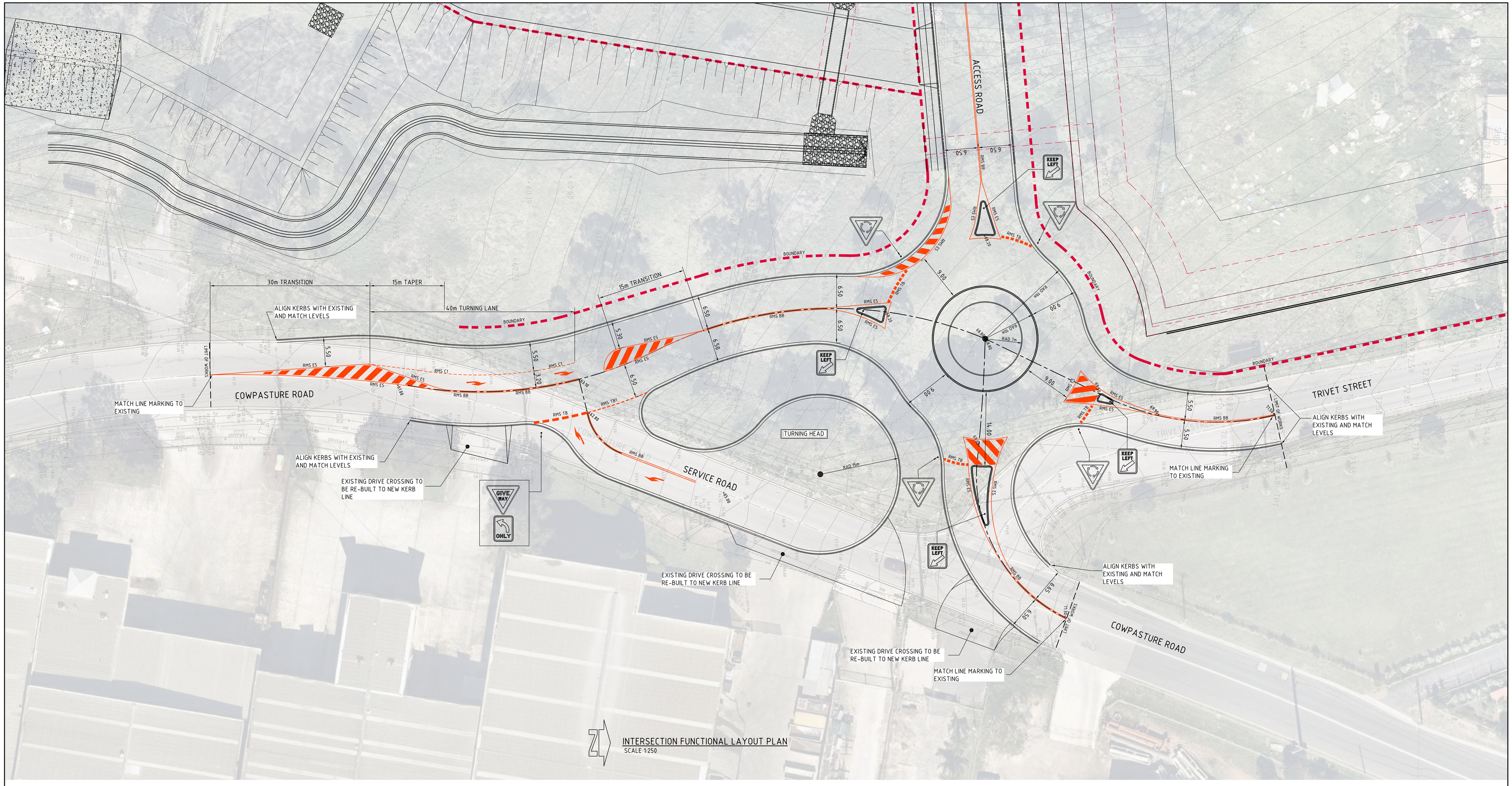
DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF.
M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co11492.17-DA65

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DRAWING TITLE: RETAINING WALL TYPICAL DETAILS

DRAWING No: Co11492.17-DA65 ISSUE: A



INTERSECTION FUNCTIONAL LAYOUT PLAN
SCALE 1:250

2m 0 5 10 15 20 25m
SCALE 1:250 AT A1 SIZE PLOT

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
FOR DEVELOPMENT APPLICATION	11.12.19	A

ARCHITECT: LEFFLER SIMES ARCHITECTS

CLIENT: Charter Hall

PROJECT: SSD7764 MASTERPLAN MOD1
HDBP STAGE 2
COWPASTURE ROAD, WETHERILL PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
M.C	M.C	NOV 19	M.W	A0	AS SHOWN	Co11492.17-DA70

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DRAWING TITLE: INTERSECTION FUNCTIONAL LAYOUT PLAN

DRAWING NO: Co11492.17-DA70 ISSUE: A