BROOKVALE OVAL REDEVELOPMENT CIVIL WORKS

GENERAL NOTES

1. Contractor must verify all dimensions and existing levels on site prior to commencement of works. Any discrepancies to be reported to the Engineer .
2. Strip all topsoil from the construction area. All stripped topsoil shall be disposed of off-site unless directed otherwise.
3. Make smooth connection with all existing works.
4. Compact subgrade under buildings and pavements to minimum 98% standard maximum dry density in accordance with AS 1289 5.1.1. Compaction under buildings to extend 2m minimum beyond building footprint.
5. All work on public property, property which is to become public property, or any work which is to come under the control of the Statutory Authority, the Contractor is to ensure that the drawings used for construction have been approved by all relevant authorities prior to commencement site.
6. All work on public property, property which is to become public property, or any work which is to come under the control of the Statutory Authority is to be carried out in accordance with the requirements of the relevant Authority. The Contractor shall obtain these requirements from the Authority. Where the requirements of the Authority are different to the drawings and specifications, the requirements of the Authority shall be applicable.
7. For all temporary batters refer to geotechnical recommendations.

REFERENCE DRAWINGS

1. These drawings have been based from, and to be read in conjunction with the following Consultants drawings. Any conflict to the drawings must be notified immediately to the Engineer.

Consultant	Dwg Title	Dwg No	Rev	Date
RYGATE SURVEYORS	LEVEL& DETAIL SURVEY	79059		09.09.19
HASSELL	GA ROOF PLAN	AR_1103	03	09.03.20
HASSEL	GA AND FINISHES PLAN	L_1101	04	09.03.20
DBYD	UNDERGROUND SERVICES	–	–	27.06.2019

PIT SCHEDULE

Note: Grate size does not necessarily reflect pit size, refer pit type details, shown on detail sheets – **C20**
Final internal pit dimensions are to comply with AS3500

Type	Description	Cover (Clear Opening)	Number
A	Surface inlet pit	1200 x 6000 Class C galvanised mild steel grate hinged to frame	1A RL28.15 IL26.78
		900 x 900 Class C galvanised mild steel grate hinged to frame	11 RL27.90 IL26.75 13 RL29.69 IL27.40
		900 x 600 Class C galvanised mild steel grate hinged to frame	6 RL29.62 IL28.15
B	Junction pit	900 x 900 Class C cast iron cover with decorative stainless steel edge	5 RL29.66 IL28.00 9 RL27.90 IL26.70 10 RL27.90 IL 26.36
		900 x 600 Class C cast iron cover with decorative stainless steel edge	14 RL28.95 IL28.11 16 RL29.68 IL28.30
C	Surface inlet pit	900 x 900 Class C galvanised mild steel grate hinged to frame 900 x 1200 internal dimensions	5 RL27.40 IL25.24 6–A RL27.70 IL26.00 12 RL28.20 IL26.59
		900 x 900 Class C galvanised mild steel grate hinged to frame 1200 x 1200 internal dimensions	1 RL28.14 IL26.73 2 RL28.70 IL25.66 4 RL 26.61 IL 25.45
C	OSD tank	900 x 900 Class C stainless steel anti slip, heelsafe grate	7 8
D	RW tank pit	900 x 900 Class C cast iron cover with decorative stainless steel edge	17 18

SITEWORKS NOTES

1. All basecourse material to comply with RMS specification No 3051 and compacted to minimum 98% modified standard dry density in accordance with AS 1289 5.2.1.
2. All trench backfill material shall be compacted to the same density as the adjacent material.
3. All service trenches under vehicular pavements shall be backfilled with an approved select material and compacted to a minimum 98% standard maximum dry density in accordance with AS 1289 5.1.1

PAVEMENT NOTE

All paving systems are to TTW documentation and specification. All paving/insitu concrete finishes to Landscape Architects Selection.

STORMWATER DRAINAGE NOTES

1 Stormwater Design Criteria :
(A) Average recurrence interval –
1:100 years for roof drainage to first external pit
1:20 years for paved and landscaped areas
(B) Rainfall intensities –
Time of concentration: 6 minutes
1:100 years = mm/hr
1:20 years = mm/hr
(C) Runoff coefficients –
Roof areas: C_{100} =
Roads and paved areas: C_{20} =
Landscaped areas: C_{20} =

2. Pipes 300 dia and larger to be reinforced concrete Class " 2 " approved spigot and socket with rubber ring joints U.N.O.
3. Pipes up to 300 dia may be sewer grade uPVC with solvent welded joints, subject to approval by the engineer.
4. Equivalent strength VCP or FRP pipes may be used subject to approval.
5. Precast pits may be used external to the building subject to approval by:
6. Enlargers, connections and junctions to be manufactured fittings where pipes are less than 300 dia.
7. Where subsoil drains pass under floor slabs and vehicular pavements, unslotted uPVC sewer grade pipe is to be used.
8. Grates and covers shall conform with AS 3996–2006, and AS 1428.1 for access requirements.
9. Pipes are to be installed in accordance with AS 3725. All bedding to be type H2 U.N.O.
10. Care is to be taken with invert levels of stormwater lines. Grades shown are not to be reduced without approval.
11. All stormwater pipes to be 150 dia at 1.0% min fall U.N.O.
12. Subsoil drains to be slotted flexible uPVC U.N.O.
13. Adopt invert levels for pipe installation (grades shown are only nominal).

CONCRETE FINISHING NOTES

1. Refer to landscape architect documentation for concrete finishes.
2. All edges of the concrete pavement including keyed and dowelled joints are to be finished with an edging tool.
3. Concrete pavements with grades greater than 10 % shall be heavily broomed finished.
4. Carborundum to be added to all stair treads and ramped crossings U.N.O.

SURVEY AND SERVICES INFORMATION

SURVEY

Origin of levels : CONTACT THE SURYOR
Datum of levels : A.H.D. AUSTRALIAN HEIGHT DATUM
Coordinate system : MGA
Survey prepared by : RYGATE SURVEYORS
Setout Points : CONTACT THE SURVEYOR

Taylor Thomson Whitting does not guarantee that the survey information shown on these drawings is accurate and will accept no liability for any inaccuracies in the survey information provided to us from any cause whatsoever.

UNDERGROUND SERVICES - WARNING

The locations of underground services shown on Taylor Thomson Whittings drawings have been plotted from diagrams provided by service authorities. This information has been prepared solely for the authorities own use and may not necessarily be updated or accurate.

The position of services as recorded by the authority at the time of installation may not reflect changes in the physical environment subsequent to installation.

Taylor Thomson Whitting does not guarantee that the services information shown on these drawings shows more than the presence or absence of services, and will accept no liability for inaccuracies in the services information shown from any cause whatsoever.

The Contractor must confirm the exact location and extent of services prior to construction and notify any conflict with the drawings immediately to the Engineer/Superintendent.

The contractor is to get approval from the relevant state survey department, to remove/adjust any survey mark. This includes but is not limited to; State Survey Marks (SSM), Permanent Marks (PM), cadastral reference marks or any other survey mark which is to be removed or adjusted in any way.
Taylor Thomson Whitting plans do not indicate the presence of any survey mark. The contractor is to undertake their own search.

BOUNDARY AND EASEMENT NOTE

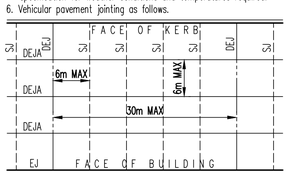
The property boundary and easement locations shown on Taylor Thomson Whitting drawing's have been based from information received from : No boundary information received.
Refer architect for boundary information and locations

Taylor Thomson Whitting makes no guarantees that the boundary or easement information shown is correct.
Taylor Thomson Whitting will accept no liabilities for boundary inaccuracies. The contractor/builder is advised to check/confirm all boundaries in relation to all proposed work prior to the commencement of construction. Boundary inaccuracies found are to be reported to the superintendent prior to construction starting.

JOINTING NOTES

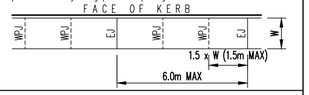
Vehicular Pavement Jointing

1. All vehicular pavements to be jointed as shown on drawings.
2. Keyed construction joints should generally be located at a maximum of 6m centres.
3. Sawn joints should generally be located at a maximum of 6m centres or 1.5 x the spacing of keyed joints, where key joint spacing is less than 4m, with dowelled expansion joints at maximum of 30m centres.
4. Provide 10mm wide full depth expansion joints between buildings and all concrete or unit pavers.
5. The timing of the saw cut is to be confirmed by the contractor on site. Site conditions will determine how many hours after the concrete pour before the saw cuts are commenced. Refer to the specification for weather conditions and temperatures required.
6. Vehicular pavement jointing as follows.



Pedestrian Footpath Jointing

1. Expansion joints are to be located where possible at tangent points of curves and elsewhere at max 6.0m centres.
2. Weakened plane joints are to be located at a max 1.5 x width of the pavement.
3. Where possible joints should be located to match kerbing and / or adjacent pavement joints.
4. All pedestrian footpath jointings as follows (uno). Please refer to pavement and jointing plan for spacing



BULK EARTHWORKS NOTES

1. All bulk earthworks setout from grid lines U.N.O.
2. Temporary batters slope as showing on plan.
3. Excavated material may be used as structural fill provided,
   (i) it complies with the specification requirements for fill material,
   (ii) the placement moisture content complies with the Geotechnical Consultants requirements, and allows filling to be placed and proofrolled in accordance with the specification. Where necessary the Contractor must moisture condition the excavated material to meet these requirements.
4. Compact fill areas and subgrade to not less than:

Location	Standard dry density (AS 1289 5.1.1.)	Moisture (OMC)
Under building slabs on ground:	98%	±2%
Under roads and carparks:	98%	±2%
Landscaped areas:	95%	±2%

5. Before placing fill, proof roll exposed subgrade with a 10 tonne minimum roller to test subgrade and then remove soft spots (areas with more than 3mm movement under roller). Soft spots to be replaced with **select** fill U.N.O.
6. Contractor shall place safety barriers around excavations in accordance with relevant safety regulations.
7. For interpretation of bulk earthworks foot print line shown on the bulk earthworks drawings refer to the bulk earthworks construction legend.
8. Bulk earthwork drawings are not to be used for detailed excavation.
9. Refer to Geotechnical Report prepared by – Jeffery and Katauskas Pty Ltd
   Ref: 24983Zrpt2 dated 5 July 2011

KERBING NOTES

Includes all kerbs, gutters, dish drains, crossings and edges.

1. All kerbs, gutters, dish drains and crossings to be constructed on minimum 75mm granular basecourse compacted to minimum 98% modified maximum dry density in accordance with AS 1289 5.2.1.
2. Expansion joints (EJ) to be formed from 10mm compressible cork filler board for the full depth of the section and cut to profile. Expansion joints to be located at drainage pits, on tangent points of curves and elsewhere at 12m centres except for integral kerbs where the expansion joints are to match the joint locations in slabs.
3. Weakened plane joints to be min 3mm wide and located at 3m centres except for integral kerbs where weakened plane joints are to match the joint locations in slabs.
4. Broomed finished to all ramped and vehicular crossings, all other kerbing or dish drains to be steel float finished.
5. In the replacement of kerbs –
   Existing road pavement is to be sawcut 900mm from lip of gutter. Upon completion of new kerbs, new basecourse and surface is to be laid 900mm wide to match existing materials and thicknesses.
   Existing allotment drainage pipes are to be built into the new kerb with a 100mm dia hole.
   Existing kerbs are to be completely removed where new kerbs are shown.

EROSION AND SEDIMENT CONTROL NOTES

1. All work shall be generally carried out in accordance with
   (A) Local authority requirements,
   (B) EPA – Pollution control manual for urban stormwater,
   (C) LANDCOM NSW – Managing Urban Stormwater: Soils and Construction ("Blue Book").
2. Erosion and sediment control **drawings and notes are** provided for the whole of the works. Should the Contractor stage these works then the design may be required to be modified. Variation to these details may require approval by the relevant authorities.
   The erosion and sediment control **plan** shall be implemented and adapted to meet the varying situations as work on site progresses.
3. Maintain all erosion and sediment control devices to the satisfaction of the superintendent and the local authority.
4. When stormwater pits are constructed prevent site runoff entering the pits unless silt fences are erected around pits.
5. Minimise the area of site being disturbed at any one time.
6. Protect all stockpiles of materials from scour and erosion. Do not stockpile loose material in roadways, near drainage pits or in watercourses.
7. All soil and water control measures are to be put back in place at the end of each working day, and modified to best suit site conditions.
8. Control water from upstream of the site such that it does not enter the disturbed site.
9. All construction vehicles shall enter and exit the site via the temporary construction entry/exit.
10. All vehicles leaving the site shall be cleaned and inspected before leaving.
11. Maintain all stormwater pipes and pits clear of debris and sediment. Inspect stormwater system and clean out after each storm event.
12. Clean out all erosion and sediment control devices after each storm event.

Sequence Of Works

1. Prior to commencement of excavation the following soil management devices must be installed.
1.1. Construct silt fences below the site and across all potential runoff sites.
1.2. Construct temporary construction entry/exit and divert runoff to suitable control systems.
1.3. Construct measures to divert upstream flows into existing stormwater system.
1.4. Construct sedimentation traps/basin including outlet control and overflow.
1.5. Construct turf lined swales.
1.6. Provide sandbag sediment traps upstream of existing pits.
2. Construct geotextile filter pit surround around all proposed pits as they are constructed.
3. On completion of pavement provide sand bag kerb inlet sediment traps around pits.
4. Provide and maintain a strip of turf on both sides of all roads after the construction of kerbs.

WATER QUALITY TESTING REQUIREMENTS

Prior to discharge of site stormwater, groundwater and seepage water into council's stormwater system, contractors must undertake water quality tests in conjunction with a suitably qualified environment consultant outlining the following:

– Compliance with the criteria of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000)
– If required subject to the environmental consultants advice, provide remedial measures to improve the quality of water that is to be discharged into Councils storm water drainage system.This should include comments from a suitably qualified environmental consultant confirming the suitability of these remedial measures to manage the water discharged from the site into Councils storm water drainage system. Outlining the proposed, ongoing monitoring, contingency plans and validation program that will be in place to continually monitor the quality of water discharged from this site. This should outline the frequency of water quality testing that will be undertaken by a suitably qualified environmental consultant.

TENDER NOTES

1. These drawings are preliminary drawings issued for tender as an indication of the extent of works only. They are not a complete construction set of drawings.
2. To determine the full extent of work, these drawings shall be read in conjunction with the architectural drawings and other contract documents.
   Allow for all items shown on architectural and other drawings as not all items are shown on the structural/civil works drawings.
3. Should any ambiguity, error, omissions, discrepancy, inconsistency or other fault exist or seem to exist in the documents, immediately notify in writing to the Superintendendent.
4. Rates shown on the drawings are for the final structure/civil works in place and do not allow for any wastage, rolling margins, over supply or fabrication requirements. etc.

SAFETY IN DESIGN

Contractor to refer to Appendix B of the Civil Specification for the Civil Risk and Solutions Register.

EXISTING SERVICES
Contractor to be aware existing services are located within the site. Location of all services to be verified by the Contractor prior to commencing works. Contractor to confirm with relevant authority regarding measures to be taken to ensure services are protected or procedures are in place to demolish and/or relocate.

EXISTING STRUCTURES
Contractor to be aware existing structures may exist within the site. To prevent damage to existing structure(s) and/or personnel, site works to be carried out as far as practicably possible from existing structure(s).

EXISTING TREES
Contractor to be aware existing trees exist within the site which need to be protected. To prevent damage to trees and/or personnel, site works to be carried out as far as practicably possible from existing trees. Advice needs to be sought from Arborist and/or Landscape Architect on measures required to protect trees. All excavations within TPZ to be hand excavations.

GROUNDWATER
Contractor to be aware ground water levels are close to existing surface level. Temporary de–watering may be required during construction works.

EXCAVATIONS
Deep excavations due to stormwater drainage works is required. Contractor to ensure safe working procedures are in place for works. All excavations to be fenced off and batters adequately supported to approval of Geotechnical Engineer. All excavations within TPZ to be hand excavations.

GROUND CONDITIONS
Contractor to be aware of the site geotechnical conditions. Refer to geotechnical report by Jeffery and Katauskas Pty Ltd (ref:24983Zrpt date:29 June 2011) for details.

HAZARDOUS MATERIALS
Existing asbestos products & contaminated material may be present on site. Contractor to ensure all hazardous materials are identified prior to commencing works. Safe working practices as per relevant authority to be adopted and appropriate PPE to be used when handling all hazardous materials. Refer to geotechnical/environmental report by Jeffery and Katauskas Pty Ltd (ref:24983Zrpt date:29 June 2011) for details.

CONFINED SPACES
Contractor to be aware of potential hazards due to working in confined spaces such as stormwater pits, trenches and/or tanks. Contractor to provide safe working methods and use appropriate PPE when entering confined spaces.

MANUAL HANDLING
Contractor to be aware manual handling may be required during construction. Contractor to take appropriate measures to ensure manual handling procedures and assessments are in place prior to commencing works.

WATER POLLUTION
Contractor to ensure appropriate measures are taken to prevent pollutants from construction works contaminating the surrounding environment.

SITE ACCESS/EGRESS
Contractor to be aware site works occur in close proximity to footpaths and roadways. Contractor to erect appropriate barriers and signage to protect site personnel and public.

VEHICLE MOVEMENT
Contractor to supply and comply with traffic management plan and provide adequate site traffic control including a certified traffic marshall to supervise vehicle movements where necessary.

EXISTING SERVICES LEGEND

S Existing sewer
W Existing water
E Existing underground electrical
EA Existing aerial electrical
T Existing communications
G Existing gas
SW Existing stormwater
Existing service to be removed

SITEWORKS LEGEND

RL 22.20 Finished surface level
F22.00 Finished contour
K&G Kerb and gutter
KO Kerb only
FK Flush kerb
DD Dish drain
MK Mountable kerb
MIK Mountable integral kerb
MIK+TE Mountable integral kerb with thickened edge
IK+TE Integral kerb with thickened edge
TE Thickened edge
IK Integral kerb
IK+ED Integral kerb with edge downturn
K&T Kerb and toe
IL10.00 600 ø 'Z' 1.25% Q=345 L/s IL9.65 Stormwater pit, flow direction and line with Invert level upstream Pipe size and class Pipe grade Flow (Litres per second) Invert level downstream
Junction Pit
GD Grated drain
IR Intermediate riser with subsoil drainage line (100 dia)
FP Flushing point with subsoil drainage line (100 dia)
DP Down pipe
RP Rodding point
Concrete encased stormwater line
Stormwater line with pipe taper and flow direction
Taper kerb to zero height over 500 mm
Wheelstop
RW# Blockwork retaining wall
RW# Brickwork retaining wall
DEJ Dowelled expansion joint
SJ Sawn joint
KJ Keyed construction joint
WPJ Weakened plane joint
EJ Expansion joint
TKJ Tied keyed joint
Grass catch drain
Overland flow path
Guard Rail

EROSION AND SEDIMENT CONTROL LEGEND

Batter
Siltation fence
Stormwater pit with Geotextile filter surround
Hay bale barriers
Sandbag sediment trap
Catch drain
Overland flow path

PAVEMENT LEGEND

P1 160mm Thickness concrete (f'c=32MPa) with SL92 fabric (40 top cover) on 150mm Compacted thickness fine crushed rock (DGB 20) 2% cement stabilisation
P2 125mm Thickness concrete (f'c=32MPa) with SL72 fabric (40 top cover) on 100mm Compacted thickness fine crushed rock (DGB 20)
P3 Refer to landscape architect detail
P4 200mm Thickness 14mm nominal size gravel in Terram Geocell Tree root grid on excavated subgrade
P5 Concrete pavement with exposed aggregate to match existing

CIVIL DRAWING SCHEDULE

Drawing No.	Drawing Title
SKC01	NOTES AND LEGEND SHEET
SKC02	SURVEY EXTENT
SKC03	OVERALL SITE WORKS PLAN
SKC04	EROSION AND SEDIMENT CONTROL PLAN
SKC05-1	STORM WATER AND SITE WORKS PLAN SHEET 1
SKC05-2	STORM WATER AND SITE WORKS PLAN SHEET 2
SKC15	BULK EARTHWORKS PLAN
SKC20	DETAIL SHEET 1
SKC21	DETAIL SHEET 2
SKC22	FILTERRA BIORETENTION DETAIL

FileName: SKC01.dwg - USER: lalaw - Plot File Created: Jul 02, 2020 - 1:29pm

DEVELOPMENT APPLICATION

NOT TO BE USED FOR CONSTRUCTION

Rev	Description	Eng	Draft	Date
P4	ISSUE FOR DA2	SB	LW	02.07.20
P3	ISSUE FOR DA	LE	WW	22.10.19
P2	DRAFT DA	SB	WW	01.10.19
P1	DRAFT DA	SB	WW	27.09.19

Architect
HASSEL
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SYDNEY NSW 2000

Engineer
TTW Structural Civil Traffic Façade
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Project
BROOKVALE OVAL REDEVELOPMENT, BROOKVALE

Sheet Subject
NOTES AND LEGEND SHEET

Scale : A1 NTS
Drawn AS
Authorised
Job No 191326
Drawing No SKC01
Revision P4
Plot File Created: Jul 02, 2020 - 1:29pm

THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT NOTES ON DRAWING SKC01

FOR CONTINUATION REFER TO DRAWING No SKC05-1

1.2m x 6m GRATE
RL 28.15
IL26.962
ø900 'Z'
3.9%
Q=1,982 L/sec
IL26.78
IL26.78
ø900 'Z'
2.2%
Q=1,984 L/sec
IL26.59
900 x 900 GRATE
900 x 1200 INTERNAL DIMENSIONS
EX28.20
PROPOSED FILTERRA BIORETENTION 30 m² MINIMUM
1.8m(W) x 20m(L) EXTENDS UNDER SUSPENDED SLAB
EX28.35
IL26.59
ø900 'Z'
2.2%
Q=1,984 L/sec
IL26.09
UPGRADE PIPE FROM 600mm TO 900mm
ø900 STORMWATER PIPE DIVERSION. FINAL LOCATION IS SUBJECT TO TREE ROOT MAPPING AND COUNCIL APPROVAL
UPGRADE PIPE FROM 600mm TO 900mm
900 x 900 GRATE
1200 x 1200 INTERNAL DIMENSIONS
UPGRADE PIPE FROM 600mm TO 900mm
PROPOSED GRASS SWALE 1.8m (W)
900 x 900 GRATE
1200 x 1200 INTERNAL DIMENSIONS
SLAB RL 28.60
BIORETENTION WALL
HIGH FLOW BYPASS ø300mm PIPE
ø300 'Z'
DOWNSTREAM IL27.40
CONNECT RWT OVERFLOW TO FILTERRA BIORETENTION
PROPOSED RAINWATER TANKS 27 kL EACH.
REFER TO LCI HYDRAULIC ENGINEERS
DRAWINGS FOR DETAILS
IL28.75
ø225 'Z'
1.0%
Q= L/sec
IL28.35
IL28.30
ø225 'Z'
0.6%
Q= L/sec
IL28.20
IL28.00
ø225 'Z'
11.0%
Q= L/sec
IL26.70
IL28.85
ø150 'Z'
1.0%
Q= L/sec
IL28.70
IL28.15
ø225 'Z'
1.5%
Q= L/sec
IL28.05
IL28.65
ø225 'Z'
1.0%
Q= L/sec
IL28.45
IL26.30
ø300 'Z'
1.0%
Q=L/sec
IL26.15
CONNECT TO BASEMENT SUBSOIL DRAINAGE BY LCI
ø300mm PIPE
OSD TANK UNDERNEATH VOLUME=160m³
IL25.66
ø900 'Z'
1.5%
Q=1,984 L/sec
IL25.25
IL27.80
ø150 'Z'
1.0%
Q=L/sec
IL26.60
OVERLAND FLOW PATH
900 x 900 GRATE
900 x 1200 INTERNAL DIMENSIONS
IL26.15
ø900 'Z'
2.2%
Q=L/sec
IL26.02
IL25.24
ø900 'Z'
1.5%
Q=2,063 L/sec
IL25.00
UPGRADE PIPE FROM 600mm TO 900mm
900 x 900 GRATE
1200 x 1200 INTERNAL DIMENSIONS
CONNECT 400 x 300 CONCRETE U DRAIN TO EXISTING OVAL SUBSOIL DRAINAGE SYSTEM AT 2m CENTERS

SCALE 1:100 0 1 2 3 4 5 m
AT ORIGINAL SIZE

DEVELOPMENT APPLICATION

NOT TO BE USED FOR CONSTRUCTION

Rev	Description	Eng	Draft	Date
P6	FOR COORDINATION	SB	AS	10.10.19
P5	FOR COORDINATION	SB	AS	08.10.19
P4	DRAFT DA	SB	AS	01.10.19
P3	DRAFT DA	SB	WW	27.09.19
P2	FOR COORDINATION	DU	SP	27.09.19
P1	FOR COORDINATION	DU	GG	
P12	ISSUE FOR DA2	SB	LW	02.07.20
P11	ISSUE FOR DA	LE	WW	22.10.19
P10	DRAFT DA	SB	WW	22.10.19
P9	DRAFT DA	SB	WW	21.10.19
P8	FOR COORDINATION	SB	AS	17.10.19
P7	DRAFT DA	SB	AS	10.10.19

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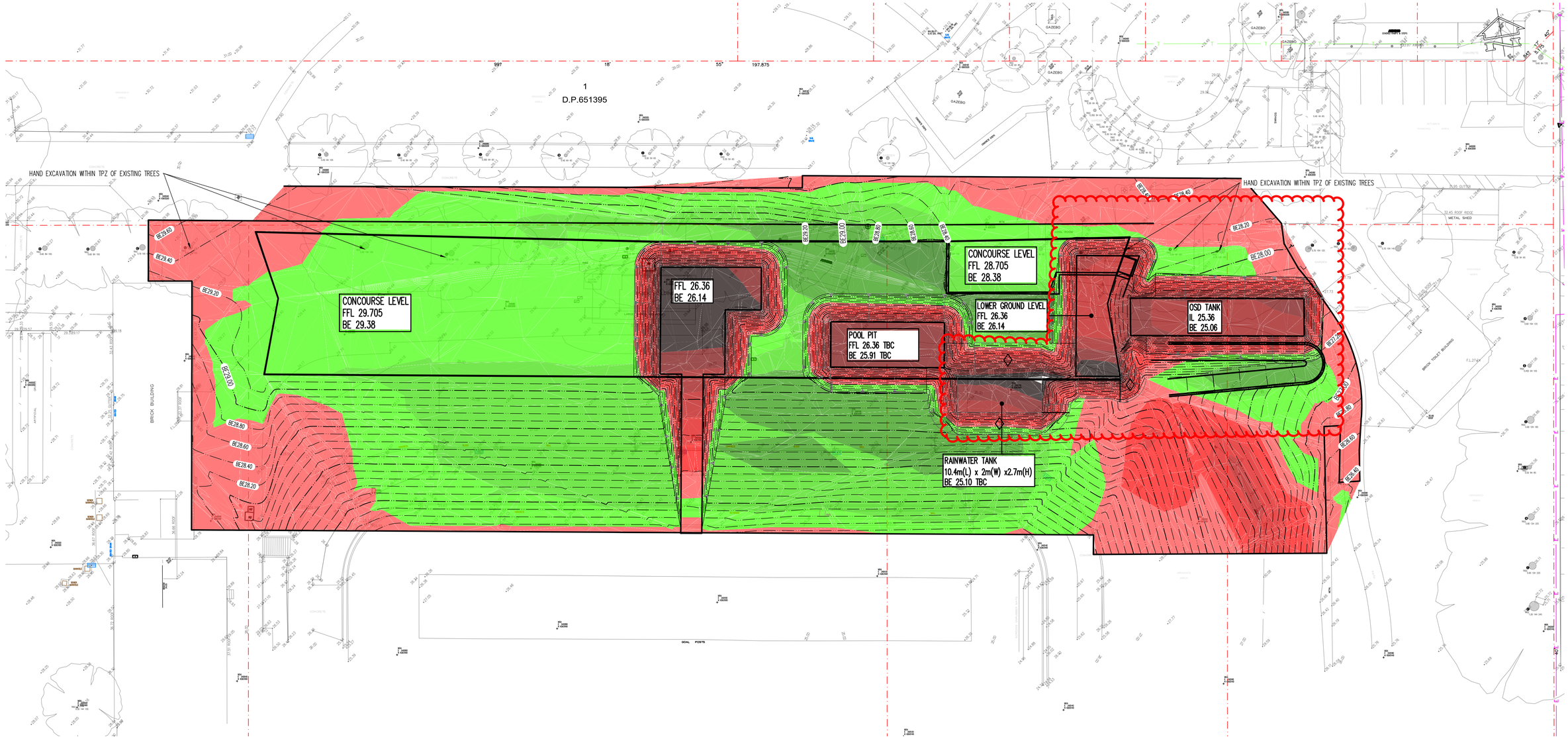
Project
BROOKVALE OVAL
REDEVELOPMENT, BROOKVALE

Sheet Subject
STORM WATER AND SITE WORKS CONCEPT PLAN

Scale : A1 1:100
Drawn SP
Authorised
Job No 191326
Drawing No SKC05-2
Revision P12
Plot File Created: Jul 02, 2020 - 1:33pm



Surface Analysis: Elevation Ranges				
Number	Color	Minimum Elevation (m)	Maximum Elevation (m)	2D Area (m²)
1		-3.500	-3.000	115.3
2		-3.000	-2.500	185.8
3		-2.500	-2.000	200.9
4		-2.000	-1.500	184.2
5		-1.500	-1.000	200.6
6		-1.000	-0.500	324.7
7		-0.500	0.000	1489.3
8		0.000	0.500	1855.9
9		0.500	1.000	1033.2
10		1.000	1.500	434.1
11		1.500	2.000	43.3

BULK EARTHWORKS NOTES

1. All bulk earthworks setout from grid lines U.N.O.
2. Temporary batters slope as showing on plan.
3. Excavated material may be used as structural fill provided,
   (i) it complies with the specification requirements for fill material,
   (ii) the placement moisture content complies with the Geotechnical Consultants requirements, and allows filling to be placed and proofrolled in accordance with the specification. Where necessary the Contractor must moisture condition the excavated material to meet these requirements.
4. Compact fill areas and subgrade to not less than:

Location	Standard dry density (AS 1289 5.1.1.)	Moisture (OMC)
Under building slabs on ground:	98%	±2%
Under roads and carparks:	98%	±2%
Landscaped areas:	95%	±2%

5. Before placing fill, proof roll exposed subgrade with a 10 tonne minimum roller to test subgrade and then remove soft spots (areas with more than 3mm movement under roller). Soft spots to be replaced with **select** fill U.N.O.
6. Contractor shall place safety barriers around excavations in accordance with relevant safety regulations.
7. For interpretation of bulk earthworks foot print line shown on the bulk earthworks drawings refer to the bulk earthworks construction legend.
8. Bulk earthwork drawings are not to be used for detailed excavation.
9. Refer to Geotechnical Report prepared by –
   Jeffery and Katauskas Pty Ltd
   Ref: 24983Zrpt2 dated 5 July 2011

BULK EARTHWORKS LEGEND

- Batter
- ●B22.00 — Bulk earthworks spot level
- B22.00 — Bulk earthworks contour level
- BE 22.00 — Bulk earthworks platform level

BULK EARTHWORKS QUANTITIES

TOP SOIL REMOVED = 920m³ (ASSUMED 150mm DEPTH)
CUT = −2470m³
FILL = 1810m³
NET = −660m³ (CUT)

NOTE

1. EXTERNAL AREA CONCRETE SLAB SET DOWN IS 310mm,
2. LANDSCAPE AREA SET DOWN IS 300mm.
3. BUILDING SLAB SET DOWN : LOWER GROUND = 220mm
   CONCOURSE LEVEL = 325mm
   REFER ARCHITECTURAL AND STRUCTURAL DRAWING FOR DETAIL EXCAVATION FOR PAD FOOTINGS.
4. DEPTH OF LIFT SHOULD BE CONFIRMED WITH SUPPLIER.
5. BULK QUANTITIES REPRESENT DIFFERENCE BETWEEN EXISTING GROUND LEVELS AND BULK EARTHWORKS LEVELS. NO ADJUSTMENT FACTORS HAVE BEEN INCLUDED.
6. BULK EARTHWORKS DOES NOT INCLUDED DETAILED EXCAVATION FOR LIFT PITS, FOOTINGS, SERVICES, ETC.

FileName: SKC15.dwg - USER: lwhite - Plot File Created: Jul 02, 2020 - 12:15pm

SCALE 1:250 0 2.5 5 7.5 10 12.5 m
AT ORIGINAL SIZE

DEVELOPMENT APPLICATION

NOT TO BE USED FOR CONSTRUCTION

Rev	Description	Eng	Draft	Date
P5	ISSUE FOR DA2	SB	LW	02.07.20
P4	ISSUE FOR DA	LE	WW	22.10.19
P3	DRAFT DA	SB	WW	01.10.19
P2	DRAFT DA	SB	WW	27.09.19
P1	FOR COORDINATION	DU	WW	10.09.19

Rev Description Eng Draft Date

Rev Description Eng Draft Date

Architect
HASSEL
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Engineer
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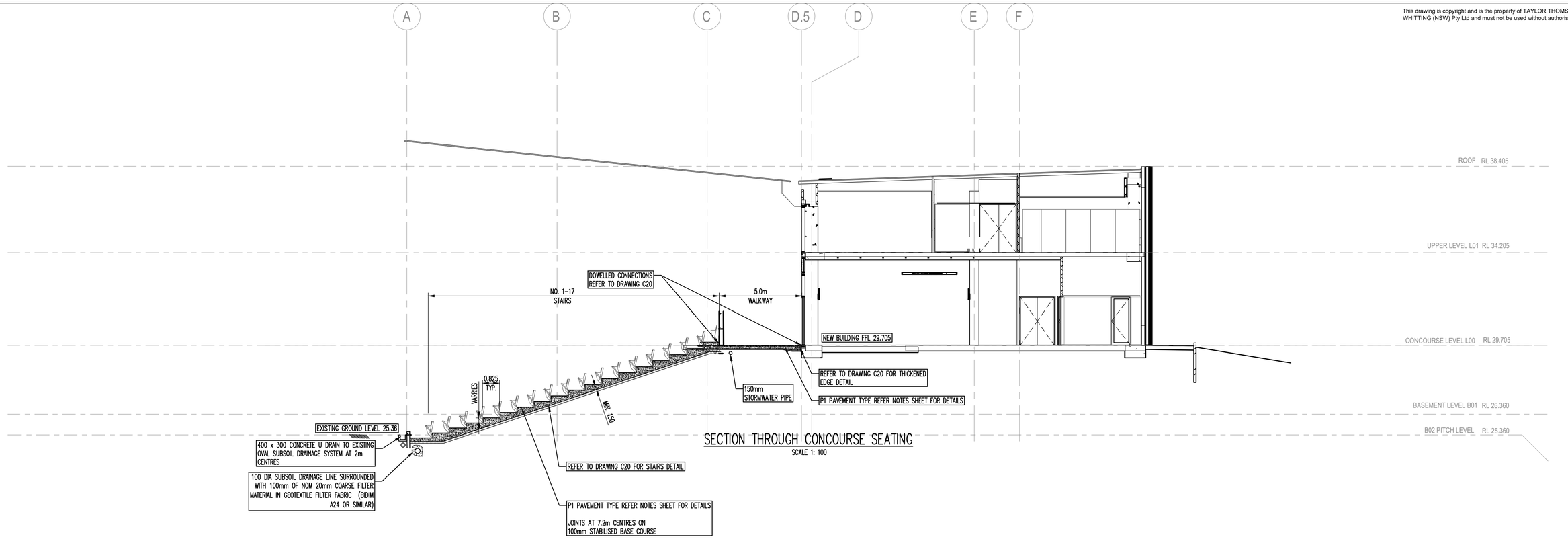
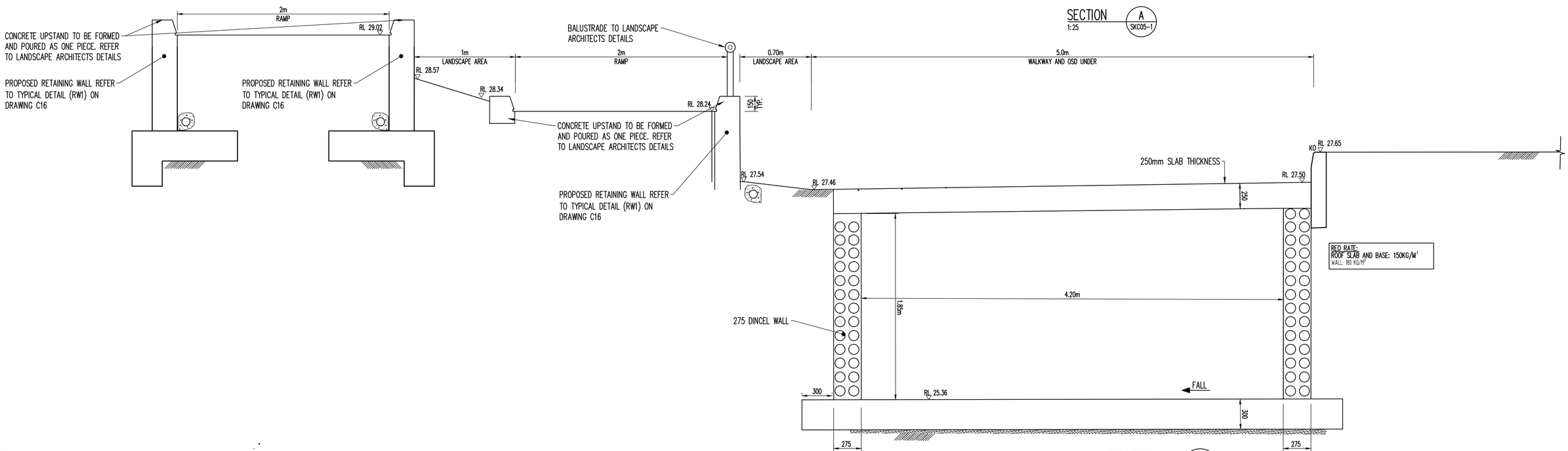
Project
BROOKVALE OVAL
REDEVELOPMENT, BROOKVALE

Sheet Subject
BULK EARTHWORK PLAN

Scale : A1 1:250
Drawn WW
Authorised
Job No 191326
Drawing No SKC15
Revision P5
Plot File Created: Jul 02, 2020 - 12:15pm



SECTION THROUGH CONCOURSE SEATING
SCALE 1: 100



SECTION A
1:25 — SKC05-1

SECTION E
1:25 — SKC05-2

DEVELOPMENT APPLICATION
NOT TO BE USED FOR CONSTRUCTION

FileName: SKC21.dwg - USER: lbrew - Plot File Created: Jul 02, 2020 - 12:18pm

Rev	Description	Eng	Draft	Date
P3	ISSUE FOR DA2	SB	LW	02.07.20
P2	ISSUE FOR DA	LE	WW	22.10.19
P1	DRAFT DA	SB	WW	02.10.19

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Project
BROOKVALE OVAL
REDEVELOPMENT, BROOKVALE

Sheet Subject
DETAILS SHEET 2

Scale : A1: AS SHOWN
Drawn: AS
Authorised:
Job No: 191326
Drawing No: SKC21
Revision: P3
Plot File Created: Jul 02, 2020 - 12:18pm