THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT NOTES ON DRAWING C101

SITEWORKS LEGEND

- F22.20 — Finished surface level
- F22.00 — Finished contour
- K&G — Kerb and gutter
- KO — Kerb only
- Stormwater pit, flow direction and line with
- IL10.00 / 600 ø 'Z' / 1.25% / Q=345 L/s / IL9.65 — Invert level upstream, Pipe size and class, Pipe grade, Flow (Litres per second), Invert level downstream
- GD — Grated drain
- IR — Intermediate riser with subsoil drainage line (100 dia)
- FP — Flushing point with subsoil drainage line (100 dia)
- DP — Down pipe
- RW# — Blockwork retaining wall
- RW# — Brickwork retaining wall

ARCHITECTURAL LEGEND

- LEVEL 2
- LEVEL 3
- Existing tree to be removed

PAVEMENT LEGEND

- Refer to Landscape

* NOTE: CONTRACTOR TO CLEAN AND INVESTIGATE VIA CCTV EXISTING STORMWATER INFRASTRUCTURE TO BE CONNECTED INTO.

MOUNT PLEASANT AVENUE

FOR CONTINUATION REFER TO DRAWING NSKC105

EXISTING TREES TO BE REMAINED

RAINWATER TANK

OSD TANK

LEVEL 03 FFL 191.40

LEVEL 02 FFL 188.20

RAISED PLANTER ON ROOF SLAB

ENTRY BASEMENT 3

LOADING DOCK ENTRY

FFL 186.183

FFL 181.90(B2)

FFL 191.35

FFL 191.40(L03)

FFL 191.00(L03)

FFL 187.50 (L02)

RL189.40(L02)

FFL 185.00(B1)

RL189.30 (L02)

RL188.20

RL187.95

RL189.905

F181.30

F181.35

F181.71

F181.86

F183.46

F183.56

F184.90

F190.85

RL181.95

RL181.68

RL184.65

TW185.10

TW182.40

TW187.45

TW188.00

TW189.00

TW185.65

FALL

Ø 300

180.25

FileName: SKC104.dwg - USER: gnoce - Plot File Created: Jan 17, 2019 - 1:59pm

A1 0 1 2 3 4 5 6 7 8 9 10

Rev	Description	Eng	Draft	Date
P3	ISSUE FOR APPROVAL	GC	JH	17.01.19
P2	ISSUE FOR APPROVAL	GC	JH	11.01.19
P1	ISSUE FOR APPROVAL	GC	JH	20.12.18

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Project
LORETO NORMANHURST,
91-93 PENNANT HILLS ROAD
SITE A, BOARDING HOUSE

Sheet Subject
SITEWORKS PLAN SHEET 2
(LEVEL 02 AND 03)

Scale : A1 1:200 | Drawn JH | Authorised

Job No 181202 | Drawing No SKC104 | Revision P3

Plot File Created: Jan 17, 2019 - 1:59pm

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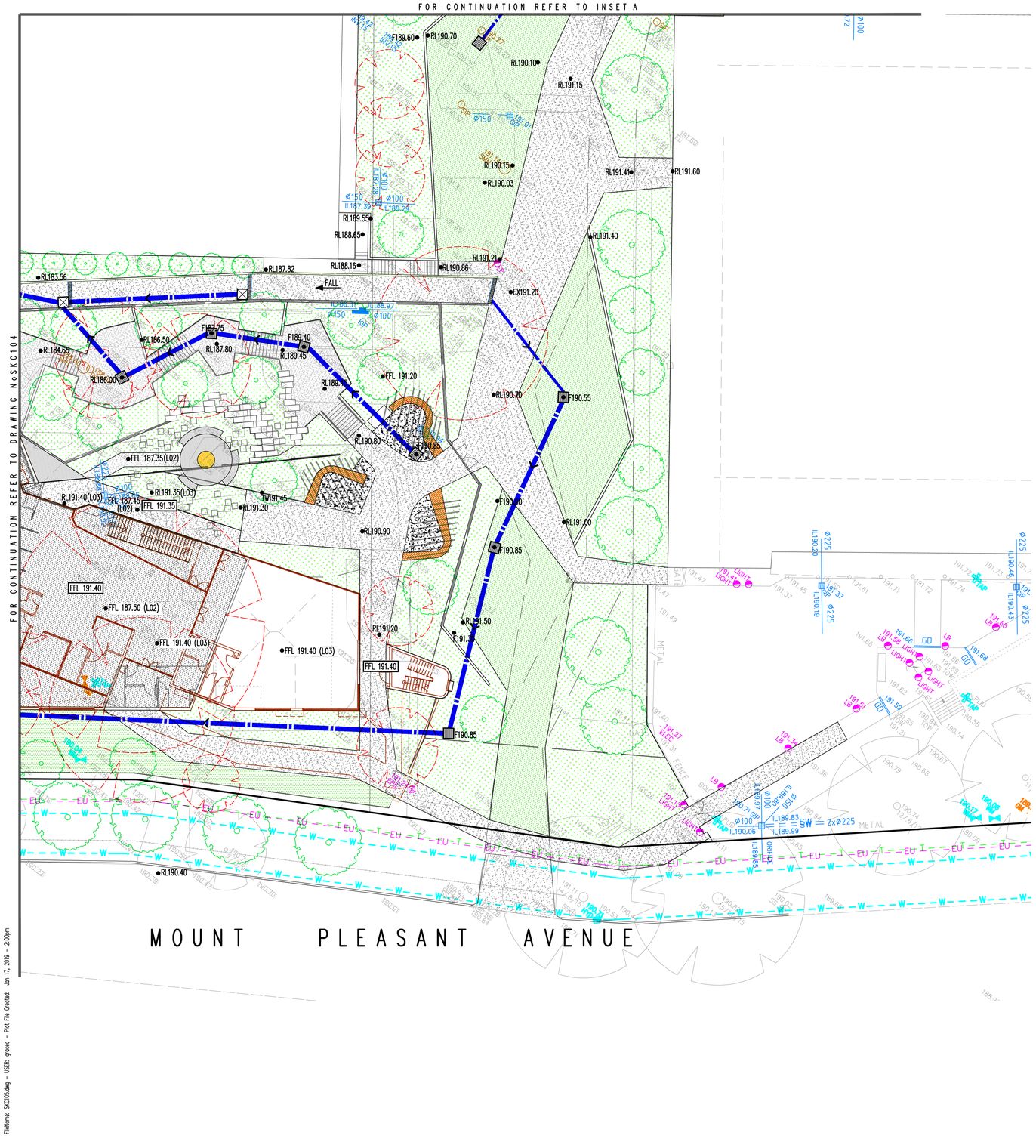

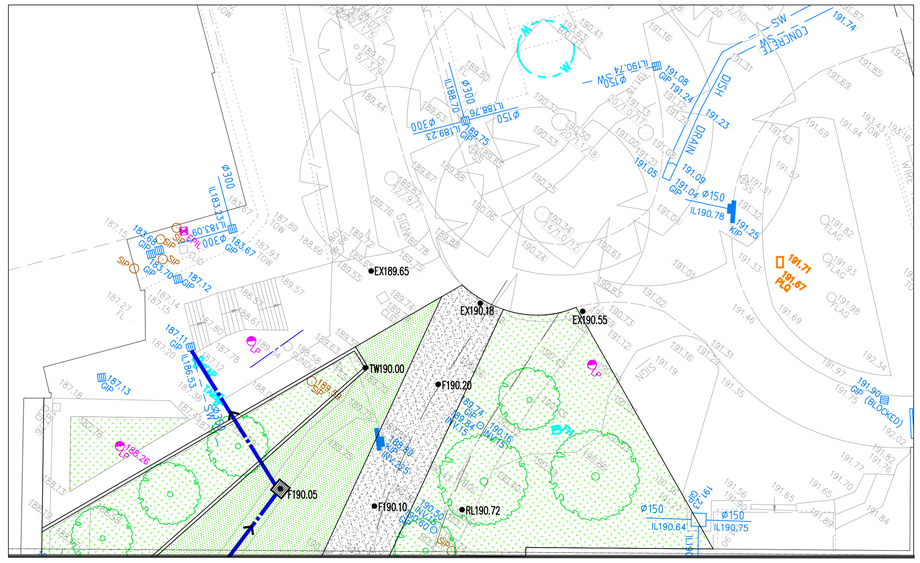

INSET A
SCALE 1: 200

SITEWORKS LEGEND

● F22.20	Finished surface level
F22.00	Finished contour
K&G	Kerb and gutter
KO	Kerb only
IL10.00 600 ø '2' 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
GD	Grated drain
IR	Intermediate riser with subsoil drainage line (100 dia)
FP	Flushing point with subsoil drainage line (100 dia)
DP	Down pipe
RW#	Blockwork retaining wall
RW#	Brickwork retaining wall

ARCHITECTURAL LEGEND

▨	LEVEL 02
—	LEVEL 03

Existing tree to be removed

PAVEMENT LEGEND

🟩	Refer to Landscape

* NOTE: CONTRACTOR TO CLEAN AND INVESTIGATE VIA CCTV EXISTING STORMWATER INFRASTRUCTURE TO BE CONNECTED INTO.

FileName: SKC105.dwg – USER: gracec – Plot File Created: Jan 17, 2019 – 2:00pm

A1 0 1 2 3 4 5 6 7 8 9 10

Rev	Description	Eng	Draft	Date
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P2	ISSUE FOR APPROVAL	GC	JH	11.01.19
P1	ISSUE FOR APPROVAL	GC	JH	20.12.18

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Project
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SITE A, BOARDING HOUSE

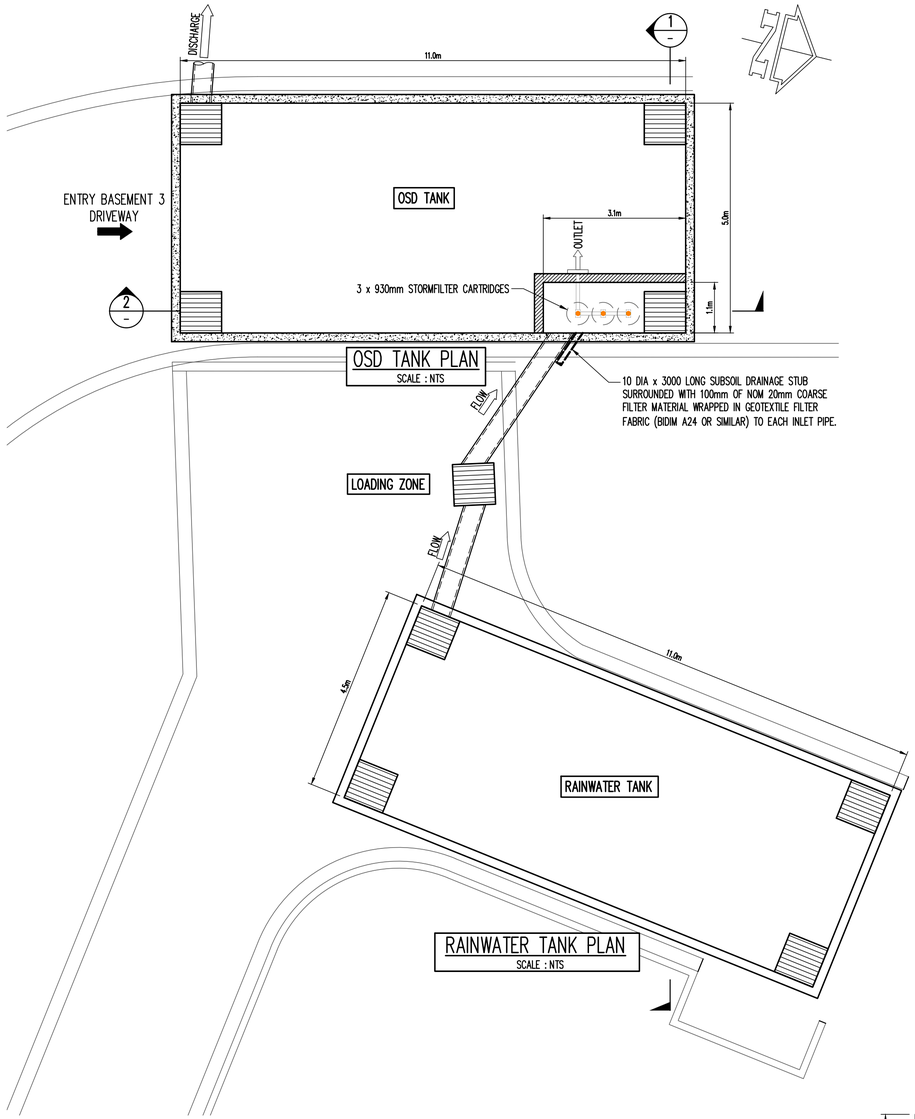
Sheet Subject
SITEWORKS PLAN SHEET 3
(LEVEL 02 AND 03)

Scale : A1	Drawn	Authorised
1:200	JH	

Job No	Drawing No	Revision
181202	SKC105	P3

Plot File Created: Jan 17, 2019 - 2:00pm

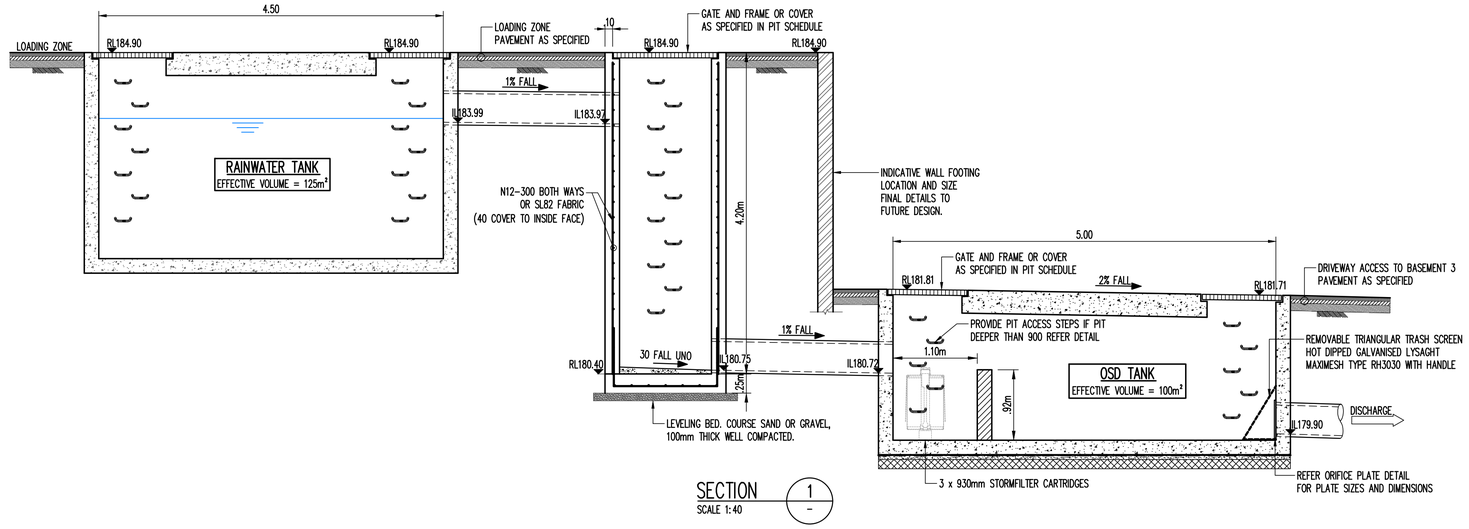
THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT NOTES ON DRAWING C101



OSD TANK PLAN
SCALE : NTS

10 DIA x 3000 LONG SUBSOIL DRAINAGE STUB SURROUNDED WITH 100mm OF NOM 20mm COARSE FILTER MATERIAL WRAPPED IN GEOTEXTILE FILTER FABRIC (BIDIM A24 OR SIMILAR) TO EACH INLET PIPE.

RAINWATER TANK PLAN
SCALE : NTS



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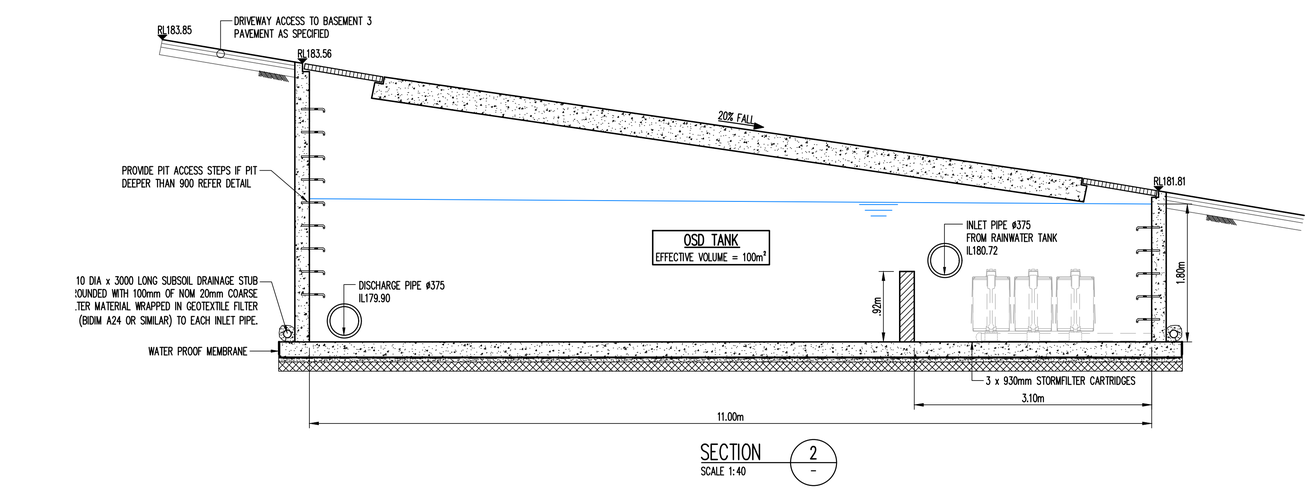

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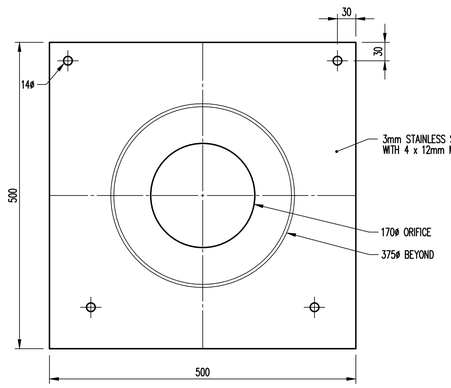
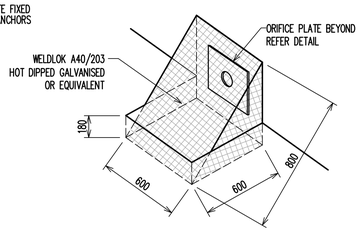
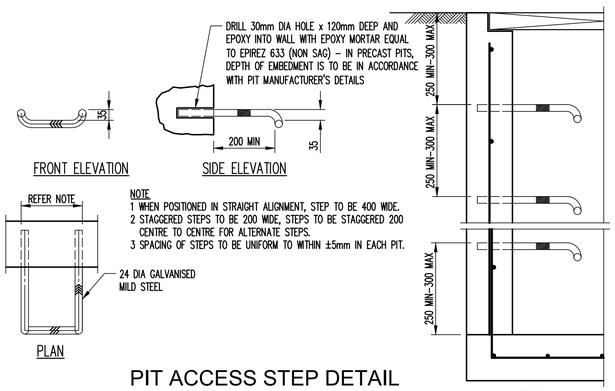
SCALE 1:40



ORIFICE PLATE DETAIL
SCALE : 5



TRASH SCREEN DETAIL
NTS



PIT ACCESS STEP DETAIL
SCALE : 10

FileName: SKC110.dwg – USER: grosic – Plot File Created: Jan 17, 2019 - 2:09pm

A1 0 1 2 3 4 5 6 7 8 9 10

Rev	Description	Eng	Draft	Date
P2	ISSUE FOR APPROVAL	GC	JH	17.01.19
P1	ISSUE FOR APPROVAL	GC	JH	20.12.18

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SITE A, BOARDING HOUSE

Sheet Subject
OSD TANK DETAILS SHEET

Scale : A1 AS NOTED
Drawn JH
Authorised
Job No 181202
Drawing No SKC110
Revision P2
Plot File Created: Jan 17, 2019 - 2:00pm

Appendix B

Concept Mary Ward Civil Engineering Drawings

THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT NOTES ON DRAWING SKC000

MARY WARD

LORETO NORMANHURST, 91-93 PENNANT HILLS ROAD, NORMANHURST

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
OCULUS	MARY WARD	DA2001	3	09.01.19
AJ+C	MARY WARD COURTYARD	DA9000	1	07.01.19

SURVEY AND SERVICES INFORMATION

SURVEY

Origin of levels : SSM46458, RL189.789
Datum of levels : A.H.D. AUSTRALIAN HEIGHT DATUM
Coordinate system : MGA
Survey prepared by : LTS LOCKLEY
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.

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.

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.

GROUND CONDITIONS

Contractor to be aware of the site geotechnical conditions. Refer to geotechnical report by (insert report details) 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 (insert report details) 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.

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.

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.

STORMWATER DRAINAGE NOTES

1 Stormwater Design Criteria :
(A) Average exceedance probability –
1% AEP for roof drainage to first external pit
5% AEP for paved and landscaped areas
(B) Rainfall intensities –
Time of concentration: 5 minutes
1% AEP = 21.7 mm
5% AEP = 16.1 mm
(C) Rainfall losses –
Impervious areas: IL = 1.5 mm , CL = 0 mm/hr
Pervious areas: IL =26.6 mm , CL = 2 mm/hr

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 Engineer
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).

RETAINING WALLS

1. Drainage shall be provided as shown on the drainage drawings.
2. Backfilling shall be carried out after grout or concrete has reached a minimum strength of 0.85 f'c. Backfilling shall be approved granular material compacted in layers not exceeding 200mm to 95% Standard compaction unless noted otherwise.
3. Provide waterproofing to back of walls as specified or noted.
4. Where retaining walls rely on connecting structural elements for stability, do not backfill against the wall unless it is adequately propped or the elements have been constructed and have sufficient strength to withstand the loads.
5. For all temporary batters obtain geotechnical engineers recommendations.

SURVEY LEGEND

+18.48	Surface level
19	Contour
	Kerb line
	Batter
	Retaining wall
SW	Stormwater drainage line
T	Telecommunications line
G	Gas line
W	Water main
S	Sewer line
E	Electrical line
EASEMENT FOR ____(__m WIDE)	Easement
	Fence
	Tree to be removed/be retained
	Boundary
SGN	Sign
H	Hydrant
MH	Manhole
G	Gas
SV	Stop Valve
W	Water
TEL	Telecommunications
TRAP	Trap
	Gully
	Grate
S	Sewer Manhole
E	Electricity
ELP	Electric Light Pole
TL	Traffic Light
TLL	Traffic Light Lid
TLB	Traffic Light Box
TB	Telephone Box
PKM	Parking Meter
PM 1234	Permanent Mark
BM 51.10	Bench Mark
BH 0	Borehole
TP No	Test Pit

EXISTING SERVICES LEGEND

S	Existing sewer
W	Existing water
EU	Existing underground electrical
EA	Existing aerial electrical
T	Existing communications
G	Existing gas
SW	Existing stormwater

SITE LOCALITY PLAN
NOT TO SCALE – IMAGE COURTESY OF NSW SPATIAL INFORMATION EXCHANGE

DRAWING SCHEDULE

Drawing No	Drawing Title
SKC200	NOTES AND LEGENDS SHEET
SKC201	EROSION & SEDIMENT CONTROL PLAN
SKC202	SITEWORKS CONCEPT PLAN
SKC203	CATCHMENT PLAN

FileName: SKC200.dwg – USER: grace – Plot File Created: Jan 17, 2019 - 12:26pm

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P1	ISSUE FOR DA	GC	DM	17.01.19

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Project
LORETO NORMANHURST,
91-93 PENNANT HILLS ROAD,
NORMANHURST

Sheet Subject
NOTES AND LEGEND SHEET

FOR APPROVAL

Scale : A1	Drawn	Authorised
-	DM	

Job No	Drawing No	Revision
181202	SKC200	P1

Plot File Created: Jan 17, 2019 - 12:26pm

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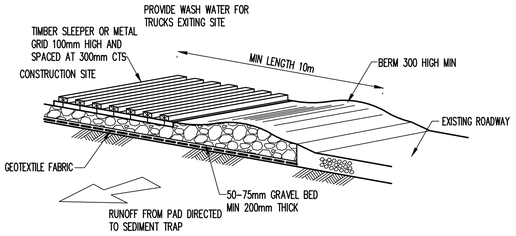
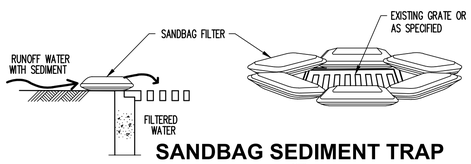
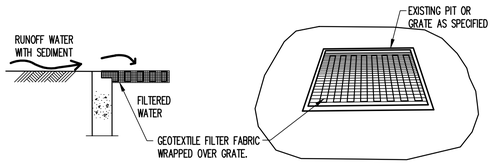


TEMPORARY CONSTRUCTION VEHICLE EXIT
NTS



SANDBAG SEDIMENT TRAP
NTS



GEOTEXTILE PIT FILTER
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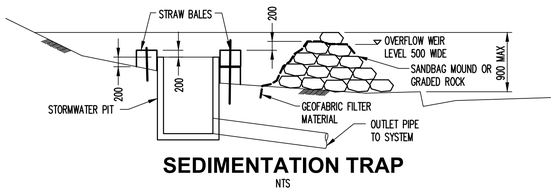

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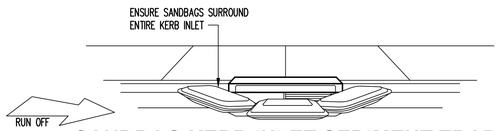

SANDBAG KERB INLET SEDIMENT TRAP
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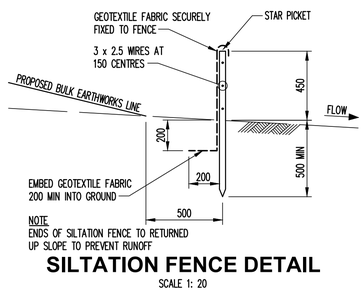
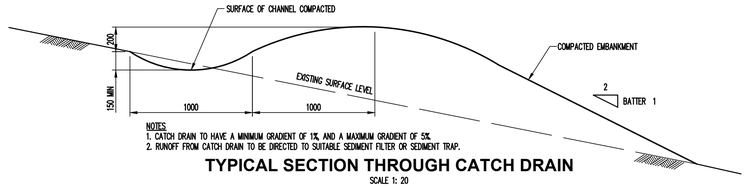
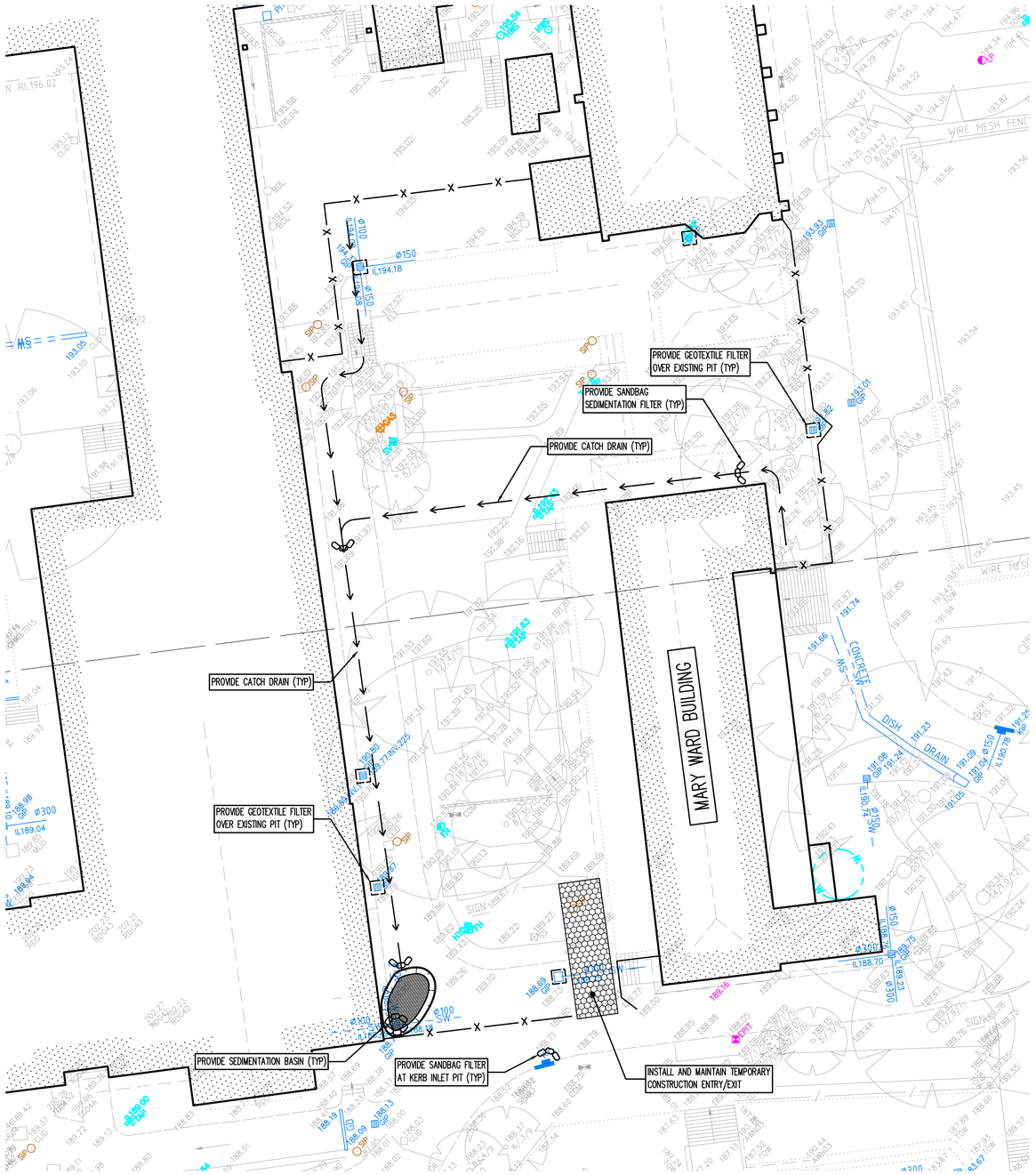


SILTATION FENCE DETAIL
SCALE 1: 20



NOTES
1. CATCH DRAIN TO HAVE A MINIMUM GRADIENT OF 1% AND A MAXIMUM GRADIENT OF 5%.
2. RUNOFF FROM CATCH DRAIN TO BE DIRECTED TO SUITABLE SEDIMENT FILTER OR SEDIMENT TRAP.

TYPICAL SECTION THROUGH CATCH DRAIN
SCALE 1: 20



ERODION 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.

EROSION AND SEDIMENT CONTROL PUMP OUT NOTES

Any accumulated water contaminated with sediment, from a sediment basin or excavation pit, is to be flocculated or filtered in order to lower the suspended solid load to less than 50mg per litre gypsum gas or other approved flocculant should be applied within 24 hours of the end of the storm event. The gypsum must be spread evenly over the entire water surface. Pumping is not to occur for at least 36 hours and preferably 48 hours after application. Clean water is to be discharged to the water table via a hole boil sediment filter in a way that does not pick up sediment that has dropped to the bottom.
Note: gypsum is a hydrated form of calcium sulphate and is available at many swimming pool shops and hardware stores.

EROSION AND SEDIMENT CONTROL LEGEND

- Batter
- Siltation fence
- Stormwater pit with Geotextile filter surround
- Sandbag sediment trap
- Catch drain

0 2 4 6 8 10 12 14 16m

1:200 A1 1:400 A3

FOR APPROVAL

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A1 0 1 2 3 4 5 6 7 8 9 10

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Sheet Subject
EROSION AND SEDIMENT CONTROL PLAN

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