

ANNEXURE 9

Date:	Rev:	Amendment:	By:

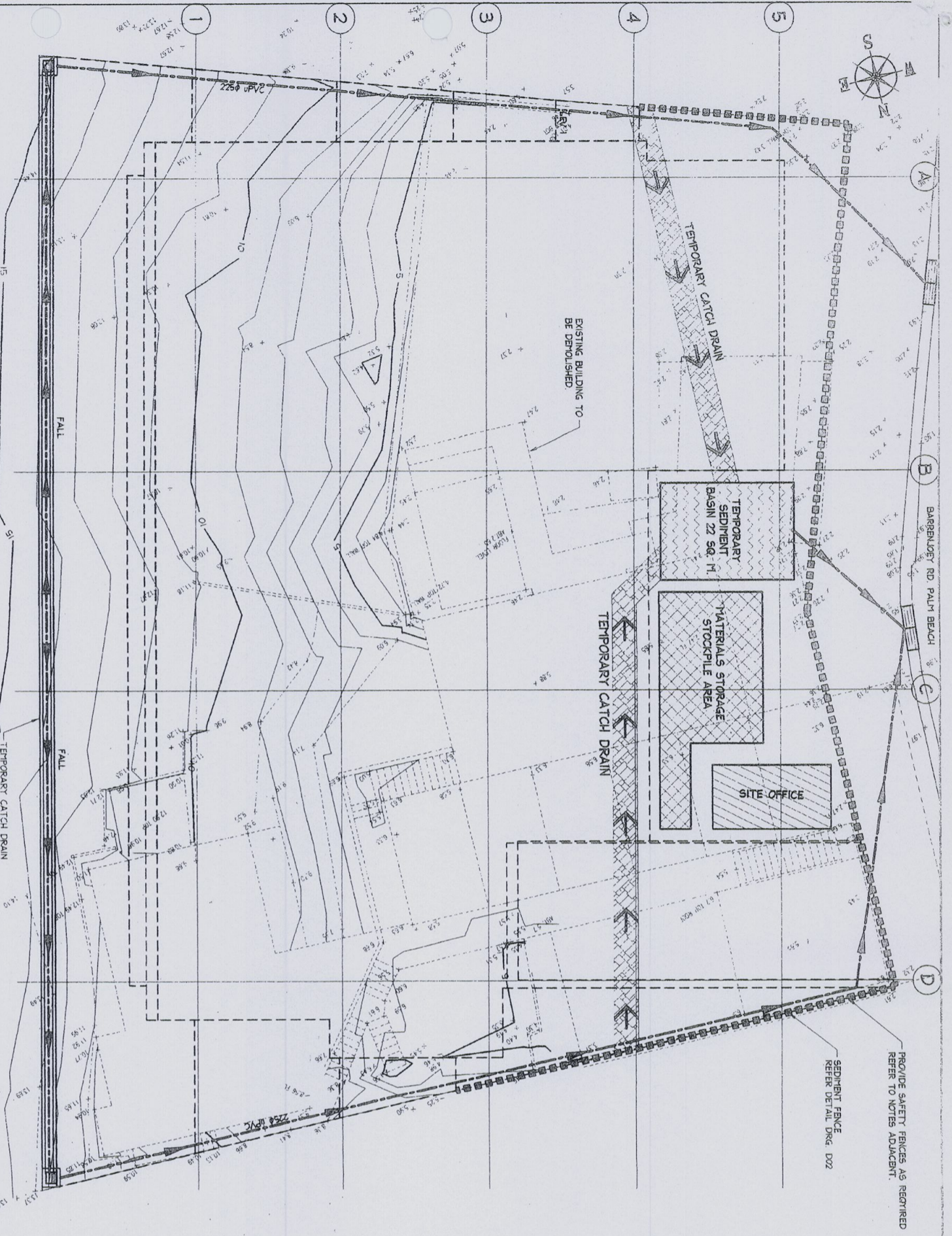
A1

- NOTES:**
1. ALL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSPECTED AND MAINTAINED DAILY BY SITE MANAGER
 2. MINIMISE DISTURBED AREAS
 3. ALL STOCKPILES TO BE CLEAR FROM DRAINS, GUTTERS AND FOOTPATHS
 4. DRAINAGE IS TO BE CONNECTED TO STORMWATER SYSTEM AS SOON AS POSSIBLE
 5. ROADS AND FOOTPATHS TO BE SWEPT DAILY

- SCHEDULE OF WORKS:**
1. SILT FENCE AND ASSOCIATED WORKS INCLUDING INTERCEPTOR DRAIN IS TO BE INSTALLED BEFORE THE COMMENCEMENT OF ANY EXCAVATION.
 2. CUTS TO BE EXECUTED TO THE REQUIRED LEVEL USING CONVENTIONAL EXCAVATION MACHINERY. INITIALLY THE DEPTH OF FILL/CLAY IS TO BE ESTABLISHED TO ENSURE NEIGHBOURING PROPERTIES ARE NOT ADVERSELY AFFECTED. EARTH BATTERS TO BE A MAXIMUM SLOPE OF 1.0 m VERT. TO 1.7 m HORIZ. (AS PER GEOTECHNICAL REPORT). ANY BATTERS GREATER THAN 1.0 m VERT. TO 1.7 m HORIZ. ARE TO BE ADEQUATELY SHORED IN ACCORDANCE WITH THE ENGINEERS DETAILS AND INSTRUCTIONS.
 3. ANY PERMANENT RETAINING STRUCTURE IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERS DETAILS AND INSTRUCTIONS.
 4. ALL PERMANENT RETAINING STRUCTURES ARE TO BE COMPLETED WITH MINIMUM DELAY FOLLOWING EXCAVATION.

PLAN ON STAGE A - EARLY WORKS

SCALE 1:100



GENERAL NOTES

- CONSTRUCTION VEHICLES ARE TO LEAVE & ENTER THE SITE OVER AN ALL WEATHER SURFACE CONSISTING OF COARSE CRUSHED STONE OR BLUE METAL FOOTPATH CROSSING UNLESS NOTED OTHERWISE.
- EXCAVATION MACHINERY ARE TO BE UNLOADED & LOADED UPON THIS ALL WEATHER SURFACE CONCRETE FORMS & TRUCKS WILL ALSO UTILISE THE ALL WEATHER SURFACE FOR THEIR OPERATIONS.
- MATERIALS WILL BE UNLOADED UPON THE ALL WEATHER SURFACE WITHIN DELIVERY TRUCKS OR UNLOADED BY HAND. A TRUCK CRANE MAY BE REQUIRED DURING THE CONSTRUCTION PROCESS.
- SOME STOCKPILING OF TOPSOIL, REMOVED FROM THE BUILDING AREA MAY BE STORED ON THE SITE DURING THE CONSTRUCTION WITHIN THE FENCING IN AN AREA ENCLOSED WITHIN THE SEDIMENT CONTROL FENCING.
- ALL EXCAVATED & CONSTRUCTION MATERIALS, SHED, SKIP BINS, TEMPORARY MATTER CLOSETTS, SPOIL & EQUIPMENT, ETC SHALL BE KEPT WITHIN THE PROPERTY & NO MATERIALS SHALL BE KEPT WITHIN THE EXCESSIVE LENGTH OF THE ROAD LENGTHS OF THE
- ALL RUBBISH & RECYCLABLE MATERIAL SHALL BE STORED IN WASTE BINS IN THE AREA NOTATED ON THE SITE PLAN WITHIN THE SITE BOUNDARY. PUBLIC PROPERTY SHALL BE KEPT FREE OF RUBBISH & RECYCLABLES AT ALL TIMES & DISPOSED OF IN AN APPROPRIATE FASHION.
- ANY BUILDING / DEMOLITION WORKS INVOLVING ASBESTOS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT STANDARDS.
- VEHICLES LEAVING THE SITE WILL DO SO VIA THE ALL WEATHER BALLAST ROAD SETBACK AREA OF THE TENDRUM LANE PIT OR MATERIAL DEPOSITED ON THE ROAD RESERVE OR ROADWAY IS TO BE PROMPTLY CLEANED.
- ANY EXCAVATED AREA REQUIRED SUPPORT WILL BE UNDERTAKEN BY THE OWNER USING STRUCTURALLY APPROVED RETAINING STRUCTURES.
- APPROPRIATE SAFETY SIGNAGE MUST BE ERECTED IN A PROMINENT POSITION ON THE WORK SITE, WARNING OF UNAUTHORIZED ENTRY TO WORK SITE & INTENDING DANGERS.
- SAFETY FENCES SHALL BE PROVIDED AROUND ALL BOUNDARIES UNLESS A CONTINUOUS STRUCTURALLY ADEQUATE FENCE PRESENTLY EXISTS. THE FENCING SHALL BE ADEQUATE TO RESTRICT PUBLIC ACCESS TO THE SITE WHEN WORK IS IN PROGRESS OR THE SITE IS UNOCCUPIED.
- NOISE LEVELS SHALL NOT EXCEED COUNCIL REGULATION LEVELS. BUILDING & DEMOLITION WORKS SHALL ONLY BE CARRIED OUT BETWEEN HOURS & DAYS SPECIFIED BY COUNCIL.
- GEOTECHNICAL FABRIC SHALL BE PLACED ON THE INSIDE OF THE SITE FENCING AND DISTURBED AREAS OF THE SITE INTO THE STORMWATER SYSTEM DURING CONSTRUCTION UNCONTAMINATED RUNOFF FROM CLEARED OR DISTURBED AREAS IS TO BE DIRECTED TO A TEMPORARY SILT ARRESTOR PIT THAT SHALL BE OPERATED BEFORE IT IS DISCHARGED TO THE STREET DRAINAGE SYSTEM OR WATERCOURSE.
- ALL TOP SOIL STRIPPED & STOCKPILED ON SITE IS TO BE PLACED UPON THE COMPLETION OF BUILDING WORKS.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO BE CONTINUALLY MAINTAINED DURING CONSTRUCTION AND INSPECTED FOR STRUCTURAL DAMAGE AFTER EACH RAINFALL EVENT, WITH TRAPPED SEDIMENT BEING REMOVED TO THE TOPSOIL STOCKPILE.
- WHERE THERE IS THE POTENTIAL OF SITE EROSION TO PRODUCE EXCESSIVE DRAINAGE DURING CONSTRUCTION, THE ENGINEER SHALL ADVISE THE OWNER TO ALLEViate THE RISK ACCORDING TO THE GEOTECHNICAL FABRIC LOCATED ON THE INSIDE OF FENCES SHALL ALSO BE UTILISED FOR DUST CONTROL WHERE NECESSARY.

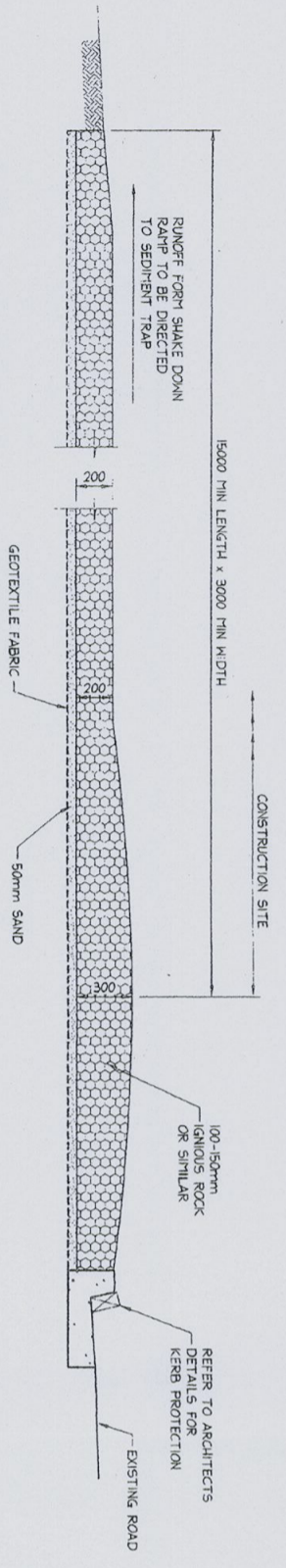
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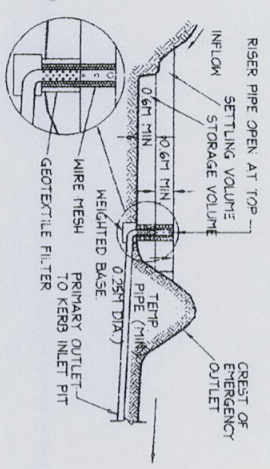
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Project:	1112-1118 BARENJOEY RD PALM BEACH
Architect:	LESURIK ARCHITECTS PTY. LTD
Drawing Title:	STAGE A EARLY WORKS PLAN
Date:	OCT '09
Design:	R.M.
Drawn:	KENTON
Checked:	RAY
Job No:	090856
Drawing No:	C01
Rev:	-



TYPICAL TEMPORARY CONSTRUCTION ENTRY/EXIT DETAIL

- CONSTRUCTION NOTES:**
1. STRIP TOP-SOIL AND LEVEL SITE
 2. COMPACT SUBGRADE
 3. COVER AREA WITH NEEDLE-PUNCHED GEOTEXTILE
 4. CONSTRUCT 300mm THICK PAD OVER GEOTEXTILE USING ROADBASE OR 30mm AGGREGATE. MINIMUM LENGTH IS 3 METRES OR TO BUILDING ALIGNMENT. MINIMUM WIDTH 3 METRES
 5. CONSTRUCT RAMP IMMEDIATELY WITHIN BOUNDARY TO DIVERT WATER TO A SEDIMENT FENCE OR OTHER SEDIMENT TRAP

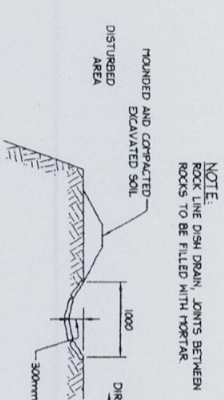


TYPICAL TEMPORARY SEDIMENT BASIN

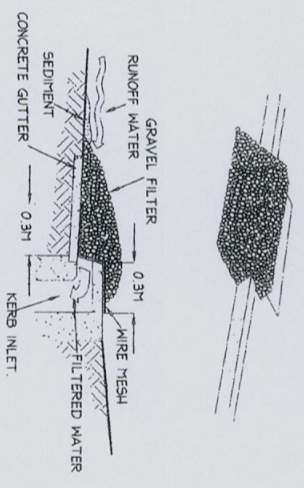
CATCHMENT AREA TO SEDIMENT BASIN = 1840 SQ. M.
LOW EROSION HAZARD = 150 T/HA
THEREFORE REQUIRE = 204 M³

TEMPORARY SEDIMENT BASIN

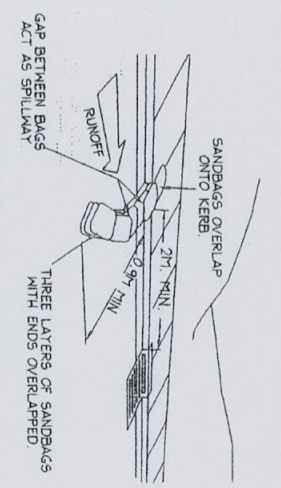
- CONSTRUCTION NOTES:**
- 1 - SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
 - 2 - THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRED AS NEEDED.
 - 3 - CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN A MANNER THAT EROSION AND WATER POLLUTION SHALL BE MINIMIZED.
 - 4 - THE SEDIMENT TRAP SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE CONSTRUCTED DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



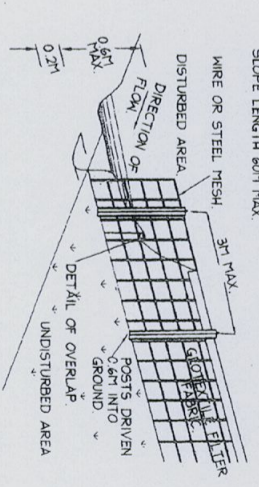
TEMPORARY CATCH DRAIN - ROCK LINED



GRAVEL KERB INLET SEDIMENT TRAP



SANDBAG KERB INLET SEDIMENT TRAP

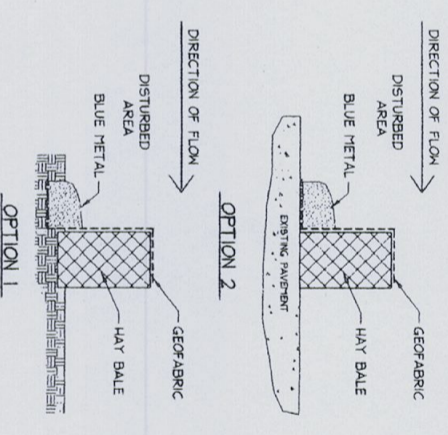


SEDIMENT FENCE

- CONSTRUCTION NOTES:**
1. CONSTRUCT SEDIMENT FENCE AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE
 2. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND, 3 METRES APART.
 3. DIG A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
 4. BACKFILL TRENCH OVER BASE OF FABRIC.
 5. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY GEOTEXTILE MANUFACTURER.
 6. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.

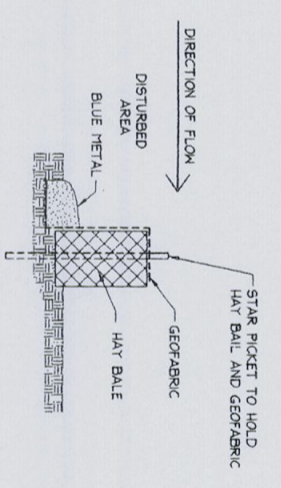
REMOVABLE HAY BALE DETAIL

SCALE = N.T.S.



SILT FENCE DETAIL - OPTION 2

SCALE = N.T.S.



Date	Rev	Amendment	By

Drawing Title:			
STAGE A EARLY WORKS DETAILS			
Date:	Design:	Drawn:	Checked:
OCT. '09	R.M.	KENTON	REGAN
Job No:	Drawing No:	Rev:	
090856	C02	-	

Architect:	Client:	Project:
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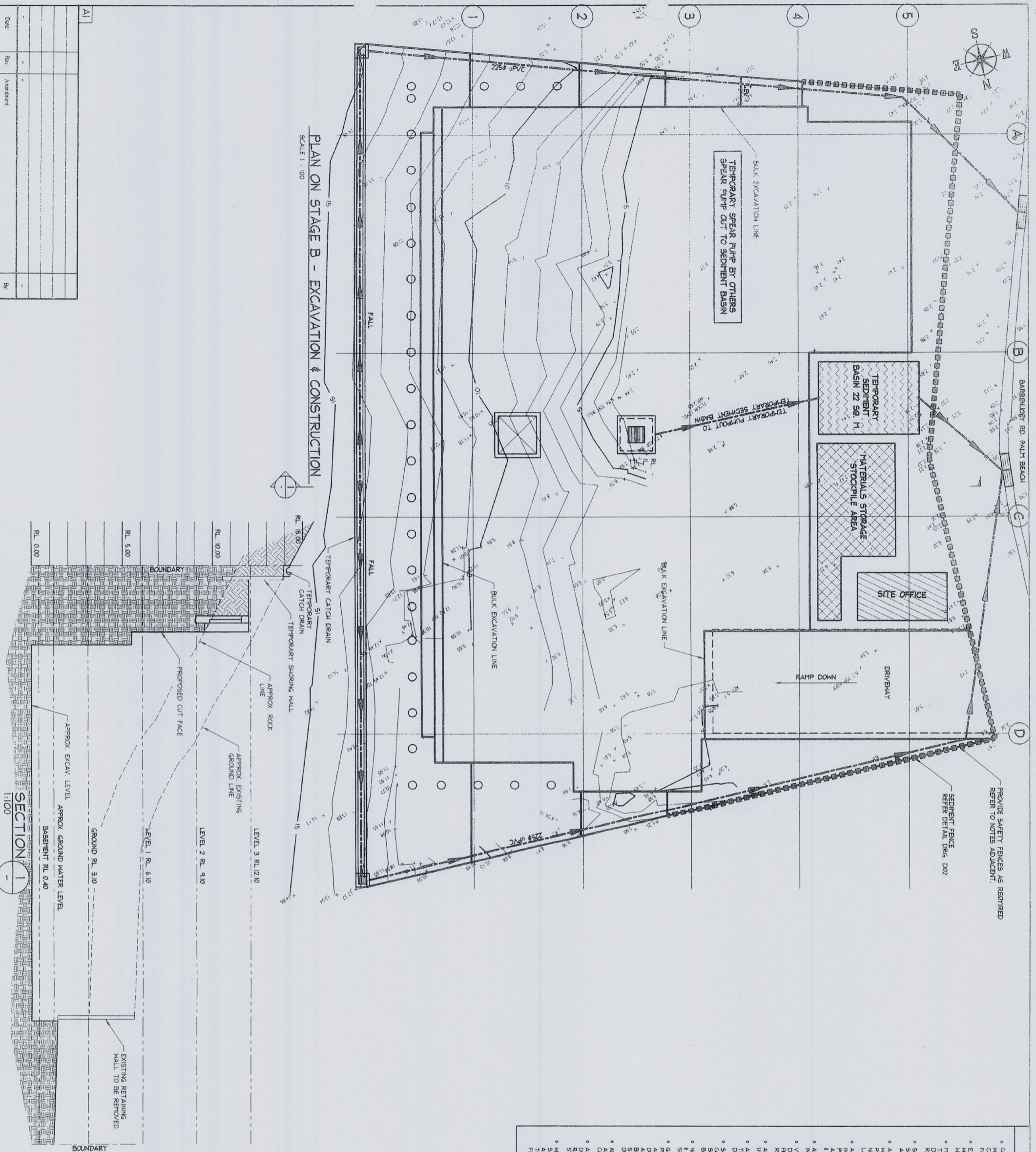
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DOCUMENT CERTIFICATION

Date: 09/09/09
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- GENERAL NOTES**
- CONSTRUCTION VEHICLES ARE TO LEAVE & ENTER THE SITE OVER AN ALL WEATHER SURFACE CONSISTING OF COURSE CRUSHED STONE OR BLUE METAL FOOTPATH CROSSING THE FRONT SETBACK AREA OPPOSITE THE EXISTING EXCAVATION MACHINERY ARE TO BE UNLOADED & LOADED UPON THIS ALL WEATHER SURFACE. CONCRETE PUMPS & TROLES WILL ALSO UTILISE THE ALL WEATHER SURFACE AREA BY MEANS OF CRANES MOUNTED ON THE BACK OF THE FRONT SETBACK AREA. WHEELED LOADERS SHOULD BE OPERATED ON THE REAR OF THE FRONT SETBACK AREA. WHEELED LOADERS SHOULD BE OPERATED ON THE REAR OF THE FRONT SETBACK AREA.
 - EXCAVATION MACHINERY ARE TO BE UNLOADED & LOADED UPON THIS ALL WEATHER SURFACE. CONCRETE PUMPS & TROLES WILL ALSO UTILISE THE ALL WEATHER SURFACE AREA BY MEANS OF CRANES MOUNTED ON THE BACK OF THE FRONT SETBACK AREA. WHEELED LOADERS SHOULD BE OPERATED ON THE REAR OF THE FRONT SETBACK AREA.
 - SOME STOCKPILING OF TOPSOIL, SPILT GRIT FROM THE BUILDING AREA MAY BE STORED WITHIN THE COURSE CRUSHED STONE OR BLUE METAL FOOTPATH CROSSING THE FRONT SETBACK AREA. THIS STOCKPILING SHALL BE IN AN AREA ENCLOSED WITHIN THE SEDIMENT CONTROL FENCING.
 - ALL EXCAVATED & CONSTRUCTION MATERIALS, SLED, SKIP BINS, TEMPORARY WATER CLOSETS, SPOIL & EQUIPMENT ETC. SHALL BE KEPT WITHIN THE PROPERTY. NO VEHICLES OR MACHINES SHALL STAND ON COUNCIL FOOTPATHS FOR ANY REASON UNLESS NOTED OTHERWISE.
 - ALL RUBBISH & RECYCLABLE MATERIAL SHALL BE STOCKPILED IN WASTE BINS WITHIN THE PROPERTY. RUBBISH BINS SHALL BE KEPT WITHIN THE PROPERTY. RUBBISH BINS SHALL BE KEPT WITHIN THE PROPERTY.
 - ANY RUBBISH & RECYCLABLE MATERIAL SHALL BE STOCKPILED IN WASTE BINS WITHIN THE PROPERTY. RUBBISH BINS SHALL BE KEPT WITHIN THE PROPERTY.
 - PROPERTY SHALL BE KEPT FREE OF RUBBISH, WASTE, SPILT GRIT, OIL & ANY OTHER MATERIALS THAT MAY BE UNLAWFULLY COLLECTED FROM THE SITE & DISPOSED OF IN AN APPROPRIATE FASHION.
 - ANY BUILDING / DEMOLITION WORKS INVOLVING ASBESTOS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT STANDARDS.
 - VEHICLES LEAVING THE SITE WILL DO SO VIA THE ALL WEATHER BALLAST DRIVEWAY MADE OF COURSE AGGREGATE OR SIMILAR MATERIAL LOCATED WITHIN THE FRONT SETBACK AREA. ANY DIRT OR MATERIAL DEPOSITED ON THE ROAD RESERVE OR ROADWAY IS TO BE PROMPTLY CLEANED.
 - ANY EXCAVATED AREA REQUIRED SUPPORT SHALL BE UNDERTAKEN BY THE OWNER USING STRUCTURALLY APPROVED RETAINING STRUCTURES.
 - ADEQUATE SAFETY SIGNAGE MUST BE ERECTED IN A PROMINENT POSITION ON THE ASBESTOS SITE. MARKING OF UNAUTHORISED ENTRY TO WORK SITE & BOUNDARY FENCES SHALL BE PROVIDED AROUND ALL BOUNDARIES UNLESS A SIGNAGE INDICATING THAT THE PROPERTY IS UNOCCUPIED.
 - SAFETY FENCES SHALL BE PROVIDED AROUND ALL BOUNDARIES UNLESS A SIGNAGE INDICATING THAT THE PROPERTY IS UNOCCUPIED.
 - VEHICLES SHALL BE ADEQUATE TO RESTRICT PUBLIC ACCESS TO THE SITE WHEN BUILDING WORK IS NOT IN PROGRESS OR THE SITE IS UNOCCUPIED.
 - NOISE LEVELS SHALL NOT EXCEED COUNCIL REGULATORY LEVELS. BUILDING DEMOLITION WORKS SHALL ONLY BE CARRIED OUT BETWEEN HOURS & DAYS SPECIFIED BY COUNCIL.
 - GEOTEXTILE FABRIC SHALL BE PLACED ON THE INSIDE OF THE SITE FENCING PRIOR TO SITE DEMOLITION TO PREVENT SEDIMENT MASSING FROM OCCURRING DURING CONSTRUCTION UNCONTAMINATED RAINOFF FROM CLEARED OR DISTURBED AREAS IS TO BE DIRECTED TO A TEMPORARY SILT ARRESTOR PIT THAT SHALL BE PROVIDED WITHIN THE SITE AT THE STREET BOUNDARY PROCESSING SITE OR WATERCOURSE. IT IS DISCHARGED TO THE STREET DRAINAGE SYSTEM.
 - ALL TOP SOIL, STRIPPED & STOCKPILED ON SITE IS TO BE PLACED IN UNPAVED AREAS ON PLAN. ALL DISTURBED AREAS ARE TO BE STABILISED UPON THE COMPLETION OF BUILDING WORKS.
 - ALL SEDIMENT CONTROL STRUCTURES ARE TO BE CONTINUALLY MAINTAINED DURING CONSTRUCTION AND INSPECTED FOR STRUCTURAL DAMAGE AFTER EACH RAINFALL EVENT, WITH TRAPPED SEDIMENT BEING REMOVED TO THE TOPSOIL STOCKPILE.
 - WHERE THERE IS THE POTENTIAL OF SITE EROSION TO PRODUCE EXCESSIVE SEDIMENT RUNOFF, GEOTEXTILE BARRIERS SHALL BE PLACED TO REDUCE DUST LEVELS. GEOTEXTILE FABRIC LOCATED ON THE INSIDE OF FENCES SHALL ALSO BE UTILISED FOR DUST CONTROL, WHERE NECESSARY.

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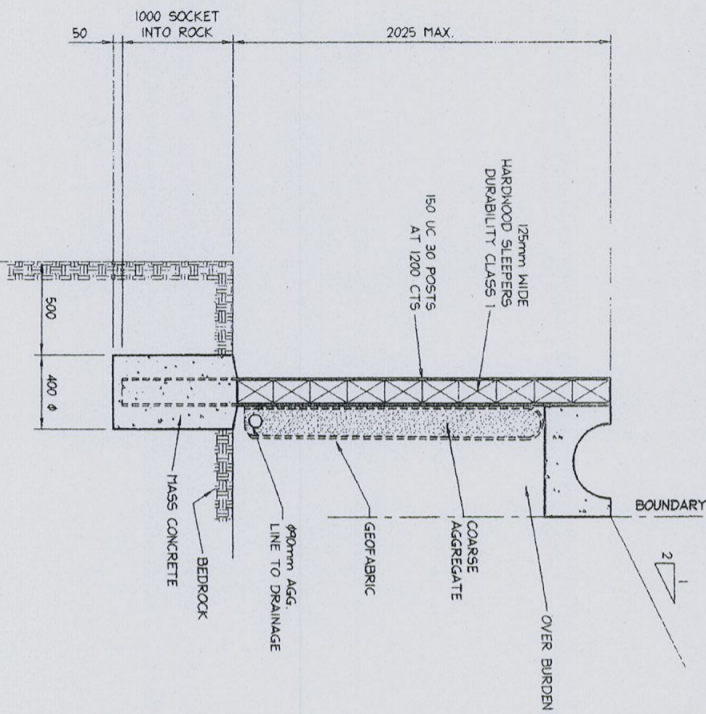
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Architect: LESLUK ARCHITECTS PTY. LTD
 Client: TASOS ANASTA SO POULOS
 Project: 1112-1118 BARENJOEY RD PALM BEACH

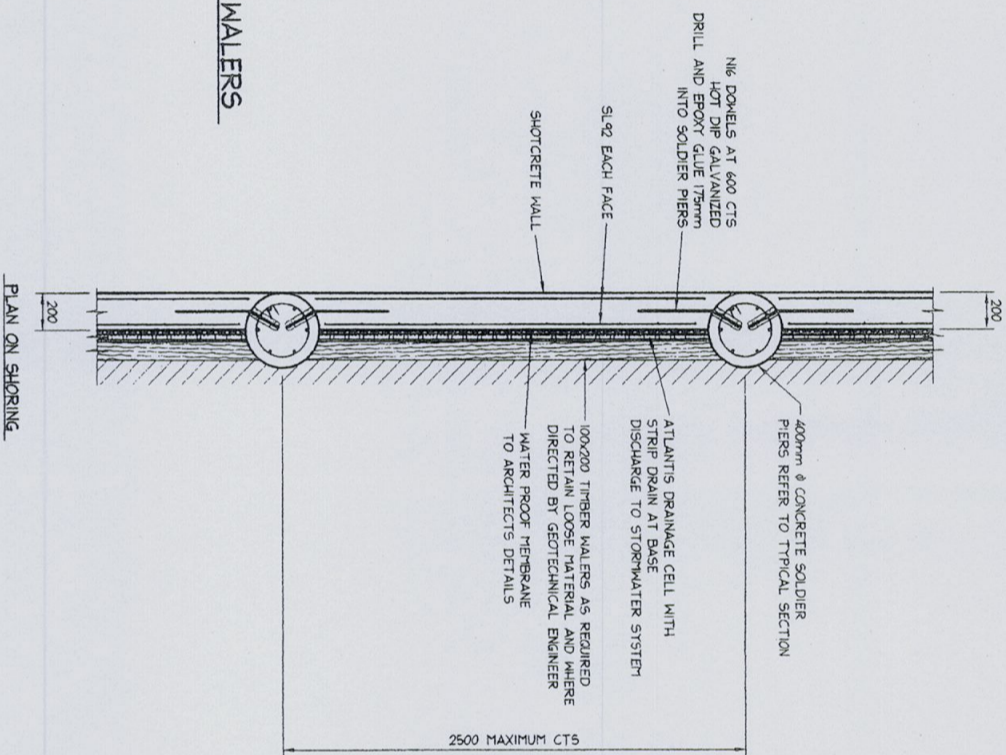
Drawing Title: STAGE B EXCAVATION & CONSTRUCTION PLAN

Date	Design	Drawn	Checked
OCT '09	R.M.	KENTON	RM/
Job No:	090856	Drawing No:	C03
Rev:			



TEMPORARY SHORING WALL WITH STEEL SOLDIERS AND TIMBER WALERS

SCALE = 1 : 20

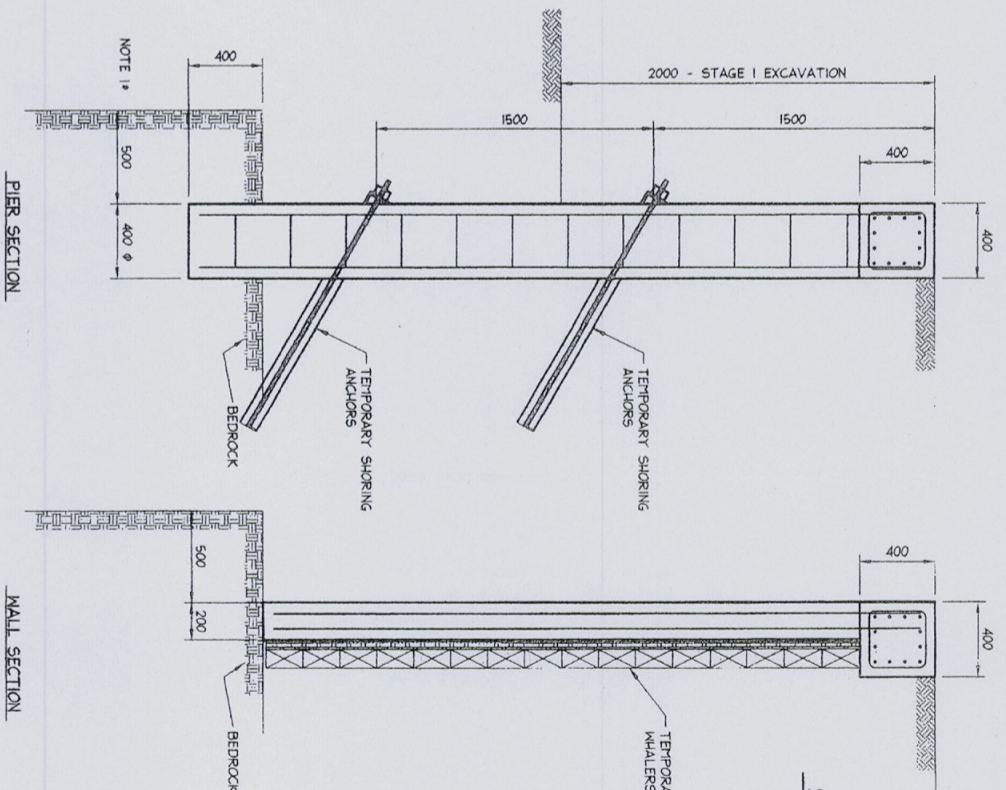


DETAIL OF SHORING WALL MAY VARY TO SUIT SITE CONDITIONS

TYPICAL SHORING DETAILS

SCALE = 1 : 20

NOTE 1# - GEOTECHNICAL CONSULTANT TO APPROVE ROCK FACE. ADD ROCK ANCHORS ETC. AS REQUIRED.



SOLDIER PIER SECTION

SCALE = 1 : 20

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Architect: LESLUK ARCHITECTS PTY. LTD
 Client: TASOS ANASTA SO POULOS
 Project: 1112-1118 BARENJOEY RD
 PALM BEACH

Drawing Title: STAGE B - EXCAVATION & CONSTRUCTION DETAILS

Date	Design	Drawn	Checked
OCT. '09	R.M.	KENTON	R&S
Job No	090856	Drawing No	C04

Date	Rev	Amendment	By

Date:	Rev:	Approved:	By:

AI

SCALE * : 100
 R11, R12 - RAIN HEAD, 150Ø DOWNPIPE
 D11 TO D15 - 100Ø DOWN PIPES
 G11, G12 - GULLY PITS REFER TO DETAILS

CONNECT ROOF WATER (MIN. 150 sqm)/DOWNPIPES TO RAINWATER TANKS
 † DIRECT TO GROUND FLOOR DRAINAGE OSD CONTROL SYSTEM.

BARENJOEY RD, PALM BEACH

900 x 900 OSD BOUNDARY CONTROL PIT
 R.L. - 3.10
 I.L. - 1.80

PUMP OUT LINE TO OSD CONTROL SYSTEM TO PUMP MANUFACTURERS SPECIFICATIONS

EMERG. PUMP OUT PIT

GRADED DRAIN

RAMP DOWN DRIVEWAY

PIT - 450 x 450

PIT - 450 x 450

PIT - 450 x 450

PIT - 450 x 450

PIT - 450 x 450

PIT - 450 x 450

PIT - 450 x 450

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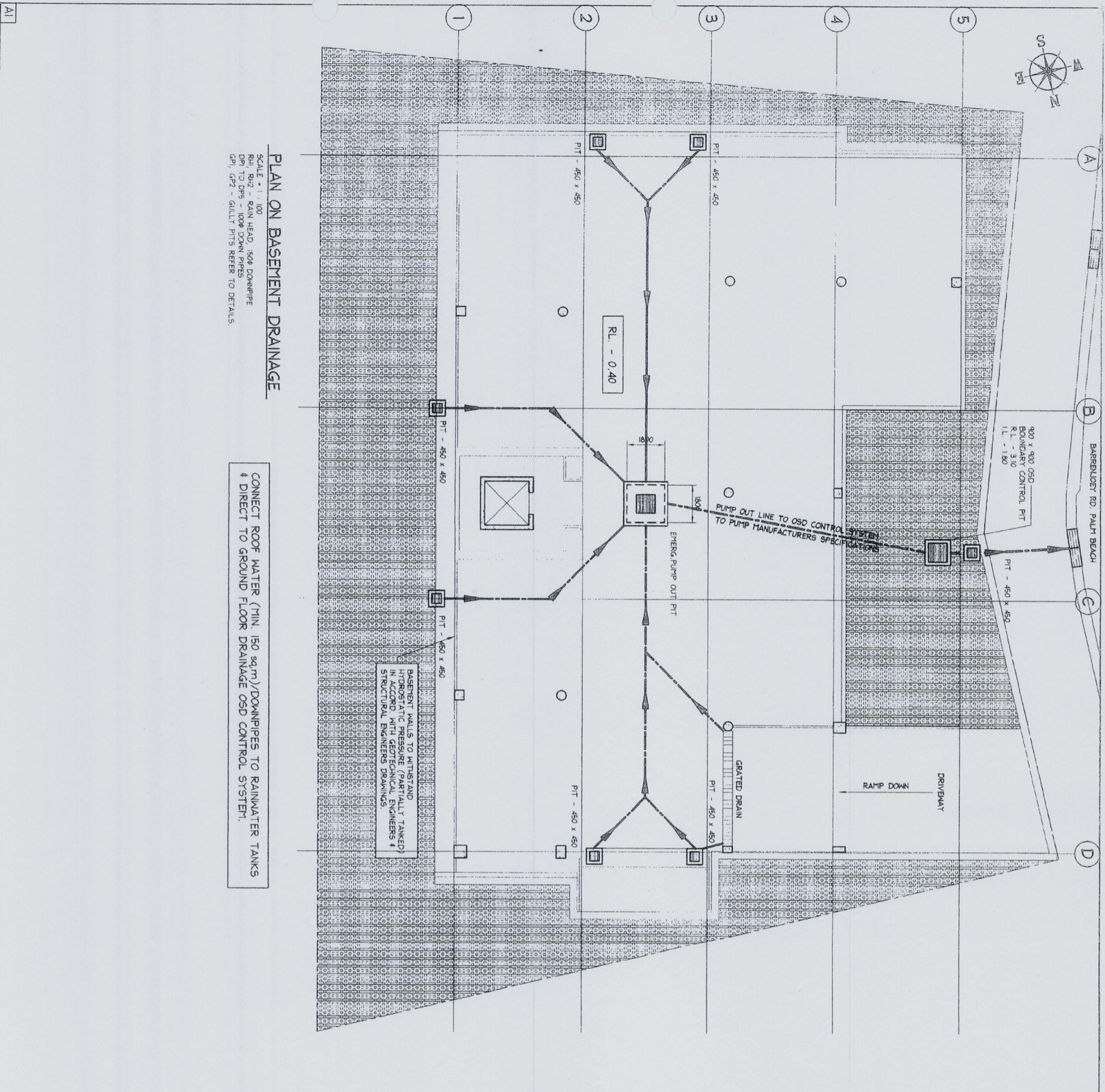
PIT - 450 x 450

PIT - 450 x 450

PIT - 450 x 450

PIT - 450 x 450

PIT - 450 x 450



- LEGEND**
- DOWNPIPE
 - STORMWATER PIPE FLOW DIRECTION
 - STORMWATER PIT
 - GULLY PIT
 - GRATED DRAIN
 - 150x100 wide GRATED DRAIN
 - 150x100 wide GULLY DRAIN
 - RAIN HEAD
- STORMWATER NOTES:**
- 1 - ALL PIPES TO BE 100mm Ø UNLESS NOTED OTHERWISE
 - 2 - ALL PIPES TO BE PVC TO AS 1544-2002 UNLESS NOTED OTHERWISE
 - 3 - ALL PIPES TO BE LAYED AT 1% MINIMUM GRADE UNLESS NOTED OTHERWISE
 - 4 - ALL PIPES SHALL BE LAID ON A 75mm SAND BED, COMPACTED TO 100% S.T.D.D. BELOW FAVEMENTS
(NO COMPACTION REQUIRED BELOW LANDSCAPING)
COVER TO SURFACE FROM TOP OF PIPE TO BE 300mm MINIMUM, BACKFILL TO BE ADEQUATELY CONSOLIDATED AROUND PIPES BY METHOD OF RAMMING AND WATERING IN TRENCHES TO BE FILLED WITH GRANULAR MATERIAL AS SPECIFIED.
 - 5 - ALL DOWN PIPES TO BE 90mm Ø UNLESS NOTED OTHERWISE
 - 6 - DOWN PIPE LOCATIONS ARE INDICATIVE ONLY. LOCATIONS TO BE CONFIRMED WITH ARCHITECT PRIOR TO COMMENCEMENT WITH WORK
 - 7 - PROVIDE CLEANING EYES AT ALL DOWNPIPES
 - 8 - ALL PITS TO BE CAST IN situ OR, IF PRECAST, APPROVED BY ENGINEER
CAST IN situ PITS TO HAVE 150mm THICK CONCRETE WALLS AND BASE WALLS TO BE REINFORCED WITH 1/2 TOP TIE UNLESS NOTED OTHERWISE
CAST IN situ PITS GREATER THAN 1000 DEEP TO BE MINIMUM 900x600 AND TO HAVE 150mm THICK CONCRETE WALLS AND BASE WALLS TO BE REINFORCED WITH N2 AT 300 EACH WAY UNLESS NOTED OTHERWISE
 - 9 - ALL PITS GREATER THAN 1000mm DEEP SHALL HAVE STEEL IRONS AS PER COUNCIL STANDARDS
 - 10 - ALL WORK TO BE IN ACCORDANCE WITH LOCAL COUNCIL STANDARDS AND SPECIFICATIONS
 - 11 - PRIOR TO COMMENCING ANY SITE WORKS THE CONTRACTOR SHALL IMPLEMENT EROSION CONTROL MEASURES TO AVOID SEDIMENT AND EROSION CONTROL PLAN, EPA GUIDELINES AND COUNCIL SPECIFICATIONS
ALL MEASURES TO REMAIN IN PLACE UNTIL COMPLETION AND STABILIZATION OF THE SITE TO COUNCIL SATISFACTION
 - 12 - ALL TRENCHES SHALL BE TO AND
 - 13 - ENSURE THAT ALL PITS AND STORMWATER PIPES ARE LOCATED CLEAR FROM TREE ROOT SYSTEMS
 - 14 - ALL EXISTING EARTHWORK PIPES TO BE UPGRADED TO PVC
 - 15 - ALL WORKS TO BE IN ACCORDANCE WITH AS 3602-2003 NATIONAL PLUMBING DRAINAGE CODE PART 5 STORMWATER PACKAGE
 - 16 - 90mm Ø x 3000 LONG TAIL OUT SUBSOIL LINE TO BE PROVIDED ON THE UPSTREAM SIDE OF ALL PITS. SUBSOIL LINE TO BE COVERED WITH GEOTEXTILE FILTER SOCK FOR THE FULL LENGTH AND END COVERED

NOTE:
 ALL DRAINAGE LINES ARE INDICATIVE ONLY.
 LOCATION MAY VARY DUE TO CONSTRAINTS

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DOCUMENT CERTIFICATION

Date: OCT 09
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Architect: LESLUK ARCHITECTS PTY. LTD
Client: TASOS ANASTA SO POULOS

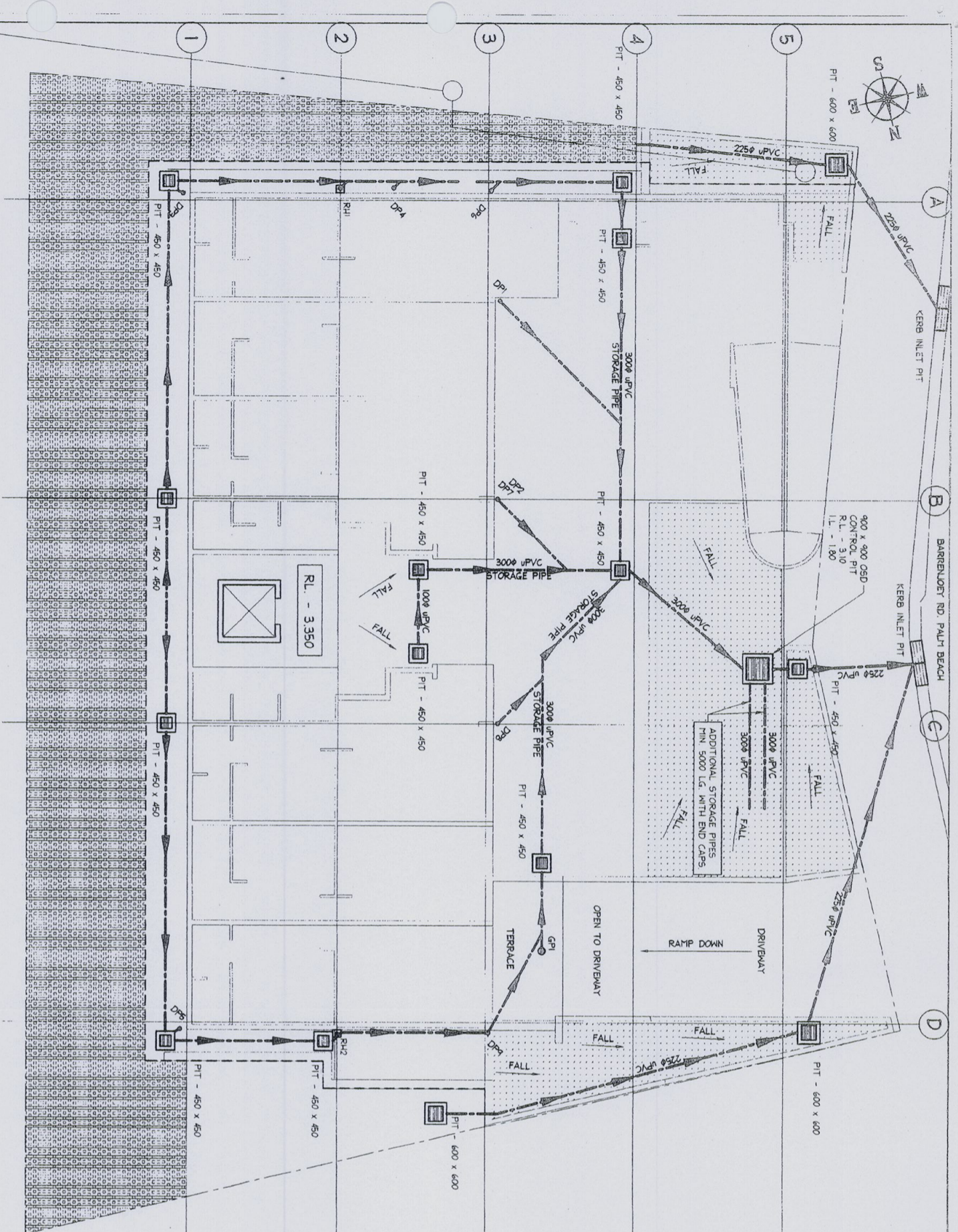
Project: 1112-1118 BARENJOEY RD
 PALM BEACH

Drawing Title: BASEMENT STORMWATER MANAGEMENT PLAN

Date	Design	Drawn	Checked
OCT. '09	R.M.	KENTON	

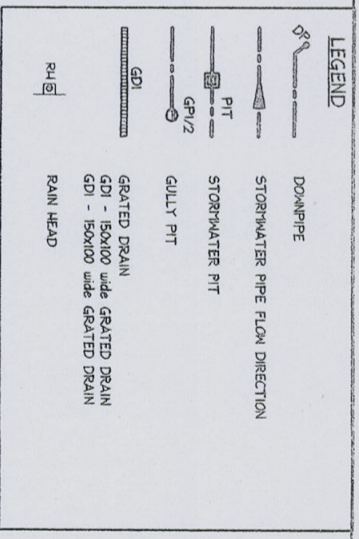
Job No: 090856
 Drawing No: D01

Northern Beaches Consulting Engineers Pty Ltd.



PLAN ON GROUND FLOOR DRAINAGE
 SCALE = 1 : 100
 R11 - RAIN HEAD, 1500 DOWNPIPE
 D11 - TO D15 - 1000 DOWNPIPES
 G11, G12 - GULLY PITS REFER TO DETAILS.

CONNECT ROOF WATER (MIN. 150 sqm) DOWNPIPES TO RAINWATER TANKS
 & DIRECT TO GROUND FLOOR DRAINAGE OSD CONTROL SYSTEM



- STORMWATER NOTES:**
- 1 - ALL PIPES TO BE 90mm Ø UNLESS NOTED OTHERWISE
 - 2 - ALL PIPES TO BE uPVC TO AS 1294-2002 UNLESS NOTED OTHERWISE
 - 3 - ALL PIPES TO BE LAYED AT 1% MINIMUM GRADE UNLESS NOTED OTHERWISE
 - 4 - ALL PIPES SHALL BE LAID ON A 75mm SAND BED, COMPACTED TO 100% S.T.O.D. BELOW PAVEMENTS
 (NO COMPACTION REQUIRED BELOW LANDSCAPING)
 COVER TO SURFACE FROM TOP OF PIPE TO BE 300mm MINIMUM. BACKFILL TO BE ADEQUATELY CONSOLIDATED AROUND PIPES BY METHOD OF RAMPING AND WATERING IN. TRENCHES TO BE FILLED WITH GRANULAR MATERIAL AS SPECIFIED.
 - 5 - ALL DOWN PIPES TO BE 90mm Ø UNLESS NOTED OTHERWISE
 - 6 - DOWN PIPE LOCATIONS ARE INDICATIVE ONLY. LOCATIONS TO BE CONFIRMED WITH ARCHITECT PRIOR TO COMMENCEMENT WITH WORK
 - 7 - PROVIDE CLEANING EYES AT ALL DOWNPIPES
 - 8 - ALL PITS TO BE CAST INSITU OR, IF PRECAST, APPROVED BY ENGINEER. CAST INSITU PITS TO HAVE 150mm THICK CONCRETE WALLS AND BASE WALLS TO BE REINFORCED WITH 1/2 TOP TIE UNLESS NOTED OTHERWISE. CAST INSITU PITS GREATER THAN 1000 DEEP TO BE THINWALL 400x400 AND TO HAVE 150mm THICK CONCRETE WALLS AND BASE WALLS TO BE REINFORCED WITH N12 AT 300 EACH WAY UNLESS NOTED OTHERWISE
 - 9 - ALL PITS GREATER THAN 1000mm DEEP SHALL HAVE STEP IRONS AS PER COUNCIL STANDARDS
 - 10 - ALL WORK TO BE IN ACCORDANCE WITH LOCAL COUNCIL STANDARDS AND SPECIFICATIONS
 - 11 - PRIOR TO COMMENCING ANY SITE WORKS THE CONTRACTOR SHALL IMPLEMENT EROSION CONTROL MEASURES TO APPROVED SCHEDULE AND EROSION CONTROL PLAN, EPA GUIDELINES AND COUNCIL SPECIFICATIONS. ALL MEASURES TO REMAIN IN PLACE UNTIL COMPLETION AND STABILIZATION OF THE SITE TO COUNCIL SATISFACTION
 - 12 - ALL LEVELS SHOWN ARE TO AND
 - 13 - ENSURE THAT ALL PITS AND STORMWATER PIPES ARE LOCATED CLEAR FROM TREE ROOT SYSTEMS
 - 14 - ALL EXISTING EARTHWORK PIPES TO BE UPGRADED TO uPVC
 - 15 - ALL WORKS TO BE IN ACCORDANCE WITH AS 3600-2003 NATIONAL PLUMBING DRAINAGE CODE PART 3 - STORMWATER DRAINAGE
 - 16 - 90mm Ø x 3000 LONG TAIL OUT SUBSOIL LINE TO BE PROVIDED ON THE UPSTREAM SIDE OF ALL PITS. SUBSOIL LINE TO BE COVERED WITH GEOTEXTILE FILTER SOCK FOR THE FULL LENGTH AND END COVERED.

NOTE
 ALL DRAINAGE LINES ARE INDICATIVE ONLY
 LOCATION MAY VARY DUE TO CONSTRAINTS

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DOCUMENT CERTIFICATION

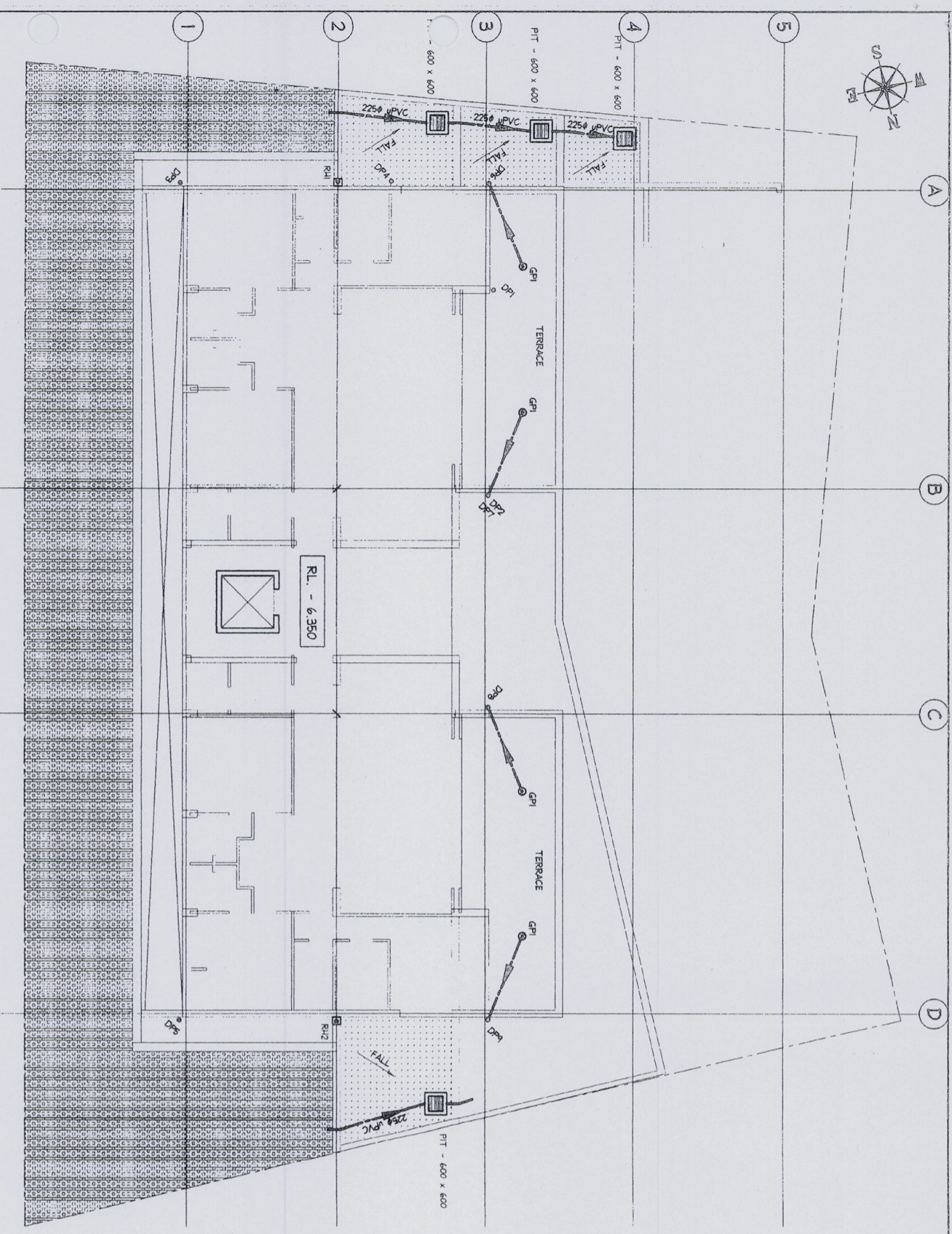
Date: 05/09/09
 Rick G. Mroy
 BE(Civil) / CEng, MIEAust, NFER
 (Director Northern Beaches Consulting Engineers)

The signatory of this drawing certifies that Northern Beaches Consulting Engineers Pty Ltd.
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Client: LESLUK ARCHITECTS PTY. LTD
 Project: TABOS ANASTA 50 POULOS
 1112-1118 BARENJOEY RD
 PALM BEACH

Drawing Title: GROUND FLOOR STORM/W/R
 MANAGEMENT PLAN

Date	Design	Drawn	Checked
OCT. '09	R.M.	KENTON	
Job No:	Drawing No:	Rev:	
090856	D02		



PLAN ON LEVEL 1 DRAINAGE
 SCALE: 1:100
 SHEET: 1 OF 1
 DRAWN: R.M.
 CHECKED: KENYON
 DATE: OCT '09

CONNECT ROOF WATER (MIN. 150 sq.m)/DOWNPIPES TO RAINTANKS & DIRECT TO GROUND FLOOR DRAINAGE OSD CONTROL SYSTEM.

LEGEND	
	DOWNPIPE
	STORMWATER PIPE FLOW DIRECTION
	STORMWATER PIT
	GULLY PIT
	GRAATED DRAIN
	GDI - 150x100 wide GRAATED DRAIN
	RAIN HEAD

- STORMWATER NOTES:**
- 1 - ALL PIPES TO BE 100mm & UNLESS NOTED OTHERWISE
 - 2 - ALL PIPES TO BE uPVC TO AS 1264-2002 UNLESS NOTED OTHERWISE.
 - 3 - ALL PIPES TO BE LAYED AT 1% MINIMUM GRADE UNLESS NOTED OTHERWISE.
 - 4 - ALL PIPES SHALL BE LAYED ON A 15mm SAND BED, COMPACTED TO 100% STD.D. BELOW PAVEMENTS
(NO COMPACTION REQUIRED BELOW LANDSCAPING)
COVER TO SURFACE FROM TOP OF PIPE TO BE 300mm MINIMUM BACKFILL TO BE ADEQUATELY CONSOLIDATED AROUND PIPES BY METHOD OF BATTING AND WATERING IN. TREKKERS TO BE FILLED WITH GRANULAR MATERIAL AS SPECIFIED
 - 5 - ALL DOWN PIPES TO BE 90mm & UNLESS NOTED OTHERWISE
 - 6 - DOWN PIPE LOCATIONS ARE INDICATIVE ONLY. LOCATIONS TO BE CONFIRMED WITH ARCHITECT PRIOR TO COMMENCEMENT WITH WORK
 - 7 - PROVIDE CLEANING EYES AT ALL DOWNPIPES.
 - 8 - ALL PITS TO BE CAST INSITU OR, IF PRECAST, APPROVED BY ENGINEER. CAST INSITU PITS TO HAVE 150mm THICK CONCRETE WALLS AND BASE. WALLS TO BE REINFORCED WITH 1/2 TOP TIE UNLESS NOTED OTHERWISE. CAST INSITU PITS GREATER THAN 1000 DEEP TO BE THINWALL 900x600 AND TO HAVE 150mm THICK CONCRETE WALLS AND BASE. WALLS TO BE REINFORCED WITH N2 AT 300 EACH WAY UNLESS NOTED OTHERWISE
 - 9 - ALL PITS GREATER THAN 1000mm DEEP SHALL HAVE STEEL IRONS AS PER COUNCIL STANDARDS
 - 10 - ALL WORK TO BE IN ACCORDANCE WITH LOCAL COUNCIL STANDARDS AND SPECIFICATIONS
 - 11 - PRIOR TO COMMENCING ANY SITE WORKS THE CONTRACTOR SHALL IMPLEMENT EROSION CONTROL MEASURES TO APPROVED SEDIMENT AND EROSION CONTROL PLAN, EPA GUIDELINES AND COUNCIL SPECIFICATIONS. ALL MEASURES TO REMAIN IN PLACE UNTIL COMPLETION AND STABILIZATION OF THE SITE TO COUNCIL SATISFACTION
 - 12 - ALL LEVELS SHOWN ARE TO AHD
 - 13 - ENSURE THAT ALL PITS AND STORMWATER PIPES ARE LOCATED CLEAR FROM TREE ROOT SYSTEMS
 - 14 - ALL EXISTING EARTHWORK PIPES TO BE UPGRADED TO uPVC
 - 15 - ALL WORKS TO BE IN ACCORDANCE WITH AS 3500-2003 NATIONAL PLUMBING DRAINAGE CODE PART 5 - STORMWATER DRAINAGE
 - 16 - 30mm ø x 3000 LONG TAIL OUT SUBSOIL LINE TO BE PROVIDED ON THE UPSTREAM SIDE OF ALL PITS. SUBSOIL LINE TO BE COVERED WITH GEOTEXTILE FILTER SOCK FOR THE FULL LENGTH AND END COVERED

NOTE: DRAINAGE LINES ARE INDICATIVE ONLY. LOCATION MAY VARY DUE TO CONSTRAINTS.

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Northern Beaches Consulting Engineers Pty Ltd.

DOCUMENT CERTIFICATION

Date: OCT '09
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 BE(Civil) CPENG/MEAL/MPER
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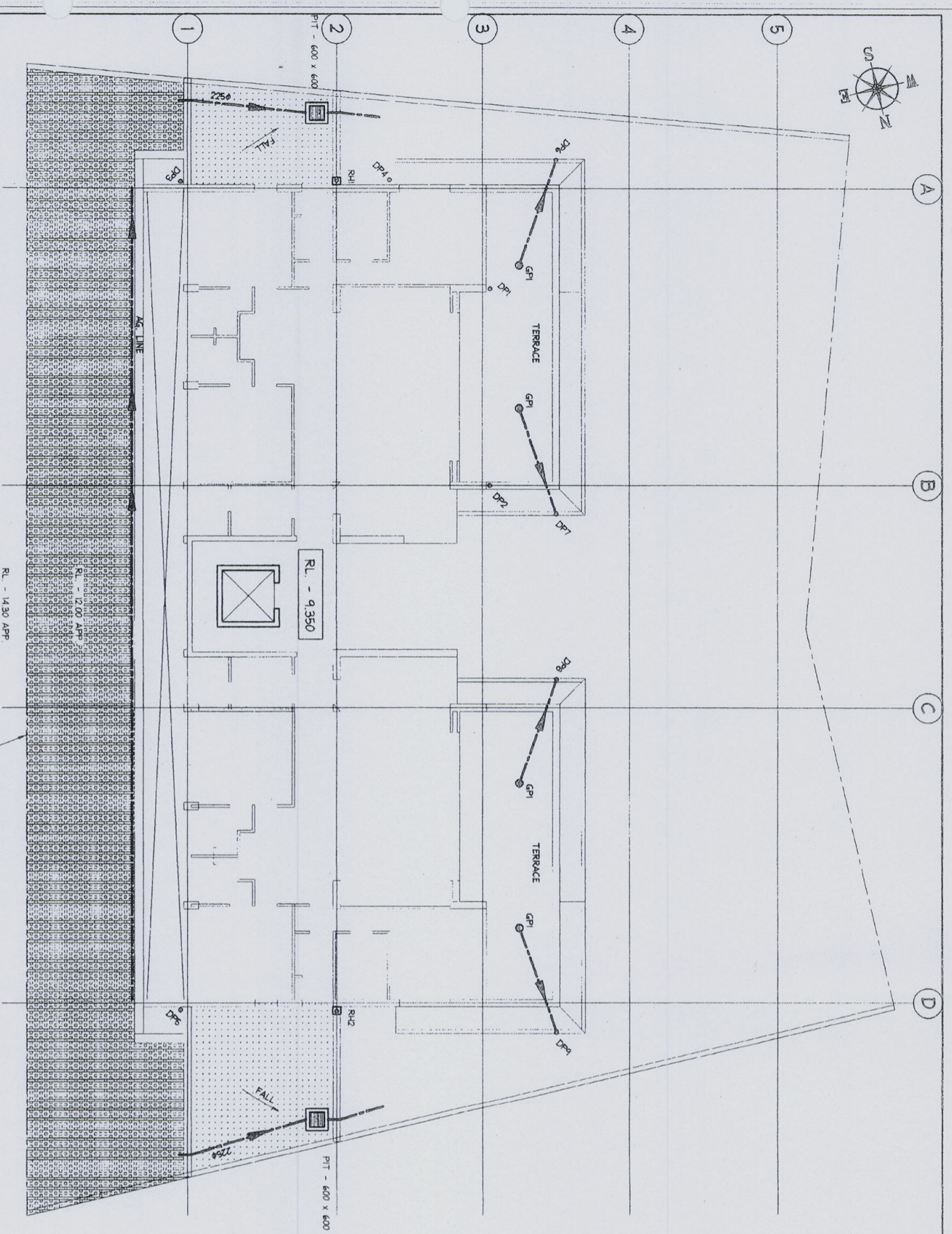
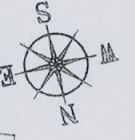
Architect: LESLUK ARCHITECTS PTY. LTD
 Client: TASOS AMASTIA SO FOULOS

Project: 1112-1118 BARENJOEY RD
 PALM BEACH

Drawing Title: LEVEL 1 STORMWATER MANAGEMENT PLAN

Date	Design	Drawn	Checked
OCT '09	R.M.	KENYON	

Job No: 090856
 Drawing No: D03



PLAN ON LEVEL 2 DRAINAGE
 SCALE = 1 : 100
 RL - RAIN HEAD - 150 DOWNPIPE
 RL - 100 DOWNPIPES
 GP1, GP2 - GULLY PITS REFER TO DETAILS

CONNECT ROOF WATER (MIN. 150 sqm)/DOWNPIPES TO RAINWATER TANKS & DIRECT TO GROUND FLOOR DRAINAGE OSD CONTROL SYSTEM.

600 HD CONCRETE DISH DRAIN REFER TO DETAILS

LEGEND	
	DOWNPIPE
	STORMWATER PIPE FLOW DIRECTION
	STORMWATER PIT
	GULLY PIT
	GRAATED DRAIN
	RAIN HEAD

STORMWATER NOTES:

- 1 - ALL PIPES TO BE 90mm Ø UNLESS NOTED OTHERWISE
- 2 - ALL PIPES TO BE PVC TO AS 1254-2002 UNLESS NOTED OTHERWISE
- 3 - ALL PIPES TO BE LAYED AT 1% MINIMUM GRADE UNLESS NOTED OTHERWISE
- 4 - ALL PIPES SHALL BE LAID ON A 75mm SAND BED, COMPACTED TO 100% STHD, BELOW PAVEMENTS. (NO COMPACTION REQUIRED BELOW LANDSCAPING.) COVER TO SURFACE FROM TOP OF PIPE TO BE 300mm MINIMUM, BACKFILL TO BE ADEQUATELY CONSOLIDATED AROUND PIPES BY METHOD OF RATTING AND WATERING IN. TRENCHES TO BE FILLED WITH GRANULAR MATERIAL AS SPECIFIED
- 5 - ALL DOWN PIPES TO BE 90mm Ø UNLESS NOTED OTHERWISE
- 6 - DOWN PIPE LOCATIONS ARE INDICATIVE ONLY. LOCATIONS TO BE CONFIRMED WITH ARCHITECT PRIOR TO COMMENCEMENT WITH WORK.
- 7 - PROVIDE CLEANING EYES AT ALL DOWNPIPES
- 8 - ALL PITS TO BE CAST INSITU OR, IF PRECAST, APPROVED BY ENGINEER. CAST INSITU PITS TO HAVE 150mm THICK CONCRETE WALLS AND BASE WALLS TO BE REINFORCED WITH 1 NO TOP TIE UNLESS NOTED OTHERWISE. CAST INSITU PITS GREATER THAN 1000 DEEP TO BE MINIMUM 900x600 AND TO HAVE 150mm THICK CONCRETE WALLS AND BASE WALLS TO BE REINFORCED WITH 1 NO AT 300 EACH WAY UNLESS NOTED OTHERWISE
- 9 - ALL PITS GREATER THAN 1000mm DEEP SHALL HAVE STEPS INSIDE AS PER COUNCIL STANDARDS
- 10 - ALL WORK TO BE IN ACCORDANCE WITH LOCAL COUNCIL STANDARDS AND SPECIFICATIONS
- 11 - PRIOR TO COMMENCING ANY SITE WORKS THE CONTRACTOR SHALL IMPLEMENT EROSION CONTROL MEASURES TO APPROVED SEDIMENT AND EROSION CONTROL PLAN, EPA GUIDELINES AND COUNCIL SPECIFICATIONS OF THE SITE TO COUNCIL SATISFACTION
- 12 - ALL LEVELS SHOWN ARE TO AHD
- 13 - ENSURE THAT ALL PITS AND STORMWATER PIPES ARE LOCATED CLEAR FROM TREE ROOT SYSTEMS
- 14 - ALL EXISTING EARTHWORK PIPES TO BE UPGRADED TO PVC
- 15 - ALL WORKS TO BE IN ACCORDANCE WITH AS 3500-2003 NATIONAL PLUMBING DRAINAGE CODE PART 3 - STORMWATER DRAINAGE
- 16 - 90mm Ø x 3000 LONG TAIL OUT SUBSOIL LINE TO BE PROVIDED ON THE UPSTREAM SIDE OF ALL PITS. SUBSOIL LINE TO BE COVERED WITH GEOTEXTILE FILTER SOCK FOR THE FULL LENGTH AND END COVERED

NOTE: DRAINAGE LINES ARE INDICATIVE ONLY. LOCATION MAY VARY DUE TO CONSTRAINTS

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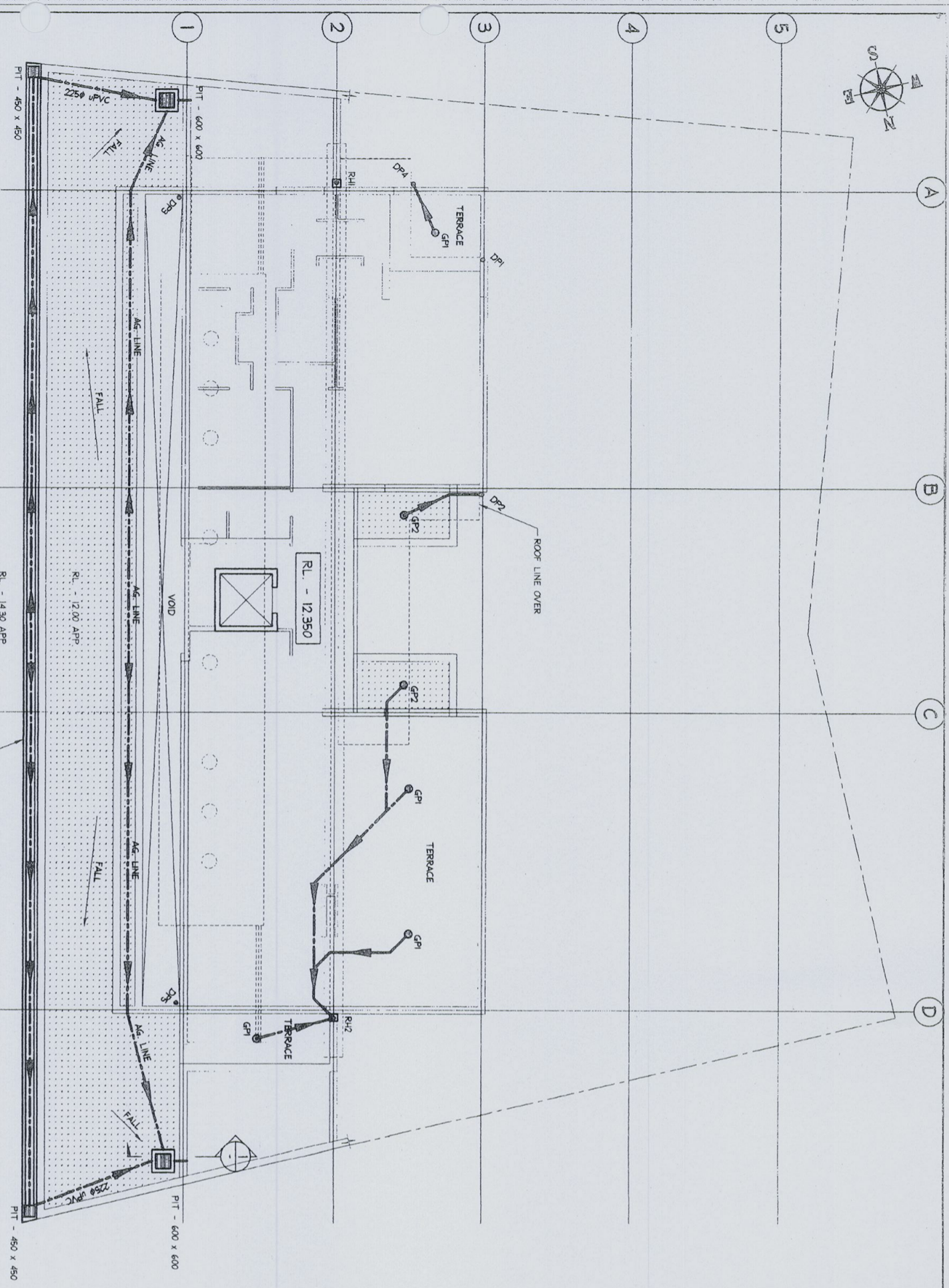
DOCUMENT CERTIFICATION

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Architect: LESLUK ARCHITECTS PTY. LTD
 Client: TASOS ANASTA SO POULOS
 Project: 1112-1118 BARENJOEY RD
 PALM BEACH

Drawing Title:
 LEVEL 2 STORMWATER
 MANAGEMENT PLAN

Date:	Design:	Drawn:	Checked:
OCT '09	R.M.	KENTON	
Job No:	090856	Drawing No:	D04
Rev:		Rev:	



PLAN ON LEVEL 3 DRAINAGE

SCALE = 1:100
 RH1, RH2 - RAIN HEAD, 150ø DOWNPIPE
 GPI TO DPS - 100ø DOWNPIPES
 GPI, GPI/2 - GULLY PITS REFER TO DETAILS

CONNECT ROOF WATER (MIN. 150 sqm) / DOWNPIPES TO RAINWATER TANKS & DIRECT TO GROUND FLOOR DRAINAGE OSD CONTROL SYSTEM.

600 MD CONCRETE CUT OFF / DISH DRAIN REFER TO DETAILS.

LEGEND	
	DOWNPIPE
	STORMWATER PIPE FLOW DIRECTION
	STORMWATER PIT
	GULLY PIT
	GATED DRAIN
	150mm wide GATED DRAIN
	150x100 wide GATED DRAIN
	RAIN HEAD

STORMWATER NOTES:

- 1 - ALL PIPES TO BE 100mm ø UNLESS NOTED OTHERWISE
- 2 - ALL PIPES TO BE uPVC TO AS 1254-2002 UNLESS NOTED OTHERWISE
- 3 - ALL PIPES TO BE LAYED AT 1% MINIMUM GRADE UNLESS NOTED OTHERWISE
- 4 - ALL PIPES SHALL BE LAID ON A 75mm SAND BED, COMPACTED TO 100% S.T.D. BELOW PAVEMENTS
(NO COMPACTION REQUIRED BELOW LANDSCAPING)
COVER TO SURFACE FROM TOP OF PIPE TO BE 300mm MINIMUM, BACKFILL TO BE ADEQUATELY CONSOLIDATED AROUND PIPES BY METHOD OF RAMPING AND WATERING IN TRENCHES TO BE FILLED WITH GRANULAR MATERIAL AS SPECIFIED
- 5 - ALL DOWN PIPES TO BE 90mm ø UNLESS NOTED OTHERWISE
- 6 - DOWN PIPE LOCATIONS ARE INDICATIVE ONLY. LOCATIONS TO BE CONFIRMED WITH ARCHITECT PRIOR TO COMMENCEMENT WITH WORK.
- 7 - PROVIDE CLEANING EYES AT ALL DOWNPIPES
- 8 - ALL PITS TO BE CAST IN SITU OR, IF PRECAST, APPROVED BY ENGINEER. CAST IN SITU PITS TO HAVE 150mm THICK CONCRETE WALLS AND BASE. WALLS TO BE REINFORCED WITH 1 N2 TOP THE UNLESS NOTED OTHERWISE. CAST IN SITU PITS GREATER THAN 1000 DEEP TO BE MINIMUM 900x600 AND TO HAVE 150mm THICK CONCRETE WALLS AND BASE. WALLS TO BE REINFORCED WITH N2 AT 300 EACH WAY UNLESS NOTED OTHERWISE
- 9 - ALL PITS GREATER THAN 1000mm DEEP SHALL HAVE STEP IRONS AS PER COUNCIL STANDARDS
- 10 - ALL WORK TO BE IN ACCORDANCE WITH LOCAL COUNCIL STANDARDS AND SPECIFICATIONS
- 11 - PRIOR TO COMMENCING ANY SITE WORKS THE CONTRACTOR SHALL IMPLEMENT EROSION CONTROL MEASURES TO AVOID SEDIMENT AND EROSION CONTROL PLAN, EPA GUIDELINES AND COUNCIL SPECIFICATIONS. ALL MEASURES TO REMAIN IN PLACE UNTIL COMPLETION AND STABILIZATION OF THE SITE TO COUNCIL SATISFACTION.
- 12 - ALL LEVELS SHOWN ARE TO AID
- 13 - ENSURE THAT ALL PITS AND STORMWATER PIPES ARE LOCATED CLEAR FROM TREE ROOT SYSTEMS
- 14 - ALL EXISTING EARTHWARE PIPES TO BE UPGRADED TO uPVC.
- 15 - ALL WORKS TO BE IN ACCORDANCE WITH AS 3500-2024 NATIONAL PLUMBING DRAINAGE CODE PART 3 - STORMWATER DRAINAGE
- 16 - 90mm ø x 3000 LONG TAIL OUT SUBSOIL LINE TO BE PROVIDED ON THE UPSTREAM SIDE OF ALL PITS. SUBSOIL LINE TO BE COVERED WITH GEOTEXTILE FILTER SOCK FOR THE FULL LENGTH AND END COVERED

NOTE:
ALL DRAINAGE LINES ARE INDICATIVE ONLY.
LOCATION MAY VARY DUE TO CONSTRAINTS.

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Date: 02 OCT '09
 Drawn: R. Wray
 Checked: R. Wray
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Project: TASOS AMASTA SO POULOS
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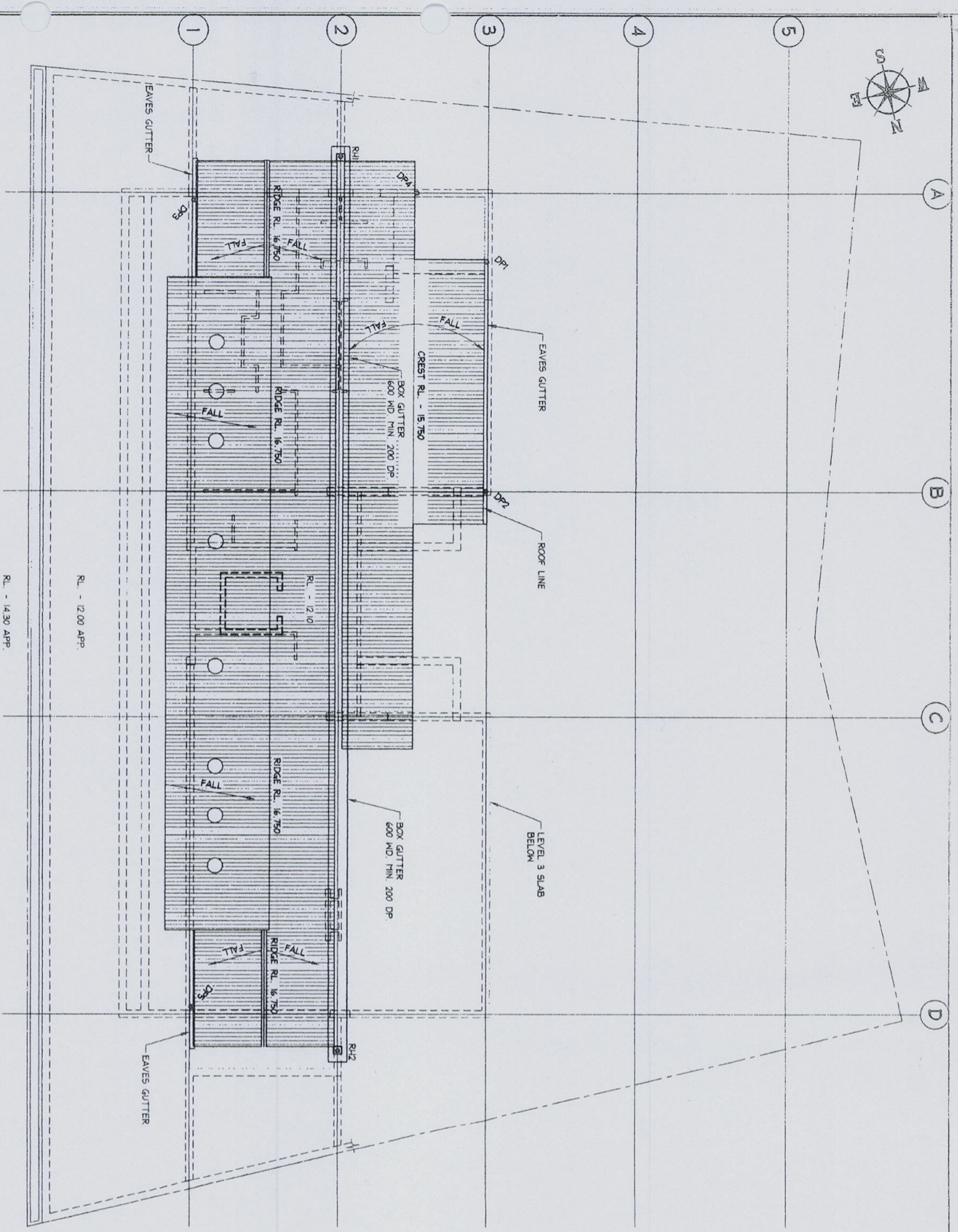
Architect: LESLUK ARCHITECTS PTY. LTD

Client: TASOS AMASTA SO POULOS

Drawing Title: LEVEL 3 STORMWATER MANAGEMENT PLAN

Date	Design	Drawn	Checked
OCT '09	R.M.	KENYON	

Job No: 090856
 Drawing No: D05



PLAN ON ROOF DRAINAGE

SCALE = 1 : 100
 R41, R42 = RAIN HEAD, 150# DOWNPIPE
 DR1 TO DR5 = 100# DOWN PIPES

CONNECT ROOF WATER (MIN. 150 sq.m)/DOWNPIPES TO RAINWATER TANKS
 & DIRECT TO GROUND FLOOR DRAINAGE OSD CONTROL SYSTEM.

RL - 12.00 APP
 RL - 14.30 APP

LEGEND	
	DOWNPIPE
	STORMWATER PIPE FLOW DIRECTION
	STORMWATER PIT
	GULLY PIT
	GRADED DRAIN
	GDI - 150x100 wide GRATED DRAIN
	RAIN HEAD

STORMWATER NOTES:

- 1 - ALL PIPES TO BE 100mm Ø UNLESS NOTED OTHERWISE.
- 2 - ALL PIPES TO BE UPVC TO AS 1254-2002 UNLESS NOTED OTHERWISE.
- 3 - ALL PIPES TO BE LAYED AT 1% MINIMUM GRADE UNLESS NOTED OTHERWISE.
- 4 - ALL PIPES SHALL BE LAID ON A 75mm SAND BED, COMPACTED TO 100% S.T.D. BELOW PAVEMENTS.
(NO COMPACTATION REQUIRED BELOW LANDSCAPING)
COVER TO SURFACE FROM TOP OF PIPE TO BE 300mm MINIMUM BACKFILL TO BE ADEQUATELY CONSOLIDATED AROUND PIPES BY METHOD OF RAMMING AND WATERING IN TRENCHES TO BE FILLED WITH GRANULAR MATERIAL AS SPECIFIED.
- 5 - ALL DOWN PIPES TO BE 90mm Ø UNLESS NOTED OTHERWISE.
- 6 - DOWN PIPE LOCATIONS ARE INDICATIVE ONLY. LOCATIONS TO BE CONFIRMED WITH ARCHITECT PRIOR TO COMMENCEMENT WITH WORK.
- 7 - PROVIDE CLEANING EYES AT ALL DOWNPIPES.
- 8 - ALL PITS TO BE CAST IN situ OR, IF PRECAST, APPROVED BY ENGINEER. CAST IN situ PITS TO HAVE 150mm THICK CONCRETE WALLS AND BASE. WALLS TO BE REINFORCED WITH 1 N12 TOP THE UNLESS NOTED OTHERWISE. CAST IN situ PITS GREATER THAN 1000 DEEP TO BE MINIMUM 900x600 AND TO HAVE 150mm THICK CONCRETE WALLS AND BASE. WALLS TO BE REINFORCED WITH N12 AT 300 EACH WAY UNLESS NOTED OTHERWISE.
- 9 - ALL PITS GREATER THAN 1000mm DEEP SHALL HAVE STEP IRONS AS PER COUNCIL STANDARDS.
- 10 - ALL WORK TO BE IN ACCORDANCE WITH LOCAL COUNCIL STANDARDS AND SPECIFICATIONS.
- 11 - PRIOR TO COMMENCING ANY SITE WORKS THE CONTRACTOR SHALL IMPLEMENT EROSION CONTROL MEASURES TO AVOID SEDIMENT AND EROSION CONTROL PLAN, EPA GUIDELINES AND COUNCIL SPECIFICATIONS. ALL MEASURES TO REMAIN IN PLACE UNTIL COMPLETION AND STABILIZATION OF THE SITE TO COUNCIL SATISFACTION.
- 12 - ALL LEVELS SHOWN ARE TO AND FROM TREE ROOT SYSTEMS.
- 13 - REQUIRE THAT ALL PITS AND STORMWATER PIPES ARE LOCATED CLEAR FROM TREE ROOT SYSTEMS.
- 14 - ALL EXISTING EARTHWORK PIPES TO BE UPGRADED TO UPVC.
- 15 - ALL WORKS TO BE IN ACCORDANCE WITH AS 3502-2003 NATIONAL PLUMBING DRAINAGE CODE PART 3 - STORMWATER DRAINAGE.
- 16 - 40mm Ø x 3000 LONG TAIL OUT SUBSOIL LINE TO BE PROVIDED ON THE UPSTREAM SIDE OF ALL PITS. SUBSOIL LINE TO BE COVERED WITH GEOTEXTILE FILTER SOCK FOR THE FULL LENGTH AND END COVERED.

NOTE
 ALL DRAINAGE LINES ARE INDICATIVE ONLY.
 LOCATION MAY VARY DUE TO CONSTRAINTS.

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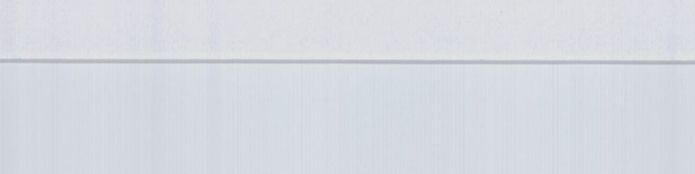
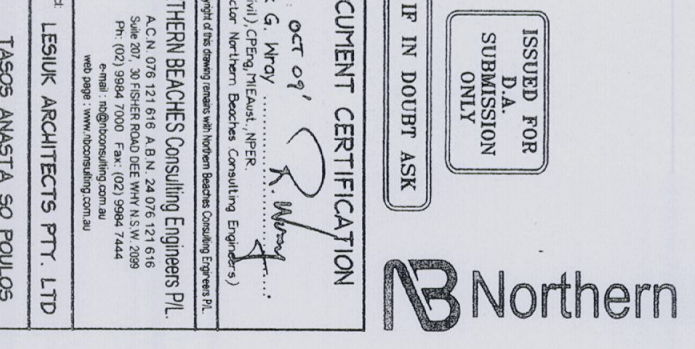
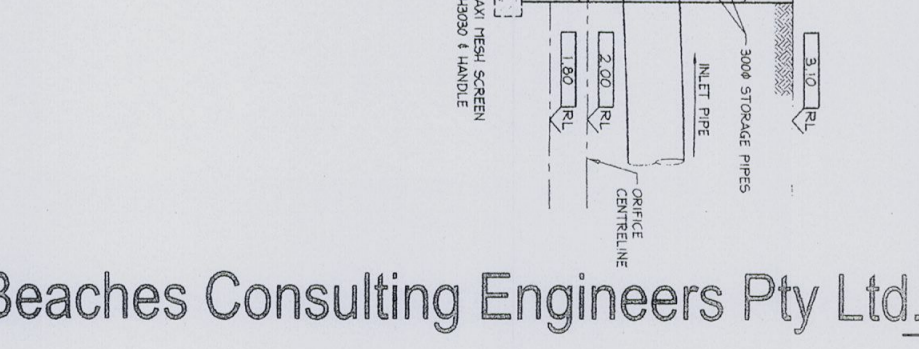
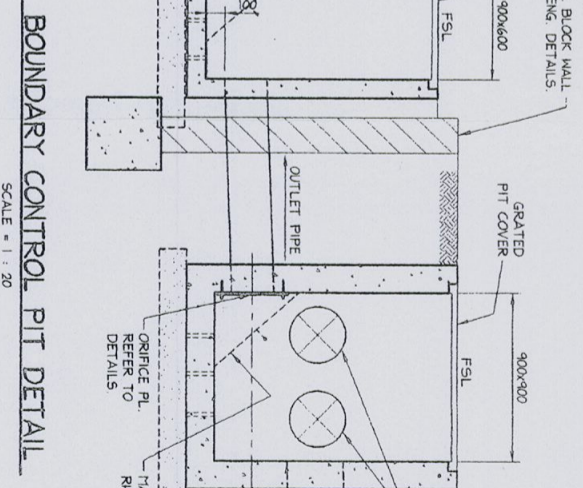
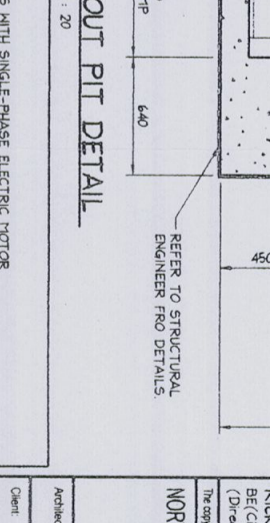
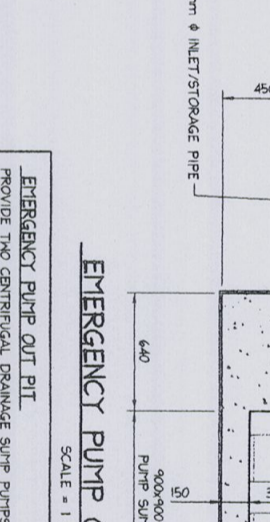
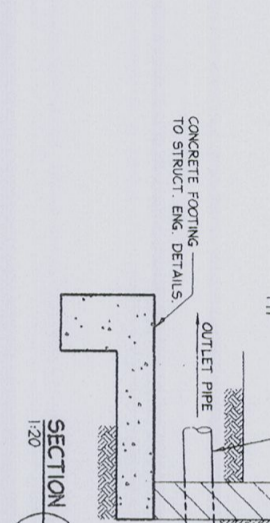
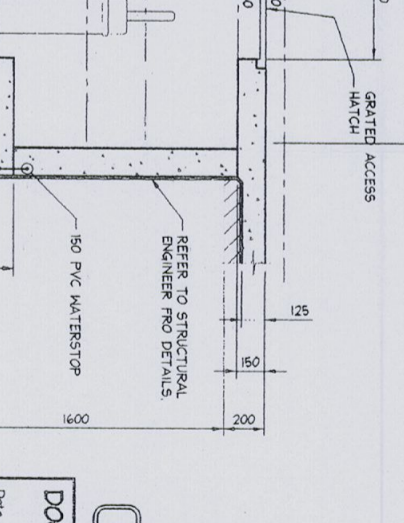
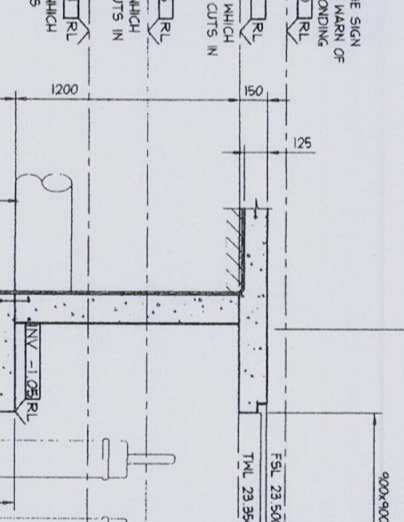
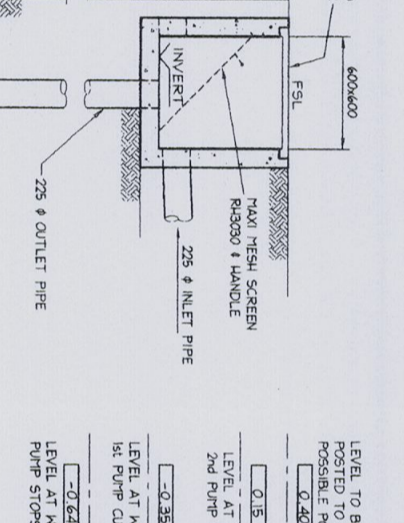
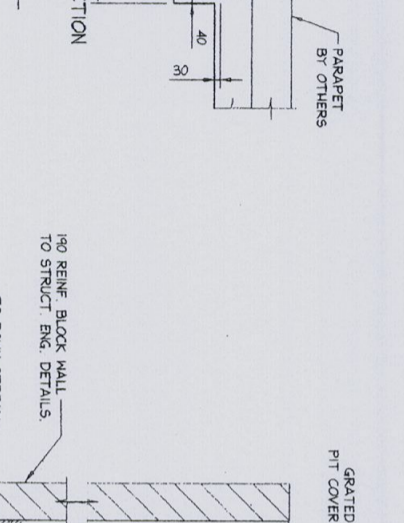
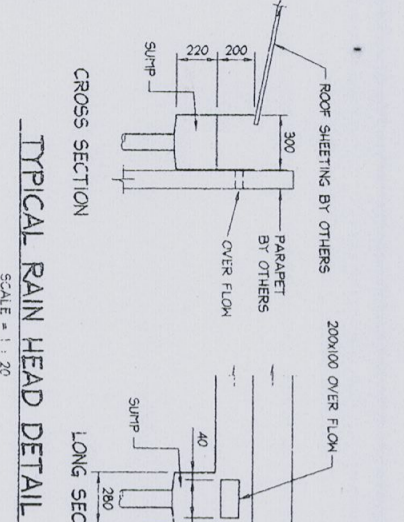
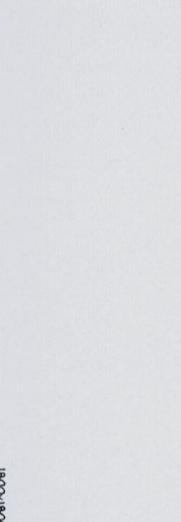
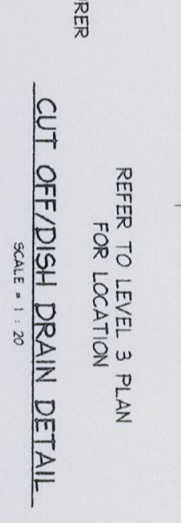
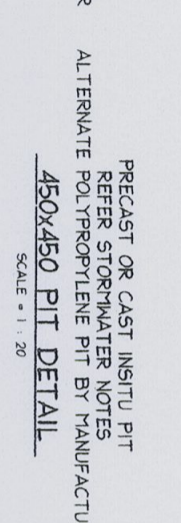
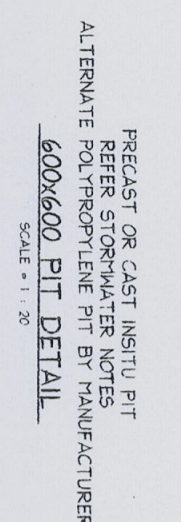
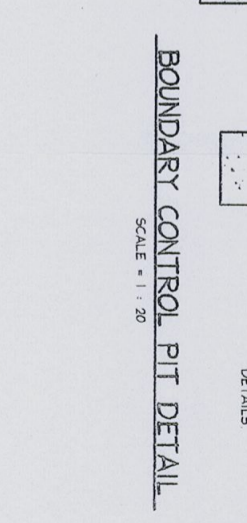
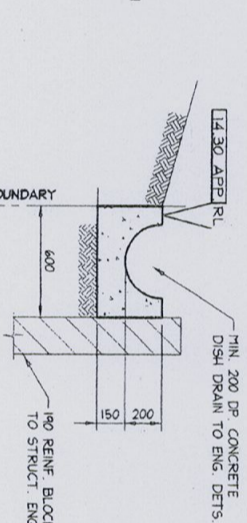
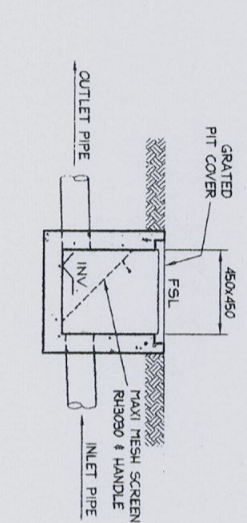
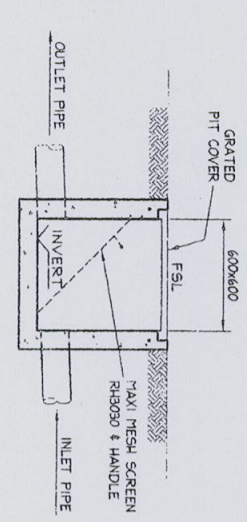
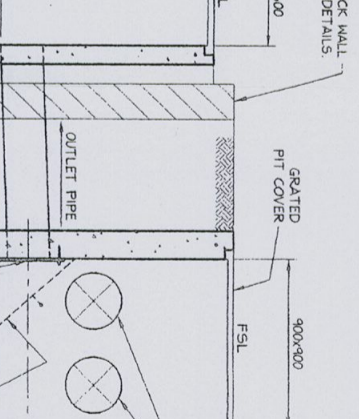
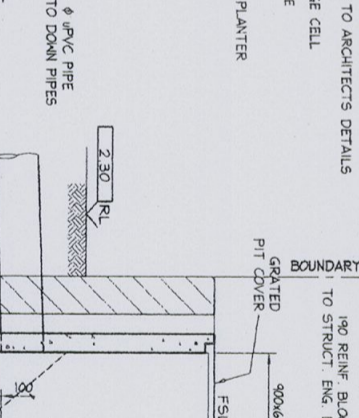
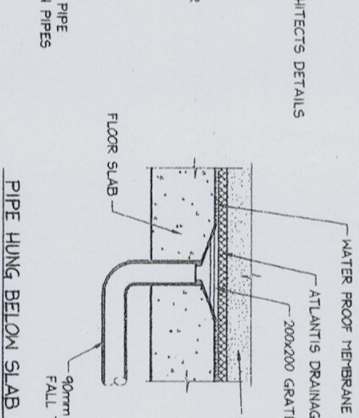
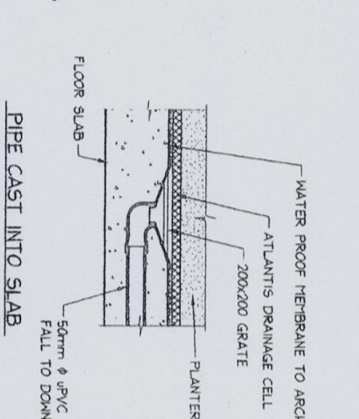
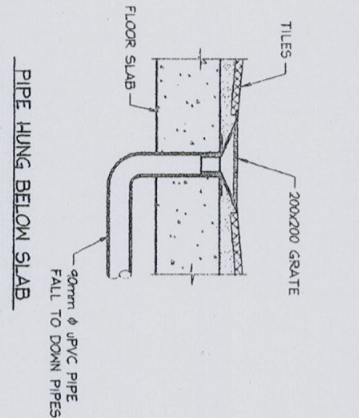
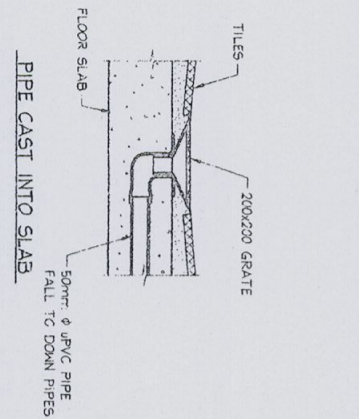
IF IN DOUBT ASK

DOCUMENT CERTIFICATION

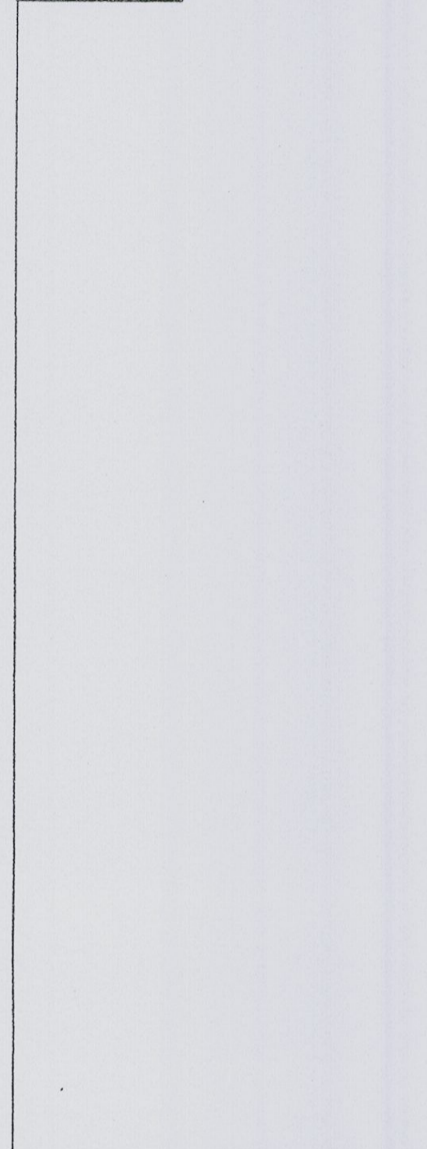
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 Client: TASOS ANASTA SO FOULOS
 Project: 1112-1118 BARENJOEY RD
 PALM BEACH
 Drawing Title: ROOF STORMWATER
 MANAGEMENT PLAN

Date	Design	Drawn	Checked
OCT '09	R.M.	KENTON	R.M.
Job No:	090856	Drawing No:	D06



Date:	Rev:	Amendment:	By:



EMERGENCY PUMP OUT PIT

PROVIDE TWO CENTRIFUGAL DRAINAGE PUMP PUMPS WITH SINGLE PHASE ELECTRIC MOTOR CAPABLE OF DISCHARGING 250L/S EACH AGAINST A TOTAL HEAD OF (2.2M) WITH 10 STARTS PER HOUR MAXIMUM CLASS 1 ZONE 2 CERTIFIED PUMPS FOR HAZARDOUS AREAS ARE REQUIRED SWITCHING SHALL PROVIDE ALTERNATIVE OPERATION OF THE PUMPS, HIGH LEVEL SWITCH ON/OFF, 2ND PUMP, AND A RED LIGHT ALARM PLACED PERMANENTLY IN THE BASEMENT AREA ACTIVATED BY HIGH LEVEL SWITCH ON.

BASEMENT HOLDING TANK

AREA DRAINING TO THE GARAGE PUMPING = 200 m² (DRIVEWAY TO THE BASEMENT)

STORAGE MUST BE PROVIDED FOR A BLOCKOUT OF AT LEAST 2HRS, THE 10 YEAR ARI STORM RAINOFF IS:

$Q = F \times C \times I \times A$

$= 1/3600 \times 0.9 \times 40.4 \times 200$

$= 2.02 \text{ L/s}$

VOLUME ACCUMULATED (10 YEAR ARI, 2 HOUR STORM):

$V_{10} = 2.02 \text{ L/s} \times 7200 \text{ s} \times 3600 \text{ s} / 1000$

$= 14.54 \text{ m}^3$

VOLUME PUMPED IN 30 MINS:

$V_{30} = (5.0 \text{ L/s} \times 0.5 \text{ hrs} \times 3600 \text{ s}) / 1000$

$= 9.00 \text{ m}^3$

VOLUME PUMPED IN 5 MINS:

$V_{5} = (5.0 \text{ L/s} \times 0.083 \text{ hrs} \times 3600 \text{ s}) / 1000$

$= 1.50 \text{ m}^3$

DESIGN NET WELL STORAGE CAPACITY = $V_{10} - V_{30} = 5.54 \text{ m}^3$

Date:	Drawn:	Checked:
OCT. '09	R.M.	KENTON
Job No:	Drawing No:	Rev:
090856	D07	-

Client: TASOS ANASTASIOPOULOS

Project: 1112-1118 BARRENJOEY RD PALM BEACH

Architect: LESLUK ARCHITECTS PTY. LTD

Engineer: R. M. Kenton

Issue Date: OCT 09

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