

HARRIS PAGE & ASSOCIATES

STORMWATER CONCEPT PLAN

FOR DEVELOPMENT APPLICATION OF

NEW LEARNING CENTRE

6A WATSFORD ROAD, CAMPBELLTOWN

STORMWATER SERVICES LEGEND

PIPEWORK

| | |
|--|---------------------|
| | STORMWATER DRAINAGE |
| | SUB SOIL SERVICE |
| | COLD WATER SERVICE |
| | SANITARY DRAINAGE |
| | VENT SERVICE |

DRAWING SCHEDULE

| DWG No. | Scale | Drawing Title |
|---------|-------|--|
| SW-00 | NTS | STORMWATER SERVICES COVER SHEET, LEGEND & DRAWING SCHEDULE |
| SW-01 | 1:200 | STORMWATER SERVICES- SITE PLAN |
| SW-02 | 1:100 | STORMWATER SERVICES- ROOF |
| SW-03 | NTS | STORMWATER SERVICES- DETAIL SHEET |
| SW-04 | NTS | STORMWATER SERVICES- SEDIMENT CONTROL PLAN |

ABBREVIATIONS, SYMBOLS AND LINETYPES IN THE LEGEND MAY NOT APPEAR ELSEWHERE ON THE DRAWINGS. THIS LEGEND SHOULD BE USED AS A GUIDE ONLY

SYMBOLS

| | |
|--|---------------------|
| | RISER |
| | DROPPER |
| | TEE DROPPER |
| | PIPEWORK CAP |
| | DIRECTION ARROW |
| | NEW CONNECTION |
| | CONTINUATION |
| | TERMINATOR 1 |
| | TERMINATOR 2 |
| | STOP VALVE |
| | DOUBLE CHECK VALVE |
| | REFLUX VALVE |
| | CHECK VALVE |
| | OVERFLOW |
| | RAIN WATER OUTLET |
| | GRATED TRENCH DRAIN |
| | GRATED STW PIT |
| | SEALED STW PIT |
| | SPREADER |

| | |
|--|----------------|
| | PUMP |
| | CLEAR OUT |
| | REVISION |
| | REVISION CLOUD |
| | RISER |
| | SERVICE TYPE |
| | SERVICE SIZE |
| | DROPPER |

ABBREVIATIONS

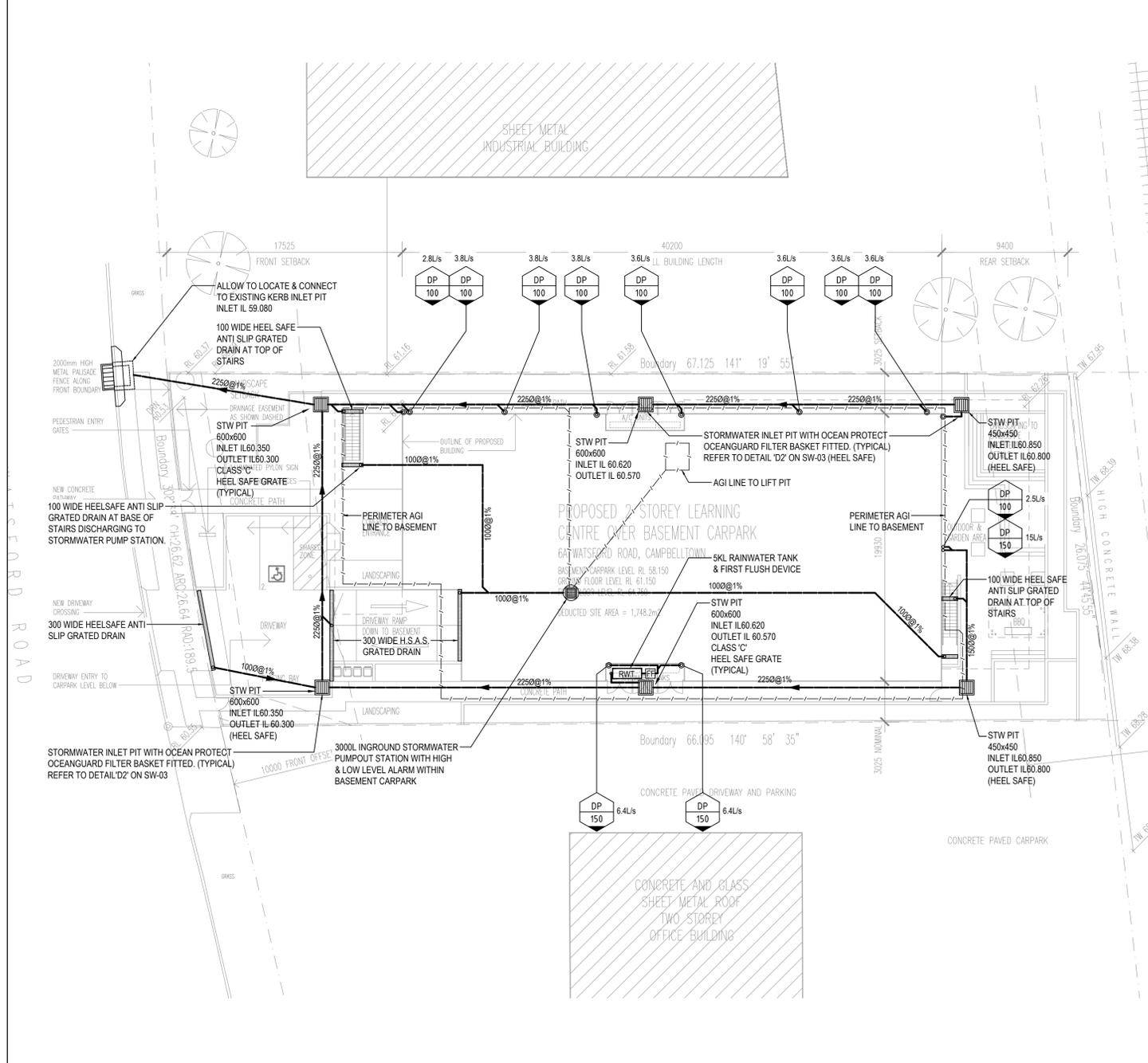
| | | | |
|---------|---------------------------|---------|-------------------|
| A/B | ABOVE | m | METRES |
| @ | AT | MAX | MAXIMUM |
| BO | BALCONY OUTLET | MIN | MINIMUM |
| BT | BOUNDARY TRAP | MM | MILLIMETERS |
| CIS | CAST IN SLAB | N.T.S | NOT TO SCALE |
| CO | CLEAROUT | O/F | OVER FLOW |
| CONT | CONTINUATION | % | PERCENTAGE |
| CV | CHECK VALVE | RL | REDUCED LEVEL |
| DCV | DOUBLE CHECK VALVE | RWH | RAIN WATER HEAD |
| DIA | DIAMETER | RWR | RAINWATER REUSE |
| DP | DOWNPIPE | RWO | RAINWATER OUTLET |
| e | EXISTING | RV | REFLUX VALVE |
| EL | ELECTRICAL CONDUIT | S | SEWER |
| FW | FLOOR WASTE | SMH | SEWER MANHOLE |
| GA | GREASE ARRESTOR | SS | SUB SOIL DRAINAGE |
| HDPE | HIGH DENSITY POLYETHYLENE | S/STEEL | STAINLESS STEEL |
| H/L | HIGH LEVEL | STW | STORMWATER |
| HP | HIGH POINT | SV | STOP VALVE |
| H.S.A.S | HEEL SAFE ANTI-SLIP | SWP | STORMWATER PIT |
| IL | INVERT LEVEL | TD | TUNDISH |
| KIP | KERB INLET PIT | U/S | UNDERSIDE |
| L | LITRE | UV | ULTRA-VIOLET |
| L/L | LOW LEVEL | | |
| L/s | LITRES PER SECOND | | |

| ISSUE | AMENDMENT | DATE |
|-------|------------------------------------|----------|
| P3 | DRAFT DA SUBMISSION - FOR APPROVAL | 25.10.19 |
| P2 | DRAFT DA SUBMISSION | 17.10.19 |
| P1 | DRAFT DA SUBMISSION | 01.10.19 |

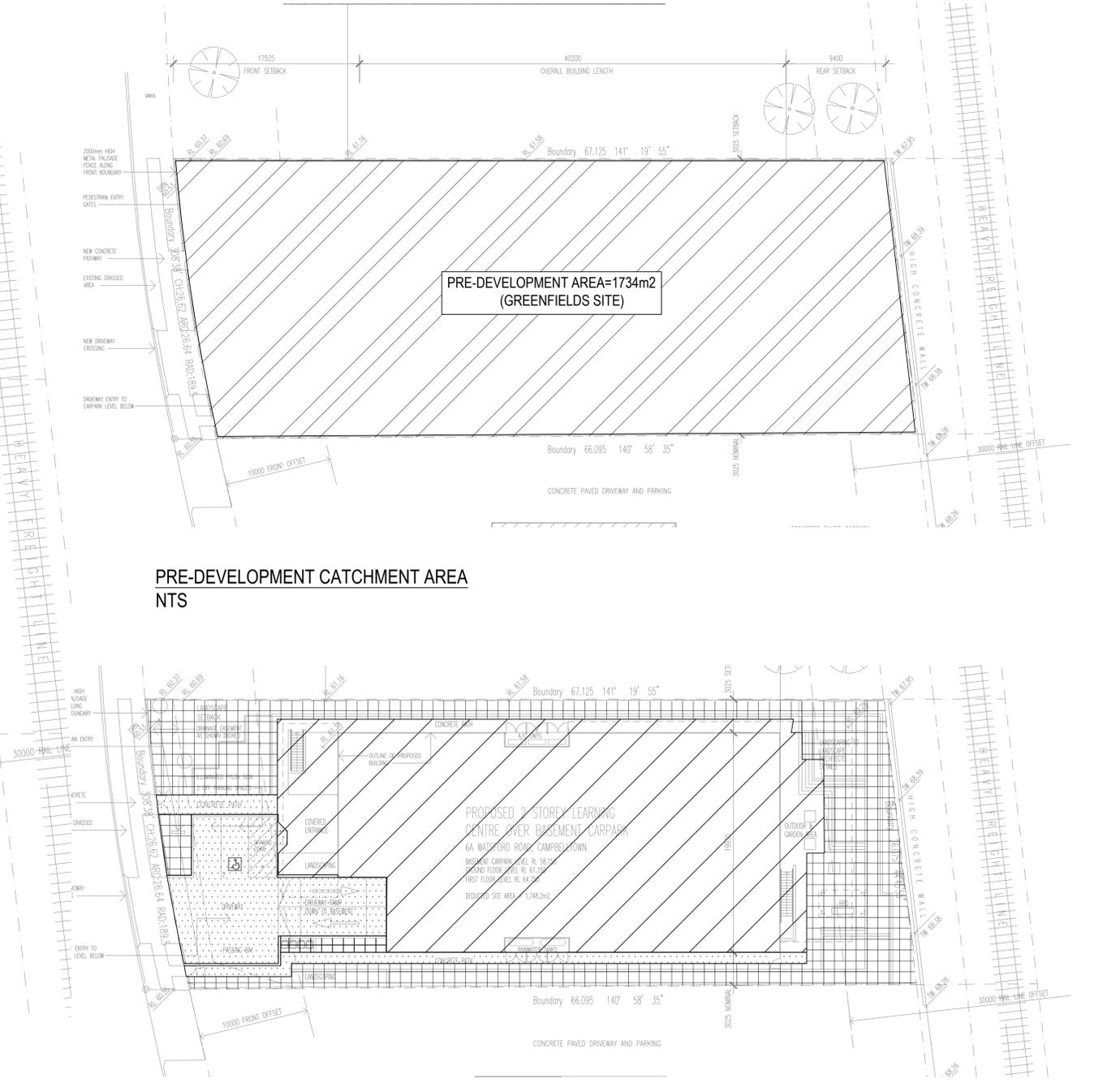
| DATE | DRAWN | CHECKED | No IN SET | SCALE |
|-------------|-------------|----------|-----------|----------|
| SEP. 2019 | KJ/KP | DP | 1 OF 5 | NTS @ A1 |
| PROJECT No. | DRAWING No. | REVISION | | |
| 6444 | SW-00 | P3 | | |

SERVICES ON THIS DRAWING ARE SHOWN OUT OF THE STRATA (UNLESS NOTED OTHERWISE)

| REFERENCE DRAWINGS | | | |
|--------------------|----------------|-----|------|
| STRUCT | | | |
| MECH | | | |
| ELEC | | | |
| RCP | | | |
| ARCH | A-01 | D | |
| DISCIPLINE | DRAWING NUMBER | REV | DATE |



SITE PLAN
SCALE: 1:200



CATCHMENT PLAN TOTAL SITE AREA = 1734m²

| SECTION | AREA | TYPE |
|---------|--------------------|-----------|
| | 1065m ² | ROOF |
| | 533 ² | LANDSCAPE |
| | 147 ² | HARDSCAPE |

COPYRIGHT OF HARRIS PAGE & ASSOCIATES Pty Ltd. All rights reserved. This drawing may not be re-produced or transmitted in any form, or by any means in part or in whole without permission from HARRIS PAGE & ASSOCIATES Pty Ltd. Figured dimensions shall be taken in preference to scaling. The contractor shall check all dimensions on drawings and site before commencing work.

| ISSUE | AMENDMENT | DATE |
|-------|------------------------------------|----------|
| P3 | DRAFT DA SUBMISSION - FOR APPROVAL | 25.10.19 |
| P2 | DRAFT DA SUBMISSION | 17.10.19 |
| P1 | DRAFT DA SUBMISSION | 01.10.19 |

CLIENT
WARAKIRRI COLLEGE

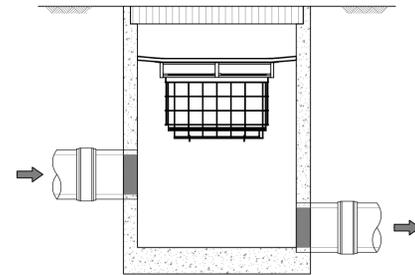
ARCHITECT
Koturic & Co.
KOTURIC & Co. Pty. Ltd.
P.O. BOX 580 CONCORD NSW 2137
E: architects@koturicandco.com T: (02) 9743 6100

HYDRAULIC & FIRE SERVICES CONSULTANTS
HARRIS PAGE & Associates
PTY LIMITED
HYDRAULIC & FIRE CONSULTANTS
Level 2, 32 Carrington Street, Sydney NSW Australia 2000
Telephone (02) 9262 1600 Fax (02) 9262 6365
Email: info@harrispage.com.au ABN 008 548 098

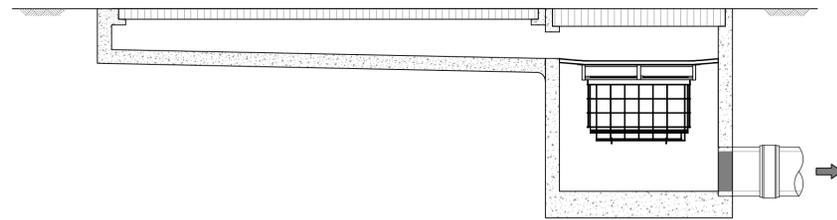
PROJECT
NEW LEARNING CENTRE
6A WATSFORD ROAD, CAMPBELLTOWN

DRAWING TITLE
HYDRAULIC SERVICES
SITE PLAN
STORMWATER CONCEPT PLAN

| DATE | DRAWN | CHECKED | No IN SET | SCALE |
|-------------|-------------|----------|-----------|------------|
| SEP. 2019 | KJ/KP | DP | 2 OF 5 | 1:200 @ A1 |
| PROJECT No. | DRAWING No. | REVISION | | |
| 6444 | SW-01 | P3 | | |



PIPE FLOW CONFIGURATION



D2 GRATED STRIP DRAIN CONFIGURATION
NTS

COPYRIGHT OF HARRIS PAGE & ASSOCIATES Pty Ltd. All rights reserved. This drawing may not be re-produced or transmitted in any form, or by any means in part or in whole without permission from HARRIS PAGE & ASSOCIATES Pty Ltd. Figured dimensions shall be taken in preference to scaling. The contractor shall check all dimensions on drawings and site before commencing work.

| ISSUE | AMENDMENT | DATE |
|-------|------------------------------------|----------|
| P3 | DRAFT DA SUBMISSION - FOR APPROVAL | 25.10.19 |
| P2 | DRAFT DA SUBMISSION | 17.10.19 |
| P1 | DRAFT DA SUBMISSION | 01.10.19 |

CLIENT
WARAKIRRI COLLEGE

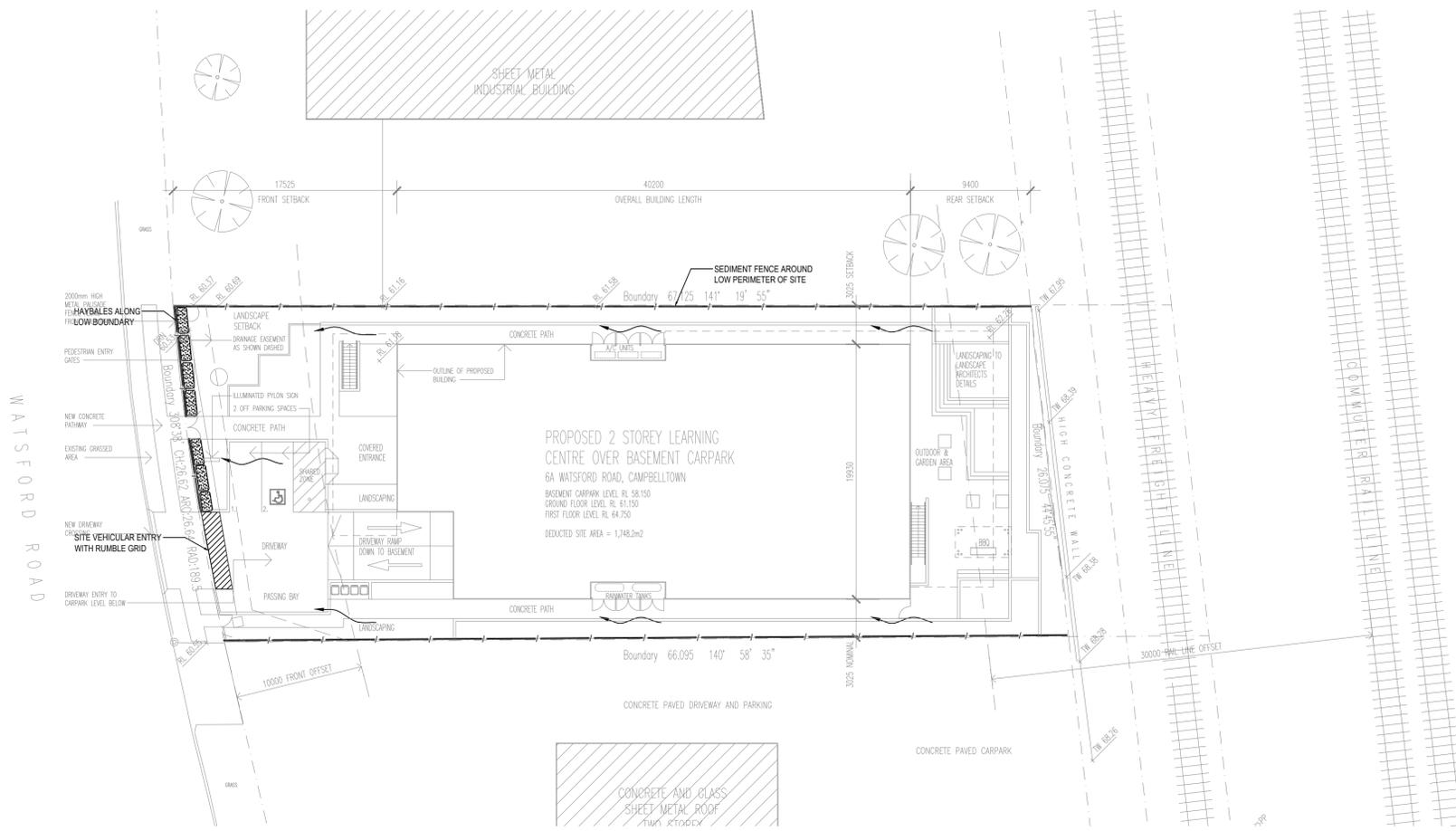
ARCHITECT
Koturic & Co.
KOTURIC & Co. Pty. Ltd.
P.O. BOX 580 CONCORD NSW 2137
E: architects@koturicandco.com T: (02) 9743 6100

HYDRAULIC & FIRE SERVICES CONSULTANTS
HARRIS PAGE & Associates
PTY LIMITED
HYDRAULIC & FIRE CONSULTANTS
Level 2, 32 Carrington Street, Sydney NSW Australia 2000
Telephone: (02) 9262 1600 Fax: (02) 9262 6385
Email: info@harrispage.com.au ABN 008 548 098

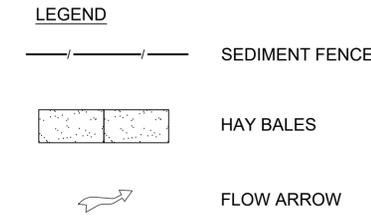
PROJECT
NEW LEARNING CENTRE
6A WATSFORD ROAD, CAMPBELLTOWN

DRAWING TITLE
**HYDRAULIC SERVICES
DETAIL SHEET**

| DATE | DRAWN | CHECKED | No IN SET | SCALE |
|----------------------------|-------|-----------------------------|-----------|-----------------------|
| SEP. 2019 | KJ/KP | DP | 4 OF 5 | NTS @ A1 |
| PROJECT No. 6444 | | DRAWING No. SW-03 | | REVISION P3 |

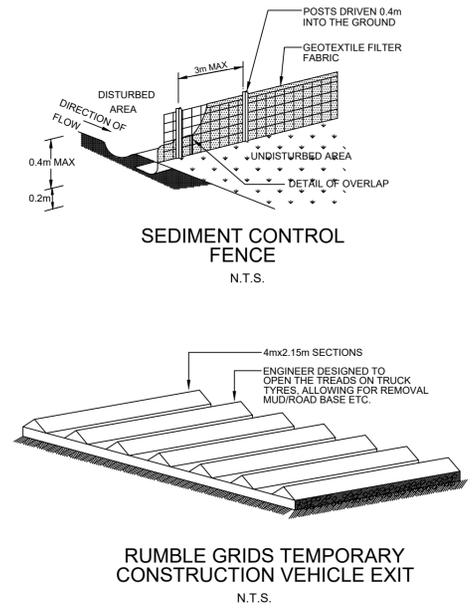
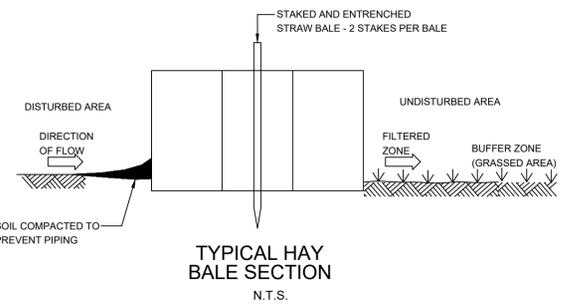
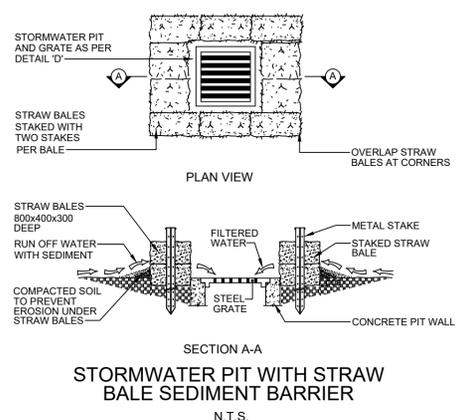


| REFERENCE DRAWINGS | | | |
|--------------------|----------------|-----|------|
| STRUCT | | | |
| MECH | | | |
| ELEC | | | |
| RCP | | | |
| ARCH | | | |
| DISCIPLINE | DRAWING NUMBER | REV | DATE |



SEDIMENT AND EROSION CONTROL PLAN
SCALE : 1:250

- SEDIMENT & EROSION CONTROL NOTES**
- THIS PLAN SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL AND ENGINEERING PLANS AND ANY OTHER PLANS OR WRITTEN INSTRUCTIONS THAT MAY BE ISSUED.
 - THE CONTRACTOR SHALL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE LOCATED AS SHOWN ON THIS DRAWING.
 - PROTECT ALL NEW PITS FROM SEDIMENT INFILTRATION PROGRESSIVELY, AS THEY ARE CONSTRUCTED.
 - ALL DOWNSTREAM STORMWATER PITS ARE TO BE PROTECTED FROM SEDIMENT INFILTRATION DURING CONSTRUCTION.
 - ALL SUB-CONTRACTORS ON SITE SHALL BE MADE AWARE OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO WATER COURSES AND WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE SHALL BE KEPT AS LOW AS POSSIBLE. TO ACHIEVE, WORKS SHOULD BE CARRIED OUT AS FOLLOWS
 - INSTALL ANY NECESSARY SECURITY/BOUNDARY FENCES FOR THE SITE
 - CONSTRUCT "SILT" FENCING AS DETAILED ALONG BOTH DOWNSLOPE BOUNDARIES.
 - DURING WINDY WEATHER, LARGE UNPROTECTED AREAS SHALL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.
 - FINAL SITE LANDSCAPING SHALL BE UNDERTAKEN AS SOON AS POSSIBLE, AND WITHIN TWENTY WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.
 - SAND USED IN THE CONCRETE CURING PROCESS SHALL BE REMOVED ASAP, AND WITHIN TEN WORKING DAYS FROM PLACEMENT.
 - WATER SHALL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM, UNLESS IT IS RELATIVELY SEDIMENT-FREE; ie. THE CATCHMENT AREA HAS BEEN LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN FILTERED THROUGH AN APPROVED STRUCTURE.
 - TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES SHALL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.
 - THE CONTRACTOR SHALL PROVIDE ACCEPTABLE RECEPTORS FOR CONCRETE & MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER.
 - RECEPTORS FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER, ARE TO BE EMPTIED AS NECESSARY. DISPOSAL OF WASTE SHALL BE IN A MANNER APPROVED BY THE SITE SUPERINTENDENT.
 - EVERY WEEK, FOR THE DURATION OF WORKS THE CONTRACTOR SHALL INSPECT THE SITE FOR THE FOLLOWING ITEMS:
 - ENSURE DRAINS OPERATE EFFECTIVELY, AND INITIATE REPAIR OR MAINTENANCE AS REQUIRED
 - REMOVE SPILLED SAND (OR OTHER MATERIALS) FROM HAZARD AREAS, INCLUDING LANDS CLOSER THAN 2 METRES FROM AREAS OF CONCENTRATED OR HIGH-VELOCITY FLOWS SUCH AS WATERCOURSES, OVERLAND FLOW PATHS, GUTTERS, PAVED AREAS, DRIVEWAYS AND ROADS.
 - CONSTRUCT ADDITIONAL EROSION AND/OR SEDIMENT WORKS IS NECESSARY TO ENSURE THE DESIRED PROTECTION IS GIVEN TO DOWNSLOPE LANDS AND WATERWAYS, ie. MAKE ONGOING CHANGES TO THE PLAN.
 - MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES IN A FUNCTIONING CONDITION UNTIL ALL EARTHWORK ACTIVITIES ARE COMPLETED AND THE SITE REHABILITATED
 - REMOVE TEMPORARY SOIL CONSERVATION STRUCTURES AS A LAST ACTIVITY IN THE REHABILITATION PROGRAMME
 - THE CONTRACTOR SHALL KEEP A LOG BOOK, MAKING ENTRIES AT LEAST WEEKLY, AND AFTER RAINFALL AND/OR SITE CLOSURE. RECORD:
 - THE VOLUME OF ANY RAINFALL EVENTS (CHECK WEATHER BUREAU)
 - THE CONDITION OF ANY SOIL AND WATER MANAGEMENT WORKS
 - REMEDIAL WORKS



COPYRIGHT OF HARRIS PAGE & ASSOCIATES Pty Ltd. All rights reserved. This drawing may not be re-produced or transmitted in any form, or by any means in part or in whole without permission from HARRIS PAGE & ASSOCIATES Pty Ltd. Figure dimensions shall be taken in preference to scaling. The contractor shall check all dimensions on drawings and site before commencing work.

| ISSUE | AMENDMENT | DATE |
|-------|------------------------------------|----------|
| P3 | DRAFT DA SUBMISSION - FOR APPROVAL | 25.10.19 |
| P2 | DRAFT DA SUBMISSION | 17.10.19 |
| P1 | DRAFT DA SUBMISSION | 01.10.19 |

CLIENT
WARAKIRRI COLLEGE

ARCHITECT
Koturic & Co. Pty. Ltd.
 P.O. BOX 580 CONCORD NSW 2137
 E: architects@koturicandco.com T: (02) 9743 6100

HYDRAULIC & FIRE SERVICES CONSULTANTS
HARRIS PAGE & Associates
 PTY LIMITED
 HYDRAULIC & FIRE CONSULTANTS
 Level 2, 32 Carrington Street, Sydney NSW Australia 2000
 Telephone: (02) 9262 1600 Fax: (02) 9262 6385
 Email: info@harrispage.com.au AS/N 008 548 098

PROJECT
NEW LEARNING CENTRE
 6A WATSFORD ROAD, CAMPBELLTOWN

DRAWING TITLE
HYDRAULIC SERVICES
 SEDIMENT & EROSION
 CONTROL PLAN

| DATE | DRAWN | CHECKED | No IN SET | SCALE |
|-------------|-------------|----------|-----------|----------|
| SEP. 2019 | KJ/KP | DP | 5 OF 5 | NTS @ A1 |
| PROJECT No. | DRAWING No. | REVISION | | |
| 6444 | SW-04 | P3 | | |