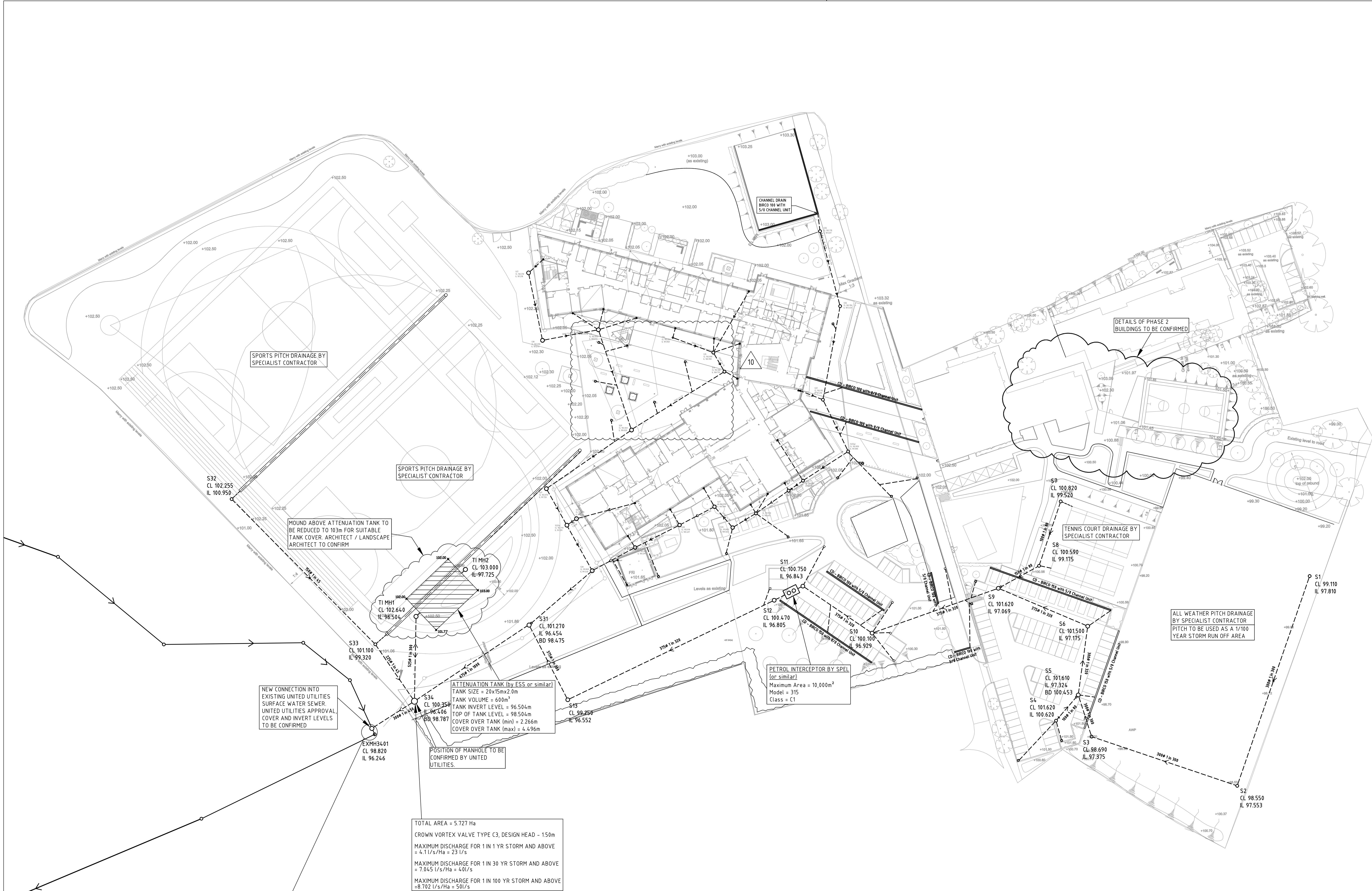
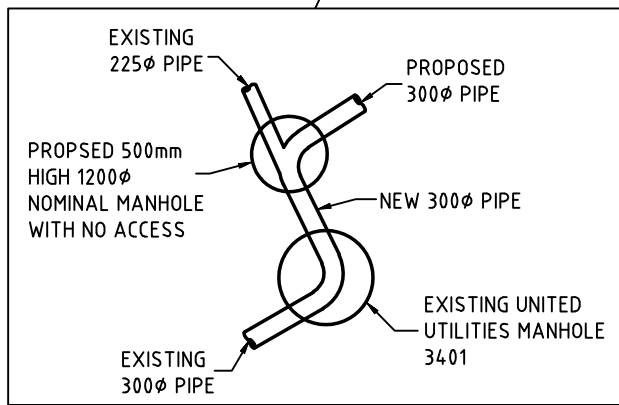




TOTAL AREA = 5.727 Ha
CROWN VORTEX VALVE TYPE C3, DESIGN HEAD - 150m
MAXIMUM DISCHARGE FOR 1 IN 1 YR STORM AND ABOVE
= 4.1 l/s/Ha = 23 l/s
MAXIMUM DISCHARGE FOR 1 IN 30 YR STORM AND ABOVE
= 7.045 l/s/Ha = 40 l/s
MAXIMUM DISCHARGE FOR 1 IN 100 YR STORM AND ABOVE
= 8.702 l/s/Ha = 50 l/s

- NOTES
- DRAINAGE BELOW GROUND**
1. THE CONTRACTOR IS TO CONFIRM POSITION, LEVELS AND SIZE OF EXISTING DRAINAGE SCHEDULE TO BE UTILISED FOR THE PURPOSES OF THE WORKS PRIOR TO THE COMMENCEMENT OF DRAINAGE WORKS. SHOULD THE EXISTING POSITIONS, LEVELS AND/OR SIZE VARY FROM THAT SCHEDULED THE CONTRACTOR SHALL IMMEDIATELY ADVISE THE ENGINEER AND SEEK INSTRUCTION OF HOW TO PROCEED.
2. **REINSTATEMENTS**
A) IN EXISTING VERGE AND OPEN FIELD AREAS TO BE REINSTATED BACK TO EXISTING CONDITION, TOPSOILED AND SEEDED.
B) IN PUBLIC HIGHWAY.
ALL PERMANENT AND TEMPORARY REINSTATEMENT TO BE IN ACCORDANCE WITH NEW ROADS AND STREET WORKS ACT SPECIFICATION FOR THE REINSTATEMENT OF OPENINGS IN HIGHWAYS CODE OF PRACTICE PUBLISHED BY THE H.M.S.O. JUNE 1992.
3. THIS DRAWING IS TO BE USED FOR THE UNDERGROUND DRAINAGE LAYOUT ONLY. FOR DRAINAGE DETAILS SEE STANDARD DETAILS SHEET.
4. FOR DIMENSIONED POSITIONS OF RAIN WATER PIPES AT GROUND LEVEL REFER TO ARCHITECTS DRAWINGS.
5. ALL WORKS, WORKMANSHIP AND MATERIALS ON PRIVATE DRAINAGE TO BE IN ACCORDANCE WITH THE CIVIL ENGINEERING SPECIFICATION FOR WATER INDUSTRY 5TH EDITION PUBLISHED BY THE WATER RESEARCH COUNCIL.
6. ALL ADAPTABLE DRAINAGE TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF SEWERS FOR ADOPTION (5TH EDITION).
7. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCHITECTS, ENGINEERS, SPECIALISTS DRAWINGS AND THE SPECIFICATION.
8. ALL DIMENSIONS AND LEVELS TO BE CHECKED AND VERIFIED BY THE MAIN CONTRACTOR ON SITE PRIOR TO THE COMMENCEMENT OF THE WORKS AND ANY ANOMALIES REPORTED TO THE ENGINEER.
9. CONCRETE PIPES SHALL BE MANUFACTURED TO BS5911.
10. 150/225mm TO BE DENSE VITRIFIED CLAYWARE PIPES EXTRA STRENGTH TO BS EN 295.
11. ALL DRAINAGE PIPE LINES, MANHOLES AND INSPECTION CHAMBERS TO BE THOROUGHLY CLEANED OUT BY HIGH PRESSURE JETTING AND SUBJECTED TO A CCTV SURVEY, WITH VIDEO RECORDINGS AND REPORTS TO BE MADE AVAILABLE TO THE ENGINEER PRIOR TO SUBSTANTIAL COMPLETION AND END OF MAINTENANCE CERTIFICATES BEING ISSUED. ALL GULLIES SHALL BE CLEANED OUT AND FILLED WITH WATER TO TOP OF 150mm.
12. ALL GULLY AND CHANNEL DRAIN CONNECTIONS TO BE 150 DIAMETER WITH A MINIMUM GRADIENT OF 1/80 UNLESS SHOWN OTHERWISE.
ALL RAINWATER PIPES BELOW FLOOR SLABS SHALL BE 100 DIAMETER LAID TO A MINIMUM GRADIENT OF 1/80 UNLESS SHOWN OTHERWISE.
13. COVERS FOR INTERNAL MANHOLES OR INSPECTION CHAMBERS ARE TO BE RECESSED TO TAKE SPECIFIED FLOOR FINISH, BE DOUBLE SEALED, LOCKABLE WITH LIFTING EYES AND EDDINGS FINISHES TO ARCHITECTS REQUIREMENTS.
14. COVERS FOR MANHOLES OR INSPECTION CHAMBERS LOCATED IN AREAS OF BLOCK PAVING SHALL BE RECESSED TO TAKE THE DEPTH OF THE PAVING BLOCK PLUS 30mm SAND BEDDING.
15. MH ILS RELATE TO OUTGOING MAIN PIPE. WHERE INCOMING PIPES ARE OF A SMALLER DIAMETER TO OUTGOING PIPE THEY ARE TO BE POSITIONED WITH PIPE SOPPHITS LEVELS.
16. ALL PIPE LINES UP TO 300 DIAMETER TO HAVE CLASS S GRANULAR BED AND SURROUND. PIPES 375 DIAMETER AND ABOVE TO HAVE CLASS B GRANULAR BED AND SURROUND. THE STRENGTH OF PIPELINES HAS BEEN DESIGNED ON FINISHED SITE CONDITIONS AND NO ALLOWANCE HAS BEEN MADE FOR LOADINGS IMPOSED DURING CONSTRUCTION. THE MAIN CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT THE PIPE LINES DURING THE CONSTRUCTION OF THE WORKS.
CONCRETE SURROUND TO PIPELINES SHALL BE PROVIDED:
(A) WHERE THE DEPTH OF COVER IS LESS THAN 12m BELOW VEHICULAR AREAS.
(B) BENEATH BUILDINGS.
17. LANDSCAPE ARCHITECT TO CONFIRM LOW POINTS AT GULLY LOCATIONS.
18. CHANNEL DRAINS BY BIRCO OR SIMILAR MANUFACTURER TO CONFIRM EXACT DETAILS.
19. FOR SURFACE WATER BUILDING DRAINAGE SEE DRAWING No. OL_SKM_DR_03_01_AZ_NS_0015.
20. FOR SURFACE WATER MANHOLE SCHEDULE SEE DRAWING No. OL_SKM_DR_03_01_AZ_NS_0016.

No	DATE	CHECKED BY	AMENDMENT	
11	18.12.08	JC	AWD	FINAL CONSTRUCTION ISSUE
10	07.10.08	CAL	AWD	EMERGENCY STAIR RAMP ADDED & MAINSTREAM COURTYARD GULLY POSITION AMENDED
9	11.08.08	CAL	AWD	CHANNEL DRAIN CONNECTION AMENDED TO SUIT COMMENTS FROM SITE
8	22.07.08	CAL	AWD	GULLY AND 2 No. CHANNEL DRAINS ADDED
7	12.06.08	CAL	MDS	TENNIS COURT CHANNEL DRAINS REPOSITIONED
6	14.03.08	CAL	MDS	CHANNEL DRAINS ADDED AT MAIN ENTRANCE
5	11.03.08	CAL	MDS	DRAINAGE AMENDED TO SUIT NEW LAYOUT AND AS-BUILT INFORMATION FROM SITE
4	01.11.07	MDS	AWD	TI MH 2 INVERT LEVEL AMENDED
3	03.08.07	MDS	AWD	ATTENUATION TANK AND TANKS AMENDED CONNECTION DETAIL ADDED
2	06.08.07	CAL	MDS	MANHOLES AND PIPES REVISED TO SUIT SITE COMMENTS AND NEW EXISTING LEVELS
1	10.08.07	MDS	SA	SUBMITTAL AND TANK POSITION AMENDED CONSTRUCTION ISSUE
0	03.08.07	CAL	SA	

DRAWING STATUS
FINAL CONSTRUCTION ISSUE

APPROVED BY : S.Tan DATE : 18.12.08

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CLIENT
LAING O'ROURKE

PROJECT
OUR LADY'S RC HIGH SCHOOL
BLACKLEY

DRAWN BY MDS 31.07.07 **CHECKED BY** SA 31.07.07

TITLE
SURFACE WATER
GENERAL ARRANGEMENT
LAYOUT

SCALE 1:500 **DRAWINGS No.** OL_SKM_DR_G_04_AZ_NS_0014 **AMDT** 11

The information shown on this Final Construction drawing incorporates, to the best of our knowledge, the changes made during construction. However, this drawing may not be wholly accurate and any party seeking to use it must first verify it's fitness for the intended purpose