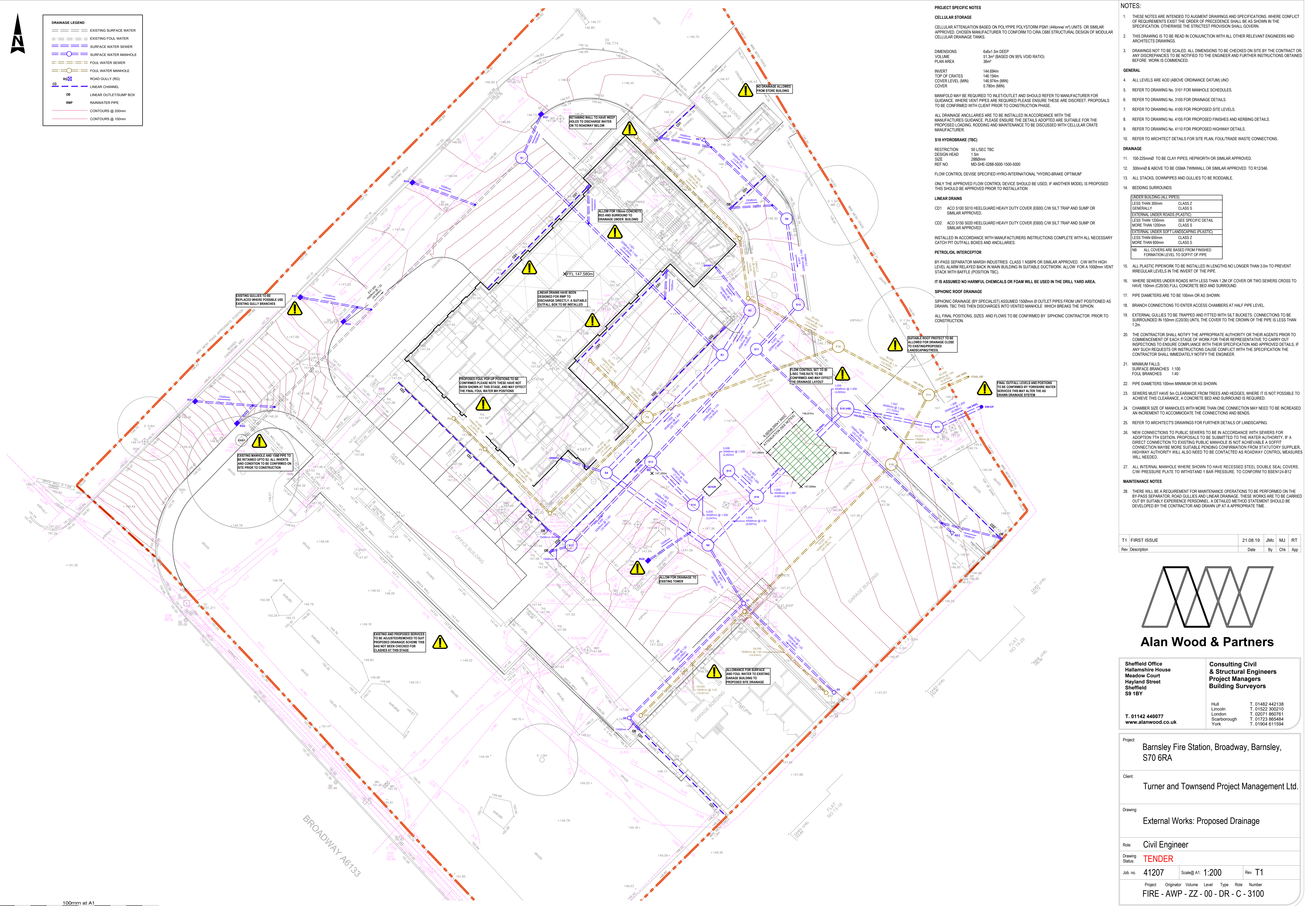




DRAINAGE LEGEND	
	EXISTING SURFACE WATER
	EXISTING FOUL WATER
	SURFACE WATER SEWER
	FOUL WATER SEWER
	FOUL WATER MANHOLE
	ROAD GULLY (RG)
	LINEAR CHANNEL
	LINEAR OUTLET/SUMP BOX
	RAINWATER PIPE
	CONTOURS @ 200mm
	CONTOURS @ 100mm

PROJECT SPECIFIC NOTES

CELLULAR STORAGE

CELLULAR ATTENUATION BASED ON POLYPIPE POLYSTORM PSM1 (44mm²) UNITS OR SIMILAR APPROVED. CHOSEN MANUFACTURER TO CONFORM TO CIRIA C580 STRUCTURAL DESIGN OF MODULAR CELLULAR DRAINAGE TANKS.

DIMENSIONS	6x6x1.5m DEEP
VOLUME	51.3m ³ (BASED ON 95% VOID RATIO)
PLAN AREA	36m ²
INVERT	146.894m
TOP OF CRATES	146.194m
COVER LEVEL (MIN)	146.874m (MIN)
COVER	0.780m (MIN)

MANIFOLD MAY BE REQUIRED TO INLET/OUTLET AND SHOULD REFER TO MANUFACTURER FOR GUIDANCE. WHERE VENT PIPES ARE REQUIRED PLEASE ENSURE THESE ARE DISCREET. PROPOSALS TO BE CONFIRMED WITH CLIENT PRIOR TO CONSTRUCTION PHASE.

ALL DRAINAGE ANCILLARIES ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS GUIDANCE. PLEASE ENSURE THE DETAILS ADOPTED ARE SUITABLE FOR THE PROPOSED LOADING, RODDING AND MAINTENANCE TO BE DISCUSSED WITH CELLULAR CRATE MANUFACTURER.

S18 HYDROBRAKE (TBC)

RESTRICTION	50 L/SEC TBC
DESIGN HEAD	1.5m
SIZE	2880mm
REF NO.	MD-SHE-0288-5000-1500-5000

FLOW CONTROL. DEVISE SPECIFIED HYDRO-INTERNATIONAL "HYDRO-BRAKE OPTIMUM"

ONLY THE APPROVED FLOW CONTROL DEVICE SHOULD BE USED, IF ANOTHER MODEL IS PROPOSED THIS SHOULD BE APPROVED PRIOR TO INSTALLATION

LINEAR DRAINS

CD1	ACC S100 S210 HEELGUARD HEAVY DUTY COVER (E600) C/W SILT TRAP AND SUMP OR SIMILAR APPROVED.
CD2	ACC S150 S202 HEELGUARD HEAVY DUTY COVER (E600) C/W SILT TRAP AND SUMP OR SIMILAR APPROVED

INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS COMPLETE WITH ALL NECESSARY CATCH PIT OUTFALL BOXES AND ANCILLARIES.

PETROL/OIL INTERCEPTOR

BY PASS SEPARATOR MARSH INDUSTRIES CLASS 1 NSBP OR SIMILAR APPROVED. C/W WITH HIGH LEVEL ALARM RELAYED BACK IN MAIN BUILDING IN SUITABLE DUCTWORK. ALLOW FOR A 1000mm VENT STACK WITH BAFFLE (POSITION TBC).

IT IS ASSUMED NO HARMFUL CHEMICALS OR FOAM WILL BE USED IN THE DRILL YARD AREA.

SIPHONIC ROOF DRAINAGE

SIPHONIC DRAINAGE (BY SPECIALIST) ASSUMED 1500mm Ø OUTLET PIPES FROM UNIT POSITIONED AS DRAWN. TBC THEN DISCHARGES INTO VENTED MANHOLE WHICH BREAKS THE SIPHON.

ALL FINAL POSITIONS, SIZES AND FLOWS TO BE CONFIRMED BY SIPHONIC CONTRACTOR PRIOR TO CONSTRUCTION.

NOTES:

- THESE NOTES ARE INTENDED TO AUGMENT DRAWINGS AND SPECIFICATIONS. WHERE CONFLICT OF REQUIREMENTS EXIST THE ORDER OF PRECEDENCE SHALL BE AS SHOWN IN THE SPECIFICATION. OTHERWISE THE STRICTEST PROVISION SHALL GOVERN.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ENGINEERS AND ARCHITECTS DRAWINGS.
- DRAWINGS NOT TO BE SCALED. ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR OR ANY DISCREPANCIES TO BE NOTIFIED TO THE ENGINEER AND FURTHER INSTRUCTIONS OBTAINED BEFORE WORK IS COMMENCED.

GENERAL

- ALL LEVELS ARE ADD (ABOVE ORDNANCE DATUM) UNO
- REFER TO DRAWING No. 3101 FOR MANHOLE SCHEDULES.
- REFER TO DRAWING No. 3105 FOR DRAINAGE DETAILS.
- REFER TO DRAWING No. 4100 FOR PROPOSED SITE LEVELS.
- REFER TO DRAWING No. 4105 FOR PROPOSED FINISHES AND KERBING DETAILS.
- REFER TO DRAWING No. 4110 FOR PROPOSED HIGHWAY DETAILS.
- REFER TO ARCHITECT DETAILS FOR SITE PLAN, FOUL/TRADE WASTE CONNECTIONS.

DRAINAGE

- 100-225mm Ø TO BE CLAY PIPES, HEPWORTH OR SIMILAR APPROVED.
- 300mm Ø & ABOVE TO BE OSMA TWINWALL OR SIMILAR APPROVED TO R12346.
- ALL STACKS, DOWNPIPES AND GULLIES TO BE RODDABLE.
- BEDDING SURROUNDS:

UNDER BUILDING (ALL PIPES)	
LESS THAN 300mm	CLASS 2
GENERALLY	CLASS 5
EXTERNAL UNDER ROADS (PLASTIC)	
LESS THAN 1200mm	SEE SPECIFIC DETAIL
MORE THAN 1200mm	CLASS 5
EXTERNAL UNDER SOFT LANDSCAPING (PLASTIC)	
LESS THAN 600mm	CLASS 2
MORE THAN 600mm	CLASS 5
NB	ALL COVERS ARE BASED FROM FINISHED FORMATION LEVEL TO SOFFIT OF PIPE

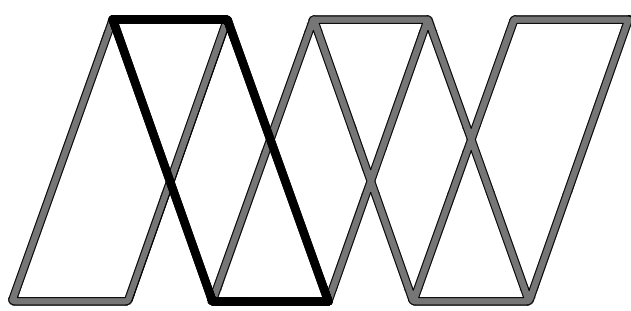
- ALL PLASTIC PIPEWORK TO BE INSTALLED IN LENGTHS NO LONGER THAN 3.0m TO PREVENT IRREGULAR LEVELS IN THE INVERT OF THE PIPE.
- WHERE SEWERS UNDER ROADS WITH LESS THAN 1.2M OF COVER OR TWO SEWERS CROSS TO HAVE 150mm (C20/30) FULL CONCRETE BED AND SURROUND.
- PIPE DIAMETERS ARE TO BE 100mm OR AS SHOWN.
- BRANCH CONNECTIONS TO ENTER ACCESS CHAMBERS AT HALF PIPE LEVEL.
- EXTERNAL GULLIES TO BE TRAPPED AND FITTED WITH SILT BUCKETS. CONNECTIONS TO BE SURROUNDED IN 150mm (C20/30) UNTIL THE COVER TO THE GROWN OF THE PIPE IS LESS THAN 1.2m.
- THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE AUTHORITY OR THEIR AGENTS PRIOR TO COMMENCEMENT OF EACH STAGE OF WORK FOR THEIR REPRESENTATIVE TO CARRY OUT INSPECTIONS TO ENSURE COMPLIANCE WITH THEIR SPECIFICATION AND APPROVED DETAILS. IF ANY SUCH REQUESTS OR INSTRUCTIONS CAUSE CONFLICT WITH THE SPECIFICATION THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.
- MINIMUM FALLS:
SURFACE BRANCHES 1:100
FOUL BRANCHES 1:40
- PIPE DIAMETERS 100mm MINIMUM OR AS SHOWN.
- SEWERS MUST HAVE 5m CLEARANCE FROM TREES AND HEDGES, WHERE IT IS NOT POSSIBLE TO ACHIEVE THIS CLEARANCE, A CONCRETE BED AND SURROUND IS REQUIRED.
- CHAMBER SIZE OF MANHOLES WITH MORE THAN ONE CONNECTION MAY NEED TO BE INCREASED AN INCREMENT TO ACCOMMODATE THE CONNECTIONS AND BENDS.
- REFER TO ARCHITECT'S DRAWINGS FOR FURTHER DETAILS OF LANDSCAPING.
- NEW CONNECTIONS TO PUBLIC SEWERS TO BE IN ACCORDANCE WITH SEWERS FOR ADOPTION 7TH EDITION, PROPOSALS TO BE SUBMITTED TO THE WATER AUTHORITY. IF A DIRECT CONNECTION TO EXISTING PUBLIC MANHOLE IS NOT ACHIEVABLE A SIPPET CONNECTION MAYBE MORE SUITABLE PENDING CONFIRMATION FROM STATUTORY SUPPLIER. HIGHWAY AUTHORITY WILL ALSO NEED TO BE CONTACTED AS ROADWAY CONTROL MEASURES WILL BE NEEDED.

- ALL INTERNAL MANHOLE WHERE SHOWN TO HAVE RECESSED STEEL DOUBLE SEAL COVERS. C/W PRESSURE PLATE TO WITHSTAND 1 BAR PRESSURE, TO CONFORM TO BS EN124-B12

MAINTENANCE NOTES

THERE WILL BE A REQUIREMENT FOR MAINTENANCE OPERATIONS TO BE PERFORMED ON THE BY-PASS SEPARATOR, ROOF GULLIES AND LINEAR DRAINAGE. THESE WORKS ARE TO BE CARRIED OUT BY SUITABLY EXPERIENCE PERSONNEL. A DETAILED METHOD STATEMENT SHOULD BE DEVELOPED BY THE CONTRACTOR AND DRAWN UP AT A APPROPRIATE TIME.

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Rev	Description	Date	By	Chk	App



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Project:	Barnsley Fire Station, Broadway, Barnsley, S70 6RA					
Client:	Turner and Townsend Project Management Ltd.					
Drawing:	External Works: Proposed Drainage					
Role:	Civil Engineer					
Drawing Status:	TENDER					
Job. no.	41207	Scale@ A1:	1:200	Rev.	T1	
Project	Originator	Volume	Level	Type	Role	Number
FIRE - AWP - ZZ - 00 - DR - C - 3100						