

DRAWING ISSUED FOR PLANNING PURPOSES ONLY. FURTHER TO APPROVAL FROM PLANNING, LOCAL AUTHORITY, SEWERAGE UNDERTAKER, ENVIRONMENT AGENCY AND ANY OTHER GOVERNING PARTIES, THE FOLLOWING RECEIPT OF FURTHER INFORMATION AND COMMENTS THE DRAWING MAY BE REVISED.

1 ALL SETTING OUT TO BE BASED ON ARCHITECT'S INFORMATION UNLESS OTHERWISE STATED.

2 THE LOCATION AND LEVEL OF ALL EXISTING SERVICES ARE TO BE IDENTIFIED PRIOR TO CONSTRUCTION AND THE ENGINEER ADVISED OF ANY CLASHES.

3 ALL EXTERNAL DRAINAGE WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DESIGN AND SPECIFICATION GUIDELINES TOGETHER WITH THE SEWERAGE UNDERTAKERS REQUIREMENTS.

4 S108 / S104 APPROVAL REQUIRED PRIOR TO ANY CONNECTIONS WORKS TO PUBLIC SEWER.

5 ALL CONCRETE TO DRAINAGE, MANHOLE BASES, SURROUNDS ETC. TO BE IN ACCORDANCE WITH THE BRE SPECIAL DIGEST I - CONCRETE IN AGGRESSIVE GROUND. REFER TO SITE INVESTIGATION REPORT FOR SULPHATE RESISTEMENT.

6 ALL PIPES SHALL BE CLAY TO BS EN 285 OR CONCRETE TO BS 911 UNLESS OTHERWISE STATED. PLASTIC PIPES MAY BE USED SUBJECT TO THE APPROVAL OF THE SEWERAGE UNDERTAKER AND SUITABILITY OF GROUND CONDITIONS.

7 DRAINAGE LAID BENEATH ROADS AND CAR PARKS WITH LESS THAN 120mm of COVER TO HAVE A MINIMUM 1% FALL TOWARDS THE ROAD ABOVE TO PROVIDE PROTECTION MEASURES. ALL OTHER DRAINAGE WITH LESS THAN 600mm of COVER TO BE SIMILARLY TREATED.

8 RIGID PIPES SHOULD BE BEDDED ON CLASS 5 GRANULAR BEDDING UNLESS LOWER IS LESS THAN 1.2m IN TRAFFICKED AREAS AND LESS THAN 900mm IN SOFT AREAS, THEN CLASS 2 CONCRETE BEDDING TO BE USED.

9 ALL PIPES SHOULD BE LAIN LOWER THAN A 5 DEGREE LINE DRAWN FROM THE BOTTOM CORNER OF AN ADJACENT FOUNDATION, WHERE PIPE FALLS WITHIN ZONE OF INFLUENCE FOUNDATIONS TO BE REVIEWED TO PREVENT ANY LOADING ON PIPE WORK

10 ALL GULLIES, REST BENS, RODDING EYES, ETC. TO BE SURROUNDED BY MASS CONCRETE ST4.

11 DRAINAGE TO BE INSTALLED AND TESTED STRICTLY IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AS SHOWN IN BS EN 752.

12 ALL BRANCHES TO MAIN DRAINS TO BE SET AT 135° LONG RADIIUS BENDS USED THROUGHOUT, ALL TAPERS AND REDUCERS ALONG THE HORIZONTAL PLANE TO BE LEVEL SOFFITS.

13 ALL Foul WATER RUNS BELOW BUILDING TO HAVE RODDABLE ACCESS POINTS AT OUTLET LOCATIONS ABOVE FLOOR SLAB.

14 ALL EXISTING SEWAGE WORKS (OR SECTIONS OF THE WORKS) THE CONTRACTOR TO SURVEY ALL PIPEWORK (ROLLING BALL TEST, CCTV AND PROVIDE RECORDS TO DEMONSTRATE THAT THE PIPEWORK HAS A UNIFORM FALL IN THE DESIGNED DIRECTION, IS STRAIGHT AND ROUND AND THAT NO OBSTRUCTIONS ARE PRESENT)

15 ALL Foul WATER MARKOLE COVERS TO BE SEALED TO PREVENT INGRESS OF SURFACE WATER AND EGREGIOUS FOUL ODOURS.

16 ALL DRAINAGE SYSTEMS TO BE CLEANED OUT PRIOR TO HANDOVER INCLUDING CATCHPITS, PERMEABLE SURFACES, SUMPS, INTERCEPTORS, CHANNELS AND MAINTENANCE OF ALL MOTORS, PUMPS AND ALARMS. DEBRIS SHOULD BE PREVENTED FROM ENTERING THE DRAINAGE NETWORK

17 ALL EXISTING PRIVATE SEWERAGE UNDERTAKER PRIOR TO CONSTRUCTION.

18 ALL MANHOLE AND DRAINAGE CHANNEL COVERS SHALL COMPLY WITH BS EN 124. MANHOLE COVERS WITHIN BLOCK PAVED AREAS AND BUILDINGS SHALL BE RECESSED.

19 VENTILATION SHALL BE PROVIDED AT THE HEAD OF Foul DRAINAGE RUNS. ACCESS FOR RODDING / JETTING SHALL BE PROVIDED TO ALL SOIL AND RAINWATER DOWNPIPS ABOVE FINISHED FLOOR LEVEL.

20 FOR SETTING OUT OF SOIL AND RAINWATER DOWNPIPS SEE ARCHITECT'S DRAWINGS.

21 ALL PIPES WITHIN THE BUILDING FOOTPRINT ARE TO BE A MINIMUM OF 100mm and TO BE LAID AT A GRADIENT AT LEAST 1.4 UNLESS STATED OTHERWISE ON THIS DRAWING.

22 ADDITIONAL DRAINAGE MAY CROSS THE SITE AND DUE TO CHANGES IN LEGISLATION IN OCTOBER 2015, THEREFORE THE CONTRACTOR WILL BE RESPONSIBLE FOR THE FULL RESPONSIBILITY OF THE SEWERAGE UNDERTAKER, BUT MAY NOT BE SHOWN ON THEIR RECORDS.

23 COVERS SHALL BE ADJUSTED TO MATCH SURROUNDING FINISH LEVELS.

24 THE CONTRACTOR SHALL PROTECT EXISTING BURIED PIPES AND TREE ROOTS FROM DAMAGE CAUSED BY LOADS IMPOSED BY CONSTRUCTION PLANT.

25 LEVELS OF EXISTING DRAINAGE TO BE CHECKED AND CONFIRMED TO THE ENGINEER PRIOR TO STARTING DRAINAGE WORKS.

26 ALL ROADS SHALL BE DRAINED BY DRAPPED GULLIES OR KERB CHANNEL UNITS. ALL BUILDING EXTERNAL AREAS SHALL BE DRAINED BY TRAPPED GULLIES OR CHANNEL UNITS. RUNOFF FROM ALL EXTERNAL SERVICE VARDAYS SHALL BE TREATED EITHER VIA PETROL/OIL INTERCEPTOR OR REMEDIATION DRAINAGE METHODS APPROPRIATE PRIOR TO DISCHARGE.

27 ANY FIELD DRAINAGE AFFECTED BY THE WORKS SHALL BE MADE GOOD AND OUTFALLS MAINTAINED.

28 SHOULD ANY SEWER BE FOUND DURING CONSTRUCTION WORKS, AN INVESTIGATION OF THE SEWER WILL BE REQUIRED TO ASCERTAIN ITS CONDITION, THE NUMBER OF PROPERTIES SERVED AND THE FORM OF ACCESS TO THE SEWER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DRAINAGE WORKS TO START AT THE OUTFALL CONNECTION AND WORK UPSTREAM.

29 ANY DISCREPANCIES OF EXISTING INVERT LEVELS TO BE REPORTED IMMEDIATELY AS THIS MAY ALTER THE DESIGN.

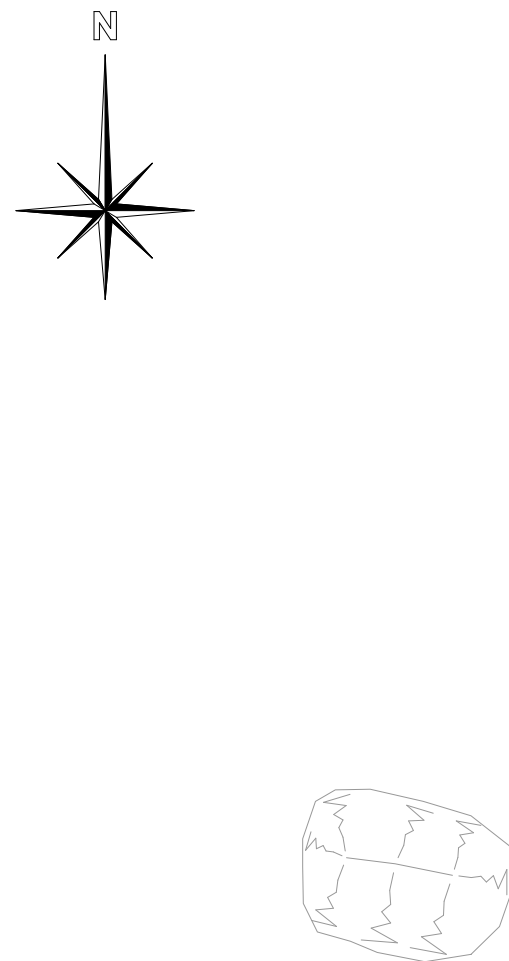
30 THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING ALL TI-INS FOR LINE AND LEVEL WITH EXISTING Foul AND SURFACE WATER SYSTEMS BEFORE COMMENCING ANY WORKS.

31 ALL DRAINAGE WORK IS TO BE STRICTLY IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUILDING REGULATIONS 2015, APPROVED DOCUMENT PART H, "DRAINAGE AND WASTE DISPOSAL". ALL EXISTING LAND DRAINS ENCOUNTERED ON SITE DURING CONSTRUCTION ARE TO BE REMOVED.

32 TEMPORARY PROTECTION TO BE PROVIDED TO DRAINAGE WORK DURING CONSTRUCTION AS NECESSARY.

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|-----|--|-----------------------|
| | PIPE DIA | LENGTH OF ROCKER PIPE |
| | 150-600MM | 6000MM |
| | 675-750MM | 10000MM |
| | OVER 750MM | 12500MM |
| 50. | ALL MANHOLES AND INSPECTION CHAMBERS SITUATED IN AREAS SUBJECT TO VEHICULAR LOADING TO HAVE CLASS D400 COVERS AND FRAMES TO BS EN124 AND WHOSE NOT SUBJECT TO VEHICULAR LOADING MAY HAVE CLASS S125 COVERS AND FRAMES. | |
| 51. | MANHOLES LOCATED WITHIN BLOCK PAVED AREAS TO HAVE 150MM DEEP COVER FRAMES AND REDUCED TO SUITABLE SIZE OF BLOCKS IN USE. THE CONCRETE HAUCHING IS NOT TO BE BROKEN OUT TO ALLOW FOR BLOCK PAVING INSTALLATION. DRAINAGE FRAMES MUST BE TIED TO MANHOLE RISERS BY USE OF MANUFACTURERS TIES (EG. POLYPIPE REF FRK900 FIXING KIT AND FRK501 BLACK TIES). THE GROUND WATER TABLE CONTRACT WILL BE HEREIN REFERRED TO BY THE CONTRACTOR'S DUE TO INCORRECT FITTING OR FAILURE TO USE THE CORRECT MANUFACTURERS FIXING EQUIPMENT. | |
| 53. | COVER LEVELS FOR MANHOLES ARE APPROXIMATE ONLY AND SHOULD BE ADJUSTED TO MATCH SURROUNDING LEVELS. | |
| | ALL WORKS TO SEWERS/ MANHOLES BEING OFFERED FOR ADOPTION OR ON EXISTING PUBLIC SEWERS SHOULD BE IN ACCORDANCE WITH 'SEWERS FOR ADOPTION, CURRENT WORKS AND THE ADAPTING WATER AUTHORITY'S RECOMMENDATIONS. | |
| | REQUIREMENT FOR LAND DRAINS TO BE ASSESSED ON SITE BY THE SITE MANAGER. ROAD GULLIES SHALL BE TRAPPED 4500 x 900MM DEEP WITH CLASS D 400 FRAME AND ADJUSTED TO BE IN ACCORDANCE WITH THE ABOVE. | |
| | ALL MANHOLES, PIPE TRENCHES ETC. TO BE BACKFILLED WITH IMPORTED GRANULAR FILL TO CLASS 6/1-6F5 (CAPPING MATERIAL) TO (SHW) TABLE 6/1 & COMPACTED IN ACCORDANCE WITH TABLE 6/4. | |
| 58. | PIPEWORK SHALL BE TESTED BOTH BEFORE AND AFTER BACKFILLING, USING EITHER AIR TEST OR WATER TEST, IN ACCORDANCE WITH BS EN 1610. | |
| 59. | ALL PIPES, CHAMBERS AND FITTINGS SHALL BE INSTALLED, BEDDED AND BACKFILLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS SUBJECT TO THE FOLLOWING MINIMUM REQUIREMENTS TABLE. | |

Location	Cover to crown	Bedding Clay/Concrete Pipe ^a	Bedding Plastic Pipe	Backfill
Roads (HGV)	>1.2m <1.2m	Class S Class 'A' (Concrete)	Class S (S1or2) Class 'A' (Concrete)	Type 1 Granular
Drives / car parking	>0.9m <0.9m	Class S Class 'A' (Concrete)	Class S (S1or2) Class 'A' (Concrete)	Type 1 Granular
Hard and soft Landscaping	>0.6m <0.6m	Class S Class 'A' (Concrete)	Class S (S1or2) Class 'A' (Concrete)	Suitable as dug material



1. IF SUB-GRADE MATERIAL IS FROST SUSCEPTIBLE THE FULL CARRIAGEWAY CONSTRUCTION THICKNESS IS TO BE NO LESS THAN 450MM
2. THE DEVELOPER SHALL TAKE CBR TEST OF ROAD FORMATION LEVELS AND RESULTS TO BE MADE AVAILABLE TO THE ENGINEER FOR APPROVAL
3. IF CBR VALUES ARE LESS THAN 2% THEN THE ADVICE OF THE ENGINEER MUST BE SOUGHT. THIS DRAWING IS SUBJECT TO APPROVAL BY THE ENGINEER. NO WORK SHALL BE UNDERTAKEN PRIOR TO GRANTING OF APPROVAL IS CARRIED OUT AT RISK TO OTHERS.
5. BEFORE WORK COMMENCES THE CONTRACTOR SHOULD LIAISE WITH ALL STATUTORY UNDERTAKERS TO DETERMINE THE EXACT LOCATIONS OF ALL APPARATUS AND TAKE THE PRECAUTIONS NECESSARY TO LOCATE, PROTECT AND WHERE NECESSARY DIVERT SUCH EQUIPMENT.
6. ALL HIGHWAY WORKS ARE TO BE CARRIED OUT TO THE REQUIREMENTS AND FULL SATISFACTION OF THE ADJOINING LOCAL AUTHORITY
7. TARMAC ROAD CONSTRUCTION TO COMPLY WITH BS EN 130108
8. SAFE PAVEMENT FOR PEDESTRIANS SHALL BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION PERIOD.
9. ALL CROSSING POINTS TO BE IN ACCORDANCE WITH THE GUIDANCE ON THE USE OF TACTILE PAVING SURFACES.
12. APPROVED WEEDKILLER TO BE APPLIED AS RECOMMENDED TO FOOTWAY FORMATION AND TO THE ADJOINING PAVED SURFACES TO PREVENT OPERATIVE WEARING PUE AND COMPLYING WITH COSHH REQUIREMENTS.
13. ANY SOFT SPOTS DISCOVERED AFTER PROPOSED ROAD SURFACING TO BE REMOVED AND REPLACED WITH SUITABLE FILL TO THE FULL NEW ROAD LEVELS TO TIE IN SMOOTHLY WITH EXISTING ROAD LEVELS TO BE CONFIRMED PRIOR TO CONSTRUCTION AND REPORTED TO THE SUPERVISOR.
15. ALL GULLY AND CHANNEL GRATING IN SHARED

ALL ADOPTABLE DRAINAGE MUST BE LAID IN ACCORDANCE WITH DESIGN AND CONSTRUCTION GUIDANCE CURRENT EDITION, TOGETHER WITH THE SEWERAGE UNDERTAKER'S REQUIREMENTS

THIS DRAWING IS TO BE READ IN CONJUNCTION
WITH ALL RELEVANT DESIGN DRAWINGS AND
OTHER INFORMATION

	SITE BOUNDARY
	LAND BOUNDARY TO BE TRANSFERRED TO ICOSA
	S104 SURFACE WATER SEWER AND MANHOLE
	SURFACE WATER GULLY
	S104 FOUL WATER SEWER AND MANHOLE
	EASEMENT
	HEADWALL
	FOUL WATER LATERAL
	SURFACE WATER LATERAL
	PROPOSED FLOW CONTROL CHAMBER
	FOUL WATER RISING MAIN
	CELLULAR ATTENUATION TANK
	PERMEABLE BLOCK PAVING CONSTRUCTION REFER TO DRAINING NO HTF-PPC-00-XX-DR-C-1150 FOR FURTHER DETAILS

1. THIS DRAWING IS COPYRIGHT AND SHOULD NOT BE REPRODUCED IN WHOLE OR PART WITHOUT THE CONSENT OF THE ENGINEER. THIS DRAWING IS TO DO NOT SCALE FROM THIS DRAWING.

2. ALL DIMENSIONS TO BE CHECKED ON SITE AND CO-ORDINATE WITH RELEVANT ARCHITECTS DRAWINGS. ANY DISCREPANCY TO BE REPORTED TO THE ENGINEER PRIOR TO CONSTRUCTION.

3. ALL DIMENSIONS IN METRES UNLESS NOTED OTHERWISE.

4. ALL DIMENSIONS IN METRES.

5. SIZES HEREON SHALL NOT BE MODIFIED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

6. THE ENGINEER IS NOT RESPONSIBLE FOR CONFLICT WITH ALL RELEVANT ENGINEERS DRAWINGS & SPECIFICATIONS.

7. DRAWING BASED 409683 0801, Proposed Layout PROVIDED BY THE CLIENT 05/2023.

8. THE DESIGN DETAILS PRESENTED MUST BE REVIEWED IN CONJUNCTION WITH THE WIDER SITE INFORMATION AND SITE CONSTRAINTS WHICH MAY NOT BE EVIDENT FROM THE DRAWING AND WHICH ARE NOT NECESSARILY PROVIDED. THIS INCLUDES, BUT NOT LIMITED TO: GROUND CONDITIONS (GEO TECHNICAL AND GEO ENVIRONMENTAL), GROUNDWATER LEVELS, UTILITIES SERVICES, SURFACE OBSTACLES, CLIMATE, ECOLOGY, TREE PROTECTION AND TOPOGRAPHY. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY, IN WRITING, SHOULD ANY SUCH DISCREPANCIES OR INCONSISTENCIES BE FOUND PRIOR TO THE COMMENCEMENT OR CONTINUATION OF ANY WORKS.

9. ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT BEST PRACTICE STANDARDS, BUILDING REGULATIONS AND NHBC STANDARDS.

10. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE WORKER AT ALL TIMES IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE HEALTH AND SAFETY AT WORK ACT 1974, AND THE C.D.M. REGULATIONS 2015. THE CONTRACTOR WILL BE RESPONSIBLE TO HAVE ALL NECESSARY COMPLIANCE, INCLUDING FULL LIAISON WITH THE CDM CO-ORDINATOR, WITHIN THEIR RATES.

11. THE DRAWING DETAILS WHICH ARE SHOWN ON THIS DRAWING ARE FOR GUIDANCE ONLY AND ARE TO BE CHECKED ON SITE BY THE CONTRACTOR. ANY VARIATIONS ARE TO BE RECORDED AND REPORTED TO THE ENGINEER IMMEDIATELY.

12. BEFORE WORK COMMENCES CONTRACTOR SHOULD CONSULT THE ENGINEER AND THE SR REPORT REGARDING ANY CONTAMINATION ISSUES. ALL NECESSARY HEALTH AND SAFETY MEASURES TO BE TAKEN.

P4	MINOR AMENDMENTS TO PRIVATE DRAINAGE LATERALS IN ACCORDANCE WITH PRIVATE DRAINAGE UPDATE					
	NGW	23.11.23	LH	23.11.23	NGW	23.11.23
P3	LATEST HOUSING LAYOUT ADDED AND MINOR AMENDMENTS TO FFLS AT PLOTS 1, 0 AND 31-33. EASEMENT REMOVED FROM ROAD 2 AND 2A					
	NGW	16.11.23	LH	16.11.23	NGW	16.11.23
P2	ROAD LEVELS AMENDED ON ROAD 1 FROM CHAINAGE 80 TO END AND ROAD 2 AND 2A TO SUIT SITE LEVELS. FFLS AMENDED AT PLOTS 09-50 TO LIFT. LAYOUT AMENDED AT PLOTS 38-50					
	NB	23.08.23	LH	23.08.23	NGW	23.08.23
P1	INITIAL ISSUE.					
	NB	18.08.23	LH	18.08.23	NGW	18.08.23
REVISION NOTE/COMMENT						



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Client
TRICAS CONSTRUCTION

Project
HILL TOP FARM,
EARL SHILTON

Drawing
S104 ADOPTABLE
DRAINAGE LAYOUT

Drawn	Date
NB	AUGUST 23

Patrick Parsons Project No. 11681	Scale @ A1 1:500
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Status Description	Status
STAGE APPROVAL	S4

Drawing No. (project-originator-volume-level-type-role-number)	Revision
HTE-PPC-00-XX-DB-C-0501	P4