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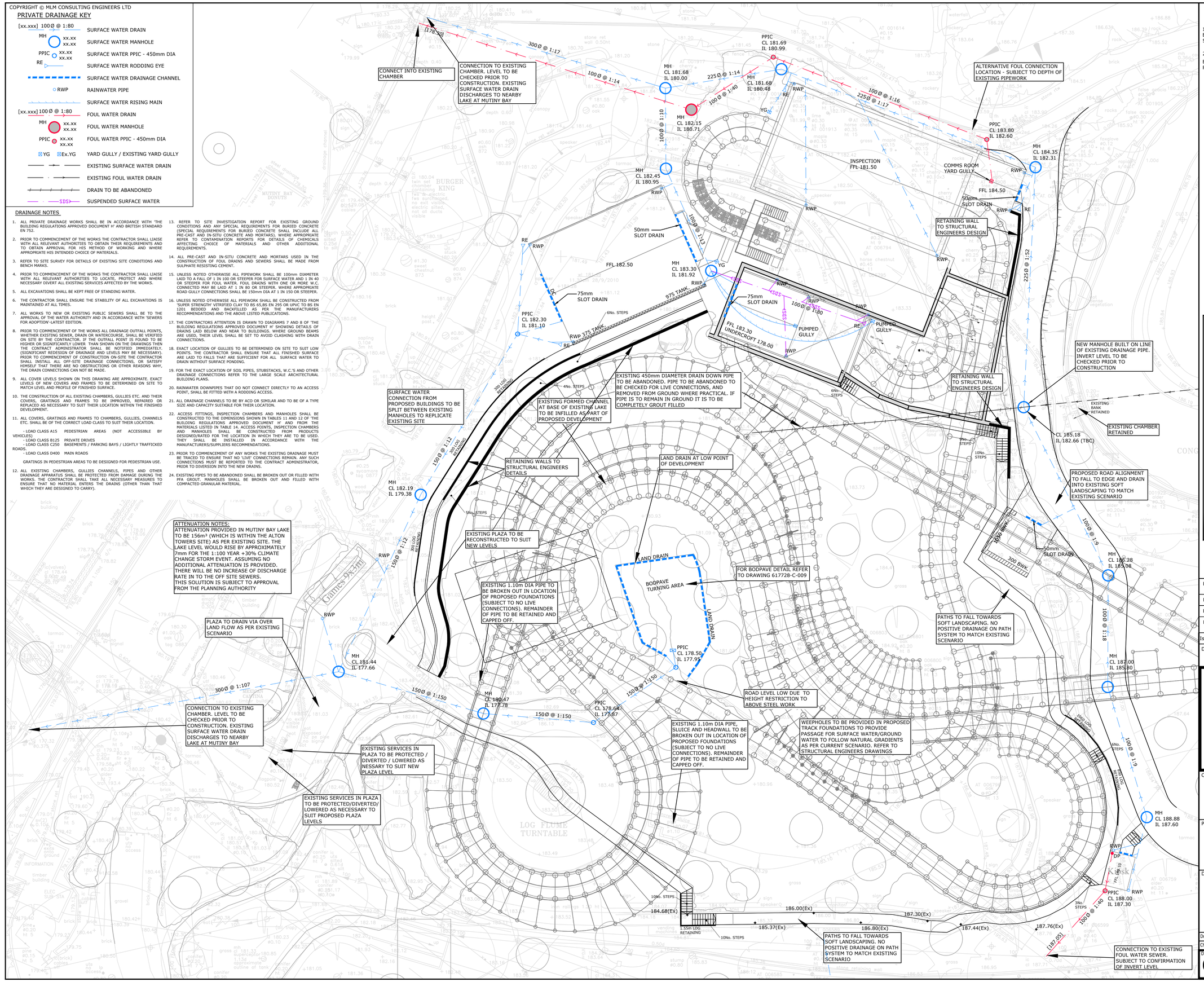
PRIVATE DRAINAGE KEY

- [xx.xxx] 100Ø @ 1:80 — SURFACE WATER DRAIN
- MH xx.xx xx.xx — SURFACE WATER MANHOLE
- PPIC xx.xx xx.xx — SURFACE WATER PPIC - 450mm DIA
- RE — SURFACE WATER RODDING EYE
- SURFACE WATER DRAINAGE CHANNEL
- RWP — RAINWATER PIPE
- SURFACE WATER RISING MAIN
- [xx.xxx] 100Ø @ 1:80 — FOUL WATER DRAIN
- MH xx.xx xx.xx — FOUL WATER MANHOLE
- PPIC xx.xx xx.xx — FOUL WATER PPIC - 450mm DIA
- ⊠YG ⊠Ex.YG — YARD GULLY / EXISTING YARD GULLY
- EXISTING SURFACE WATER DRAIN
- EXISTING FOUL WATER DRAIN
- DRAIN TO BE ABANDONED
- SDS — SUSPENDED SURFACE WATER

DRAINAGE NOTES

1. ALL PRIVATE DRAINAGE WORKS SHALL BE IN ACCORDANCE WITH 'THE BUILDING REGULATIONS APPROVED DOCUMENT H' AND BRITISH STANDARD EN 752.
2. PRIOR TO COMMENCEMENT OF THE WORKS THE CONTRACTOR SHALL LIAISE WITH ALL RELEVANT AUTHORITIES TO OBTAIN THEIR REQUIREMENTS AND TO OBTAIN APPROVAL FOR HIS METHOD OF WORKING AND WHERE APPROPRIATE HES INTENDED CHOICE OF MATERIALS.
3. REFER TO SITE SURVEY FOR DETAILS OF EXISTING SITE CONDITIONS AND BENCH MARKS.
4. PRIOR TO COMMENCEMENT OF THE WORKS THE CONTRACTOR SHALL LIAISE WITH ALL RELEVANT AUTHORITIES TO LOCATE, PROTECT AND WHERE NECESSARY DIVERT ALL EXISTING SERVICES AFFECTED BY THE WORKS.
5. ALL EXCAVATIONS SHALL BE KEPT FREE OF STANDING WATER.
6. THE CONTRACTOR SHALL ENSURE THE STABILITY OF ALL EXCAVATIONS IS MAINTAINED AT ALL TIMES.
7. ALL WORKS TO NEW OR EXISTING PUBLIC SEWERS SHALL BE TO THE APPROVAL OF THE WATER AUTHORITY AND IN ACCORDANCE WITH 'SEWERS FOR ADOPTION'-LATEST EDITION.
8. PRIOR TO COMMENCEMENT OF THE WORKS ALL DRAINAGE OUTFALL POINTS, WHETHER EXISTING SEWER, DRAIN OR WATERCOURSE, SHALL BE VERIFIED ON SITE BY THE CONTRACTOR. IF THE OUTFALL POINT IS FOUND TO BE HIGHER OR SIGNIFICANTLY LOWER THAN SHOWN ON THE DRAWINGS THEN THE CONTRACT ADMINISTRATOR SHALL BE NOTIFIED IMMEDIATELY (SIGNIFICANT REDESIGN OF DRAINAGE AND LEVELS MAY BE NECESSARY). PRIOR TO COMMENCEMENT OF CONSTRUCTION ON-SITE THE CONTRACTOR SHALL INSTALL ALL OFF-SITE DRAINAGE CONNECTIONS, OR SATISFY HIMSELF THAT THERE ARE NO OBSTRUCTIONS OR OTHER REASONS WHY, THE DRAIN CONNECTIONS CAN NOT BE MADE.
9. ALL COVER LEVELS SHOWN ON THIS DRAWING ARE APPROXIMATE. EXACT LEVELS OF NEW COVERS AND FRAMES TO BE DETERMINED ON SITE TO MATCH LEVEL AND PROFILE OF FINISHED SURFACE.
10. THE CONSTRUCTION OF ALL EXISTING CHAMBERS, GULLIES ETC. AND THEIR COVERS, GRATINGS AND FRAMES TO BE IMPROVED, REPAIRED OR REPLACED AS NECESSARY TO SUIT THEIR LOCATION WITHIN THE FINISHED DEVELOPMENT.
11. ALL COVERS, GRATINGS AND FRAMES TO CHAMBERS, GULLIES, CHANNELS ETC. SHALL BE OF THE CORRECT LOAD CLASS TO SUIT THEIR LOCATION.
    - LOAD CLASS A15 PEDESTRIAN AREAS (NOT ACCESSIBLE BY VEHICLES)
    - LOAD CLASS B125 PRIVATE DRIVES
    - LOAD CLASS C250 BASEMENTS / PARKING BAYS / LIGHTLY TRAFFICKED ROADS.
    - LOAD CLASS D400 MAIN ROADS

    GRATINGS IN PEDESTRIAN AREAS TO BE DESIGNED FOR PEDESTRIAN USE.
12. ALL EXISTING CHAMBERS, GULLIES CHANNELS, PIPES AND OTHER DRAINAGE APPARATUS SHALL BE PROTECTED FROM DAMAGE DURING THE WORKS. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ENSURE THAT NO MATERIAL ENTERS THE DRAINS (OTHER THAN THAT WHICH THEY ARE DESIGNED TO CARRY).
13. REFER TO SITE INVESTIGATION REPORT FOR EXISTING GROUND CONDITIONS AND ANY SPECIAL REQUIREMENTS FOR BURIED CONCRETE (SPECIAL REQUIREMENTS FOR BURIED CONCRETE SHALL INCLUDE ALL PRE-CAST AND IN-SITU CONCRETE AND MORTARS). WHERE APPROPRIATE REFER TO CONTAMINATION REPORTS FOR DETAILS OF CHEMICALS AFFECTING CHOICE OF MATERIALS AND OTHER ADDITIONAL REQUIREMENTS.
14. ALL PRE-CAST AND IN-SITU CONCRETE AND MORTARS USED IN THE CONSTRUCTION OF FOUL DRAINS AND SEWERS SHALL BE MADE FROM SULPHATE RESISTING CEMENT.
15. UNLESS NOTED OTHERWISE ALL PIPEWORK SHALL BE 100mm DIAMETER LAID TO A FALL OF 1 IN 100 OR STEEPER FOR SURFACE WATER AND 1 IN 40 OR STEEPER FOR FOUL WATER. FOUL DRAINS WITH ONE OR MORE W.C. CONNECTED MAY BE LAID AT 1 IN 80 OR STEEPER. WHERE APPROPRIATE ROAD GULLY CONNECTIONS SHALL BE 150mm DIA AT 1 IN 150 OR STEEPER.
16. UNLESS NOTED OTHERWISE ALL PIPEWORK SHALL BE CONSTRUCTED FROM 'SUPER STRENGTH' VITRIFIED CLAY TO BS 65,BS EN 295 OR UPVC TO BS EN 1201 BEDDED AND BACKFILLED AS PER THE MANUFACTURERS RECOMMENDATIONS AND THE ABOVE LISTED PUBLICATIONS.
17. THE CONTRACTORS ATTENTION IS DRAWN TO DIAGRAMS 7 AND 8 OF THE BUILDING REGULATIONS APPROVED DOCUMENT H' SHOWING DETAILS OF DRAINS LAID BELOW AND NEAR TO BUILDINGS. WHERE GROUND BEAMS ARE USED, THEIR LEVEL SHALL BE SET TO AVOID CLASHING WITH DRAIN CONNECTIONS.
18. EXACT LOCATION OF GULLIES TO BE DETERMINED ON SITE TO SUIT LOW POINTS. THE CONTRACTOR SHALL ENSURE THAT ALL FINISHED SURFACE ARE LAID TO FALLS THAT ARE SUFFICIENT FOR ALL SURFACE WATER TO DRAIN WITHOUT SURFACE PONDING.
19. FOR THE EXACT LOCATION OF SOIL PIPES, STUBSTACKS, W.C.'S AND OTHER DRAINAGE CONNECTIONS REFER TO THE LARGE SCALE ARCHITECTURAL BUILDING PLANS.
20. RAINWATER DOWNPIPES THAT DO NOT CONNECT DIRECTLY TO AN ACCESS POINT, SHALL BE FITTED WITH A RODDING ACCESS.
21. ALL DRAINAGE CHANNELS TO BE BY ACO OR SIMILAR AND TO BE OF A TYPE SIZE AND CAPACITY SUITABLE FOR THEIR LOCATION.
22. ACCESS FITTINGS, INSPECTION CHAMBERS AND MANHOLES SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN IN TABLES 11 AND 12 OF THE BUILDING REGULATIONS APPROVED DOCUMENT H' AND FROM THE MATERIALS LISTED IN TABLE 14. ACCESS POINTS, INSPECTION CHAMBERS AND MANHOLES SHALL BE CONSTRUCTED FROM PRODUCTS DESIGNED/RATED FOR THE LOCATION IN WHICH THEY ARE TO BE USED. THEY SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS/SUPPLIERS RECOMMENDATIONS.
23. PRIOR TO COMMENCEMENT OF ANY WORKS THE EXISTING DRAINAGE MUST BE TRACED TO ENSURE THAT NO 'LIVE' CONNECTIONS REMAIN. ANY SUCH CONNECTIONS MUST BE REPORTED TO THE CONTRACT ADMINISTRATOR, PRIOR TO DIVERSION INTO THE NEW DRAINS.
24. EXISTING PIPES TO BE ABANDONED SHALL BE BROKEN OUT OR FILLED WITH PFA GROUT. MANHOLES SHALL BE BROKEN OUT AND FILLED WITH COMPACTED GRANULAR MATERIAL.



NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEER'S, ARCHITECT'S AND SPECIALIST'S DRAWINGS AND THE SPECIFICATION.
2. DO NOT SCALE FROM THIS DRAWING MANUALLY OR ELECTRONICALLY. WRITTEN PERMISSION MUST BE OBTAINED FROM MLM PRIOR TO SCALING ELECTRONICALLY OR USING THIS ELECTRONIC FILE.

N E S W MLM

TOPOGRAPHICAL SURVEY BASED ON DRAWING 'SCALED UP TOPO.dwg' AS RECEIVED 15/05/2016

SITE BASED ON DRAWING '2967-20' AS RECEIVED 24/08/2016

CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS 2015

DESIGNERS HAZARD INFORMATION FOR CONSTRUCTION

1. IF YOU DO NOT FULLY UNDERSTAND THE RISKS INVOLVED DURING THE CONSTRUCTION OF THE ITEMS INDICATED ON THIS DRAWING ASK YOUR MANAGER, HEALTH & SAFETY ADVISOR OR A MEMBER OF THE DESIGN TEAM BEFORE PROCEEDING.
2. EXISTING SERVICES PRESENT ON SITE.
3. WORKING ADJACENT TO AREAS OPEN TO GENERAL PUBLIC.
4. DEEP EXCAVATIONS.
5. LEVEL DIFFERENCES (i.e. STEPS IN LEVEL / STEEP GRADIENTS) ACROSS THE SITE.

THE ABOVE NOTES REFER SPECIFICALLY TO THE INFORMATION SHOWN ON THIS DRAWING.

REFER TO THE HEALTH AND SAFETY PLAN FOR FURTHER INFORMATION.

Issue	Date	Description	Made	Checked
P4	07.11.16	ADDITIONAL NOTES ADDED REGARDING DRAINAGE CONNECTIONS	LA	DK
P3	06.10.16	TENDER ISSUE	AFJF	DK
P2	16.09.16	UPDATED TO COMMENTS	AFJF	DK
P1	25/08/16	FIRST ISSUE	DK	JEB

Drawing Status: CONSTRUCTION

MLM
Multidisciplinary Consulting
190 Eureka Park, Upper Pemberton, Ashford, Kent TN25 4AZ
Tel: 01233 610530 Fax: 01233 618299
Website: www.mlm.uk.com

Client: MERLIN ENTERTAINMENTS

Project: ATR_2018_SW8

Drawing Title: EXTERNAL WORKS BELOW GROUND DRAINAGE

Drawn/Design	AFJF	Date	25.08.16	Scales	1:200	@ A1
Checked	DK	Approved	JEB		1:400	@ A3

Drawing No. 617728/CIV/007 Rev P4