

Private Drainage Notes

1. This drawing is to be read in conjunction with and checked against all other drawings, engineering details, specification and any structural, geotechnical or other specialist documents provided.

2. All lateral connections for house drainage shall be 100mm unless stated otherwise and must extend a minimum of 500mm behind the back of the footpath.

3. All pipes to be vitrified clay or UPVC and shall be 100mmØ laid to a fall of 1:80 unless noted otherwise or indicated by size and invert levels. All connections when laid shall be plugged, protected as necessary and marked with a stake for future use.

4. Building drainage shall comply with BS 6301 1985, BS EN 752 and Building Regulations Part H. Inspection chambers located within garages to have double seal bolt down covers.

5. Gully top and manhole cover specification to be in accordance with BS EN 124 and located in accordance with the intended use and loading classification as described within groups 1-6:-

6. This drawing is schematic for clarity only, positions of pipe runs and manholes may vary on site due to site conditions.

7. Cover and invert levels are indicative and may vary on site. In any case the following minimum cover to depth of cover to the crown of pipes without protection shall be as follows:-

- a. Domestic gardens and pathways without any possibility of vehicular access - 0.35m
- b. Domestic driveways, parking areas and yards with height restrictions to prevent entry by vehicles with a gross weight in excess of 7.5 tonnes - 0.5m
- c. Domestic driveways, parking areas and narrow streets without footways (e.g Mews developments) with limited access for vehicles with a gross weight in excess of 7.5 tonnes - 0.9m
- d. Other highways and parking areas with unrestricted access to vehicles with a gross weight in excess of 7.5 tonnes - 1.2m

Note: any protection required where drainage does not comply with a-e above shall be as follows:-

a) Vitrified clay pipes - provide a 100 mm min. thick concrete bed and surround (instead of class 'S' bedding) and a 13 mm thick compressible filler at each joint.

b) UPVC pipes - provide a concrete bridging (in addition to class 'S' bedding) in accordance with appendix A15, Building Regulations part 'H'.

Note: in-situ concrete used in connection with a) and b) above shall be standard mix GEN3 in accordance with BS 5328.

8. Drainage runs should be laid at a minimum of 5.0 metres from the rear of properties where practicable to allow for future extensions

9. Where pipes pass under buildings, unless beam & block floors are used, they are to be surrounded in concrete.

10. All branch drains, or connections, are to discharge to the collectors obliquely, and in the direction of the main flow.

11. Finished Floor Levels (FFL's), assumed to be typically a minimum of 150mm above finished ground level outside. refer to architects drawing for details.

12. All new private shallow 225mm diameter surface water and foul inspection chambers and rodding eyes shown without cover levels (CL) shall be assumed to be at external ground level, and invert levels (IL) are to be typically between 450 and 600mm below CL, subject to the length of the internal house connections.

13. All low spots on hardstanding areas to have double gullies.

14. Prior to topsoiling of rear gardens, the gardens should be reworked, rotovated or decompacted to a depth of 600mm. Once this is carried **NO PLANT to access these areas**, any further consolidation of subsoil to be reworked as necessary. Before reworking or rotovating the Contractor is to mark all drain runs in the area.

15. Pipe bedding to be Class 'S' Bedding (100mm granular bed and surround).

16. Excavations for manholes, pipe runs etc located within a 45 degree load distribution splay from any adjoining existing foundations, are to be adequately supported for the duration of the works and building drainage protected.

17. Foundations adjacent to pipe runs or manholes are to have their formation level set above the invert level no higher than the equivalent of the horizontal distance between the pipe/excavation trench and the foundation, minus 500 mm.

18. Where excavations for pipe runs are parallel and in close proximity to each other and/or other service trenches, the contractor shall ensure that adequate safety measures, including temporary shoring, are provided in line with current Health & Safety Legislation and good practice. Particular attention is to be paid to adjacent trenches of differing invert levels.

19. All existing drainage found on site during the works shall be investigated, its operational status confirmed, and the following applied:-

- a) Inoperative drainage shall be cut back and pipe runs filled with concrete grout.
- b) 'Live' drainage shall be temporarily re-routed to allow the new drainage to be constructed.

20. Where existing drainage is to be re-used including road, building and external drainage systems, the contractor shall ensure that all chambers and drainage runs are cleaned, de-silted and made good.

21. Covers to existing chambers to be re-used shall be replaced where necessary to suit proposed development loading class, see note 5. Chamber covers shall also be adjusted to suit final ground levels as necessary.

22. Where necessary, existing chambers shall be re-benched to suit new pipework arrangement.

Important Drainage Notes:

Prior to installation of any new drainage the contractor shall:

1. Confirm line and level of all outfall manholes. Where the depths of these manholes are insufficiently deep for any new connection from the site, the engineer shall be informed immediately.

2. Confirm line and level of existing drainage outfalls. Level of connection subject to confirmation that no clashing occurs with any of the existing sewers or services, contractor to re-level if necessary.

MANHOLE / INSPECTION CHAMBER SCHEDULE :- SURFACE WATER

M.H / I/C NO	M.H / I/C TYPE	COVER LEVEL	INVERT LEVEL	DEPTH (mm)	INTERNAL M.H / I/C SIZE (mm)	COVER CLASS	COVER SIZE (mm)	COMMENTS
S1	Type 3	143.850	143.120	730	Ø450	B125		
S2	Type 3	143.850	143.067	783	Ø450	B125		
S3	Type 3	143.850	142.925	925	Ø450	B125		
S4	Storage	143.850	142.596	1254	Ø1200	D400	600x600	
S5	Storage	143.850	142.576	1274	Ø1200	D400	600x600	
S6	Type 4	144.095	143.495	600	Ø225	B125		
S7	Type 3	144.095	143.248	847	Ø450	B125		
S8	Storage	144.000	142.526	1474	Ø1200	B125	600x600	
S9	Type 3	144.095	143.401	694	Ø450	B125		
S10	Type 3	144.095	143.311	784	Ø450	B125		
S11	Type 3	144.095	142.995	1100	Ø450	B125		
S12	Type 3	143.850	143.174	676	Ø450	B125		
S13	Type 3	143.850	142.773	1077	Ø450	B125		
S14	Type 3	143.850	142.666	1184	Ø450	B125		
S15	Control	143.600	142.489	1111	Ø1200	D400	675x675	

MANHOLE / INSPECTION CHAMBER SCHEDULE :- FOUL WATER

M.H / I/C NO	M.H / I/C TYPE	COVER LEVEL	INVERT LEVEL	DEPTH (mm)	INTERNAL M.H / I/C SIZE (mm)	COVER CLASS	COVER SIZE (mm)	COMMENTS
F1	Type 4	143.850	143.400	450	Ø225	B125		
F2	Type 3	143.850	143.317	533	Ø450	B125		
F3	Type 3	143.850	143.250	600	Ø225	B125		
F4	Type 4	143.850	143.250	600	Ø450	B125		
F5	Type 3	143.850	143.015	835	Ø225	B125		
F6	Type 3	143.850	143.250	600	Ø225	B125		
F7	Type 3	143.850	143.181	669	Ø450	B125		
F8	Type 3	143.850	142.917	933	Ø450	B125		
F9	Type 4	144.095	143.495	600	Ø225	B125		
F10	Type 3	144.095	143.357	738	Ø450	B125		
F11	Type 3	144.095	143.064	1031	Ø450	B125		
F12	Type 3	144.095	142.779	1316	Ø450	B125	Ø350 reducing piece	
F13	Type 3	144.095	142.451	1644	Ø450	B125	Ø350 reducing piece	Backdrop IL 142.850
C1	B	144.095	142.420	1675	Ø1200	D400	600x600	
C2	E	143.760	142.298 (TBC)	1462	Ø1200	D400	600x600	

Notes:-

- Where this drawing has been issued in electronic .dwg format it has been done so in good faith. jnpgroup do not take any responsibility for any inaccuracies in the electronic data, which should be checked against the paper (or .pdf) drawing issue. Any apparent discrepancies should be immediately reported to jnpgroup. The electronic .dwg file should not be assumed to be to scale and should not be used for 'overlying', setting out or checking of any third party information. All dimensions should be taken from the paper (or .pdf) version of the drawing. Electronic drawings may contain third party information, jnpgroup take no responsibility for this information, which should be checked against the originators paper drawing(s).
- All working dimensions to be checked on site.
- Do not scale.
- Any discrepancies between drawings of different scales, and between drawings and specification where appropriate to be notified to The Engineer for decision.
- Copyright reserved. This drawing may only be used for The Client and location specified in the title block. It may not be copied or disclosed to any third party without the prior written consent of jnpgroup.
- This drawing should only be used for construction if the drawing status is "Construction", jnpgroup take no responsibility for construction works undertaken to drawings which are not marked with this status.

Health and Safety Note:
The details on this drawing have been prepared on the assumption that a competent contractor will be carrying out the works. If the contractor(s) considers that there is insufficient Health and Safety information on this drawing, this should immediately be brought to the attention of the designer.

HAZARD IDENTIFICATION BOX		
This table is provided to assist the Principal Contractor to fulfil their obligations under the CDM Regulations 2015		
Construction Hazard	Maintenance / Cleaning Hazard	Demolition / Adaption Hazard

B	05.08.19	Pumping chamber notes removed. MH schedules amended to suit revised drainage scheme	NE	BP
A	08.05.19	Foul water pumping chamber notes removed. Foul water to plots 1 & 2 amended to suit drainage layout amendments	NE	BP
Rev.	Date	Amendment	By	Chk.

Status
For Approval

john newton & partners
jnpgroup
Consulting Engineers
www.jnpgroup.co.uk
Chesham • Brighouse • Hartlepool • Leamington Spa • Sheffield
Tel: 01484 400691 E-mail: brighouse@jnpgroup.co.uk

Client	D&M Middleton Ltd
Job	Land to the Rear of 40 Church Road, Roberttown, WF15 7LR
Title	Proposed Drainage Notes and Manhole Schedules

Scale N/A @ A1 Date April 2019
Drawn by NE Checked by STS/BP Approved by STS



Drawing No.	B22865-D-102	Rev.	B
-------------	--------------	------	---

QA Ref: Q0019 Rev D