

- Notes**
1. Do note scale this drawing.
 2. This drawing is to be read in conjunction with all other project drawings and specifications.
 3. All dimensions are in millimetres unless stated otherwise.
 4. Should there be any conflict between the details indicated on this drawing and those indicated on other drawings the Project Engineer shall be informed prior to construction.
 5. Until technical approval has been obtained from the relevant authority, it should be understood that all drawings issued are preliminary and not for construction. Should the contractor commence site work prior to such approval being given, it is entirely at their own risk.
 6. All 1000 proposed foul drainage pipes shown are to be laid at a gradient of 1:80.
 7. All 1500 proposed foul drainage pipes shown are to be laid at a gradient of 1:150.
 8. All existing land drains encountered on site during construction are to be re-connected.
 9. Temporary protection to be provided to drainage work during construction as necessary.
 10. Topographical survey and architectural layout based on third party information.
 11. Anticipated foul flow rates calculated using discharge unit method to BS EN 12056-2.
 12. Drawing to be read in conjunction with Causeway Flow design pack.
 13. Pipes to be structured walled to BS EN 13476, Polypropylene to BE EN 1852 or PVC-U to BS EN 1401.
 14. Both clay and concrete pipes shall be strength class 120 (100/150mm min crushing strength 28kN/m). Thermoplastic pipes shall have a minimum ring stiffness of SN4
 15. Pipes which run adjacent to buildings shall be installed in strict accordance with Building Regulations Part H, clauses 2.23 to 2.25
 16. Class Z concrete bed and surround to all foul and surface water pipes with less than 900mm cover depth. Type S granular bed and surround to all foul and surface water pipes with greater than 900mm cover depth.
 17. All manholes and inspection chambers to have D400 load-rated covers and frames to BS EN 124.
 18. Concrete to be GEN1 unless specified otherwise.
 19. The first flexible joint in pipes adjoining a manhole shall be a maximum length of 600mm from the inside face of the manhole, connecting to a rocker pipe. The length of the rocker pipe shall be 600mm.
 20. All foul and surface water pipes to be constructed to Building Regulations Part H.
 21. If soft spots are encountered the whole area is to be excavated until firm ground is encountered and all excavated material disposed. Material excavated from soft spots should not be used for fill on site. The excavation should be reinstated with MOT Type 3 compacted in 100mm-150mm layers.
 22. Permeable pavement sub-base to consist of minimum 30% voids, e.g. Mot Type 3. Sub-base to be a minimum of 300mm thick, and subject to pavement design based on recorded CBR values.
 23. Drainage design based on an infiltration rate of 3×10^{-6} , as recorded by Michael D Joyce Associates LLP.
 24. Formation of infiltration devices to be constructed with at least 1m clearance to groundwater level.
 25. Geo-cellular units to be PolyStorm PSM1A or similar approved.
 26. Geo-cellular units to be installed in accordance with manufacturer's instructions and specification.
 27. Manufacturer to provide structural calculations to relevant industry guidance which confirm the product is suitable for use at the proposed depth and expected loading conditions.

CDM Requirements
Risk - Deep excavation
Control method - Contractor to design trench support to depths shown on drawings and in the manhole schedule, appropriate to the ground conditions.
Risk - Water ingress into excavations, including ground water
Control method - Contractor to specify method of dealing with ingress of water into excavations, in particular if ground water is experienced. Contractor to undertake trench inspections prior to entry into any excavation, and again if left overnight or if conditions change.

A	Foul water drainage layout amended	09/06/2023
Revision	Details	Date
NC29 Ltd 269 Lincoln Road North Hykeham, Lincoln, LN6 8NH Tel : 07753 168226 Web: www.nc29.co.uk Email : info@nc29.co.uk Project Proposed Residential Development Kirk Cross Crescent, Barnsley Client Mr. W. Cooke Title Proposed Drainage Layout Drawn CC Checked CC Date June 2023 Scale 1:200 Number 1509-001 A Status Preliminary		

