CIVILS

DRAINAGE

All drainage design and installation to be carried out in accordance with the following:
BS EN 752: Drain and sewer systems outside buildings.
BS EN 12056: Gravity drainage systems inside buildings.
Building Regulations - Part H.
Design and Construction Guidance (Version 2.0)
Site surface water drainage has been designed based on the levels and grades shown on the Architect's / Landscape Architect's drawings.

MANHOLES & INSPECTION CHAMBERS

Concrete manholes / inspection chambers by Milton Precast (or similar approved).
Polypropylene inspection chambers by Wavin (or similar approved).

PIPES

Pipes to be cast iron within building footprint and vitrified clay externally as R12 Specification

All pipes with cover more than 600 in external non-trafficked areas and 900 in external trafficked areas to be laid in class 'S' surround; for cover less than 600 and 900 respetively pipes to be laid in class 'Z' surround. If pipework is below an RC slab, Class Y or W surround should be used.

All pipes below Block B void to be supported on concrete when sitting above the ground level or up to a maximum of 200mm below ground. Class S bedding is to be used when cover is a minimum of 200mm above the pipe.

All pipes under foundations to be laid in Class Z surround.
The initial below ground lateral/branch pipes shall be nominal 100mm diameter and laid no flatter than 1:40 for foul and 1:60 for surface water uno. Where necessary, to avoid clashes, lateral connections may be laid to nominal falls and ramp at 45 degrees to manhole invert or pipe junction.

Selected fill for backfilling shall consist of uniform readily compactible as-dug material, free from vegetable matter, rubbish, frozen soil and material retained on a 40 mm sieve.

Rocker pipe lengths to be 600mm maximum.
All bends in pipework shall be long radius.
Where branch pipes are to connect directly onto a main run provide above ground rodding access at head of branch run and:
When connecting 100 or 150 diameter branches to a main run of 300 diameter or larger use a preformed saddle fitting.
Otherwise connections shall be made with a preformed oblique junction swept in the direction of flow.

All gullies to be trapped and roddable.

DISUSED PIPEWORK

Confirm pipework is no longer in use before abandoning / demolishing.
All pipework within new building envelope to be demolished, should be removed and replaced with clean fill material.

ATTENUATION

The attenuation tanks have been designed for a 1 in 100 year storm event with a 40% allowance for climate change.

The Geocellular units shall be installed strictly in accordance with the manufacturer's recommendations and installed by a specialist. The constructed conduits shall be surrounded with a suitable impermeable geomembrane before carefully backfilling with material approved by the Civil Engineer.

Silt traps should be provided at each connection to the modular units. An optional access shaft can be provided for maintenance at the centre of each tank.

Vent pipes should be provided in accordance with the manufacturer's specification.

CONSTRUCTION

The Contractor shall allow for the temporary and permanent support and diversion works as necessary, to all existing services to the satisfaction of the Public Utilities.

Before starting work on the pump chamber, or placing orders for the pump, sump, cover or any other element of the design associated with the pumps, the Contractor shall:

The Contractor should carry out a drainage CCTV survey after completion of private pipework to demonstrate that the constructed drainage is in accordance with the design and specification clause R12/971. For adoptable pipework allow for drainage CCTV survey by others in accordance with specification clause R12/976.

SETTING OUT

All levels and dimensions shall be verified on site before the start of any works.
All FWP/RWP and gully locations are shown as indicative only. Architect/Landscape Architect to confirm all: Cover levels, FWP/RWP & gully locations and termination positions of vent pipes.

Landscape layout, and finished levels to be confirmed by Architects / Landscape Architect.

The Contractor is to co-ordinate manhole positions and levels with landscape drawing requirements in hard landscaped areas to tie-in with the finishes proposed, i.e. block paviours & paving.

Co-ordinates given are "guide" positions of the centre of cover opening. Positions of inspection chambers may require manual adjustment on site due to confinement and congestion of pipe runs.

The Contractor is to position cover slabs/manhole openings to allow access over benching from the bottom of ladder/step iron /rungs.

Manhole covers shall be set to same level and fall as adjacent ground.
Manhole to manhole runs should be kept straight and not be extended in length without reference to the Civil Engineer.

SERVICES

All connections to existing drainage to be confirmed on receipt of condition survey.
The location, size and depth of all existing drains/sewers and services shall be established by the Contractor before the start of works on site.

Details of existing and public sewers to be taken from relevant Asset Maps, Water Authority, CCTV & Site Surveys.

ROADS

CBR tests are to be carried out by the Contractor in-situ and at the proposed formation level, before final design and construction. This is required to determine depths of sub-base and capping material. Allow 5 working days for issue of updated details after CBR tests results...

Surface course, binder course and base course to be in accordance with BS EN 13108.
Sub-base to be accordance with the specification for Highway Works, Series 800.
Sub-base Type 1 granular material to have minimum CBR of 30%.
Capping material to be in accordance with the Specification for Highway Works, Series 600.

Capping material to have CBR of 15%.
Formation to be trimmed and rolled to Specification for Highway Works, Series 600 before laying pavement material.

Road formation to be checked for soft spots before laying pavement materials. All soft spots to be removed and replaced with granular material in accordance with Specification for Highway Works, Series 600.

All tolerances for pavement layers in accordance with Specification for Highway Works, Series 700.

All material within 450mm of ground level to be non frost susceptible.
All pavement materials damaged by construction traffic are to be repaired before replacing full pavement layers.

All kerbs to be laid in accordance with BS 7533-6.

Rev	Date	Drawn	Eng	Amendment
P03	29.10.21	TP	KB	Issued for Stage 3
P02	22.10.21	AC	KB	Contract Issue
P01	16.09.21	WS	KB	Issued for Information

LIDDELL ROAD - PHASE 2

GENERAL NOTES
SHEET 2

Status
STAGE 3 ISSUE
NOT FOR CONSTRUCTION

Drawn WS	Eng KB
Scales @A1	
Drawing No	Rev
29100/0002	P03
Doc Ref.	
29100-PAM-ZZ-XX-DR-C-0002	

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