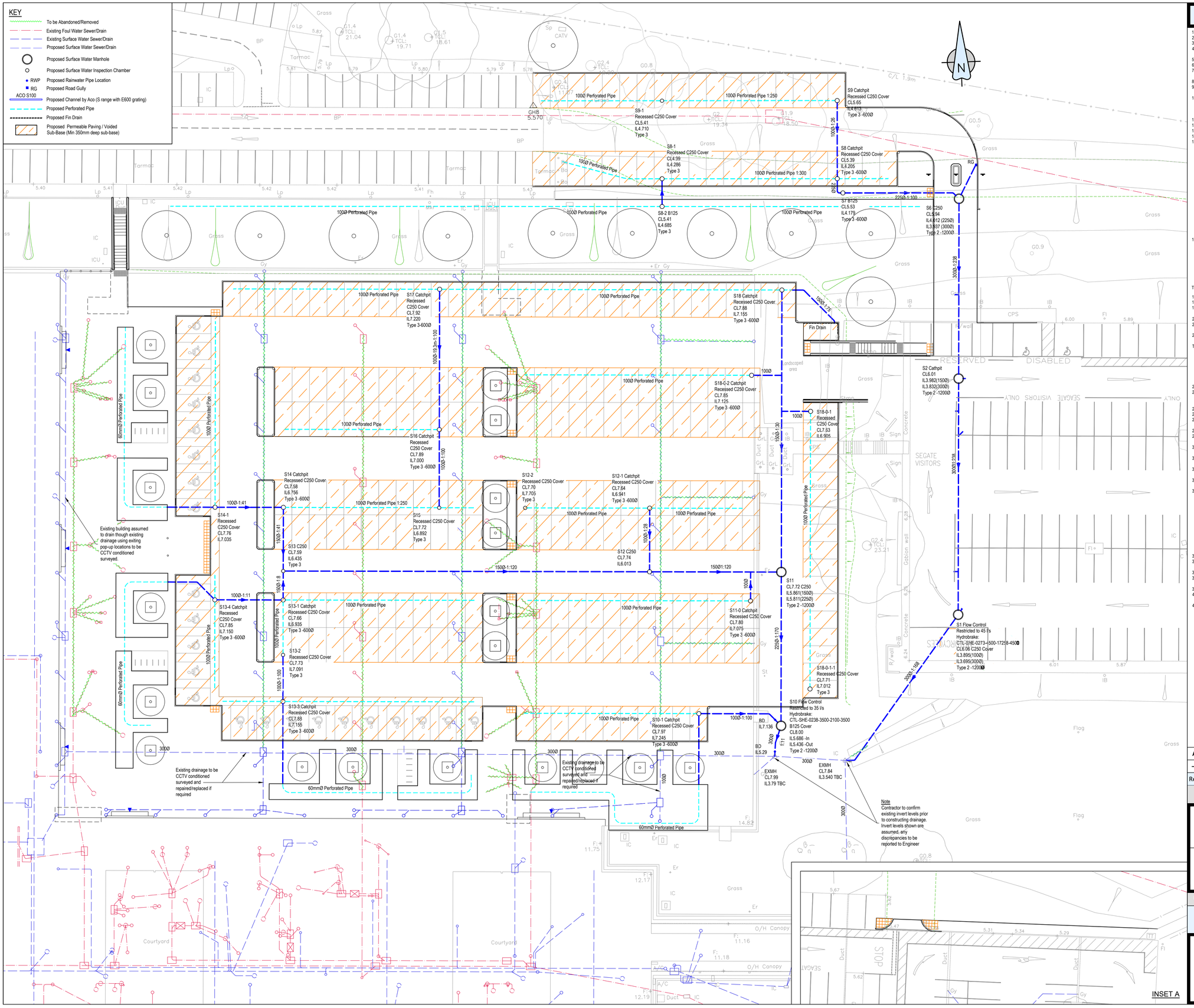


NOTES

A1

1. Do not scale drawings. All dimensions must be checked / verified on site.
2. Drawings are to be read in conjunction with all relevant Architects, Engineers and Specialists drawings and specifications.
3. For details of ground conditions refer to the Ground Investigation Report.
4. Reference should be made to services consultants for details of existing and proposed services / utility apparatus locations and protection / diversions requirements.
5. All dimensions are shown in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
6. Any discrepancies noted on site are to be reported to the Engineer immediately.
7. All drainage works shall be carried out in accordance with Sewers for Adoption 6/7th edition and addendums as appropriate, including the requirements of the local authority and in conjunction with all relevant British standards and codes of practice.
8. All drainage shall comply with the requirements of BS EN 752, the Building Regulations Part H (ADH) and typical drainage construction details.
9. Private pipework may be either vitrified clay to BS 65 and BS EN 295 or thermoplastic structured wall and shall comply with WIS 4-35-01 and be BSI Kitemarked or equivalent certified.
10. All new drains/sewers and existing ones to be re-used are to be jet-cleaned and condition-surveyed by CCTV on completion of the works by the contractor, including existing drains adjacent to the new building and the site boundary. An additional CCTV survey of all drains beneath buildings is to be carried out prior to completion of floor construction. Any structural defects shall be repaired or replaced as required using appropriate and approved methods.
11. Clayware pipes 150mm diameter up to and including 225mm to be Class 160 to BS EN 295.
12. Pipes over 300mm diameter to be concrete to BS 5911 Class M.
13. All pipe runs to be laid with flexible joints.
14. All pipes entering and exiting manholes are to be connected with pipe soffits level unless noted otherwise.
15. Bedding and surround to be as follows :-

Location	Cover to Soffit	Bedding
	Clayware/Concrete	
Roods.	>1.2m	Class 'S' granular bed and surround.
	<1.2m	Class 'Z' Concrete surround.
	Flexible	
	>0.9m	Class 'S' granular bed and surround.
	<0.9m	Class 'Z' Concrete surround.
Hard and soft landscaping.	>0.6m	Class 'S' granular bed and surround.
	<0.6m	Class 'Z' Concrete surround.

16. The following concrete mixes are to be used (all in accordance with BS 5800) :-

Location	Mix Reference.
Concrete surround to pipes	Gen3
Concrete base and surround to manholes	Gen3

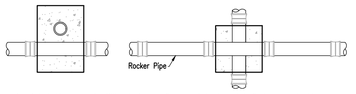
The above concrete mixes have been selected for BS 5800 Class 2 Sulphates.

17. All precast concrete products (ie pipes, manholes rings etc.) shall be of suitable concrete mix to cater for Class 2 sulphates.
18. Pre-formed channels are to be used in manholes where applicable.
19. Granolithic concrete benching to be steel trowelled to a dense smooth face neatly shaped and finished to all branch connections and laid in accordance with the Specification.
20. All connections to be turned in direction of flow using pipe bends.
21. Manhole covers and frames to be ductile iron medium duty Grade D400 circular or rectangular to BS EN124 positions inside vehicular trafficked areas.
22. First flexible joint in pipes adjacent to a manhole shall be a maximum of 600mm from inside face of manhole, connecting to rocker pipe.

The length of rocker pipe is as follows:-

Pipe Diameter	Length of Rocker pipe
150mm–600mm	600mm
601mm–750mm	1000mm
>750mm	1250mm

23. Manholes with outgoing pipes greater than 600mm diameter shall be fitted with guard bars, safety chains or other safety devices.
24. The Principle Contractor shall be responsible for checking the existing line and invert levels of any connection points for both the foul and surface water systems, prior to undertaking installation of any new drainage works. Any deviation to the levels and positions indicated on the drawing should be brought to the immediate attention of the Project Engineer.
25. All inverts specified are outgoing (except backdrop). All pipe are to be laid soffits levels unless noted otherwise.
26. All connections to be made by purpose made junctions as far as practicable.
27. Access covers and frames shall comply with the loadings specified and to BS EN 124 and Kitemarked or if recessed covers are to be specified then in accordance with FACTA association equivalent.
28. Manhole covers in block paved areas to be recessed to receive required surface finish.
29. Cover levels of manholes shown are approximate and are intended for guidance only and shall be adjusted to suit finished pavement levels on site by contractor. Covers to be orientated to suit pavement finishes where appropriate.
30. Existing access covers and frames to be retained shall be checked to ensure they are of a suitable duty and condition for reuse and levels adjusted to suit proposed finished ground levels.
31. All internal covers to be double sealed and lockable and unless otherwise noted or located in plant rooms to be recessed to receive required surface finish.
32. Refer to Architects/Mechanical & Electrical engineers drawings for setting out of sub-stacks, soil vent pipes, rain water pipes, floor gullies & other drainage pop up's.
33. Any drainage constructed within 5 metres of new or existing trees to be encased in concrete and/or provided with root protection to reduce the risk of root damage.
34. Where clearance between two pipe crossing is less than 100mm pipes shall be concrete encased at crossing point as illustrated below:



35. RWP connections to be laid to minimum 1 in 100 gradient unless otherwise noted and provided with above ground rodding access.
36. All foul drainage unless otherwise noted to be 100mm internal diameter, stack connections under building to be laid to minimum 1 in 40 gradient unless otherwise noted.
37. The soil pipe at head of each run to be vented to atmosphere.
38. Existing drainage shall be assumed to be live and appropriately maintained at all times during the works. Existing drainage to be reconnected to newly constructed drainage system unless proven to be redundant for abandonment.
39. Ends of any existing drains/sewers to be abandoned are to be plugged with GEN 3 concrete.
40. Road gully and linear drain connections to be 150mm unless noted otherwise with Class Z concrete bed and surround. Class Z concrete bed and surround with Fixcell at pipe joints required to internal drains, with concrete backfill.
41. The works shall be carried out by competent and experienced contractors. All operatives to have appropriate training with appropriate qualifications for the duties they are required to undertake.

PRELIMINARY

Rev	Date	Description	By	Chkd
A	28/01/2021	ADDITIONAL AREAS ADDED TO PLAN.	K.M.	G.L.
—	06/10/2021	FIRST ISSUE.	M.S.P.	G.L.

Revision Schedule

Project Title
LANGSTONE TECHNOLOGY PARK, HAVANT

Drawing Title
BUILDING 1000 - CAR PARK DRAINAGE

Drawn by **M.S.P.** Checked by **G.L.** Project Engineer **G.L.**

Date	Scale @ A1	Project No.	Drawing No.	Rev
OCT 2021	1 : 250	13023	SK40	A

BAYNHAM MEIKLE
Consulting Structural & Civil Engineers
8 Meadow Road, Edgbaston, Birmingham B17 8BU
Tel: 0121 434 4100 Fax: 0121 434 4073 Email: admin@bm-p.co.uk

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