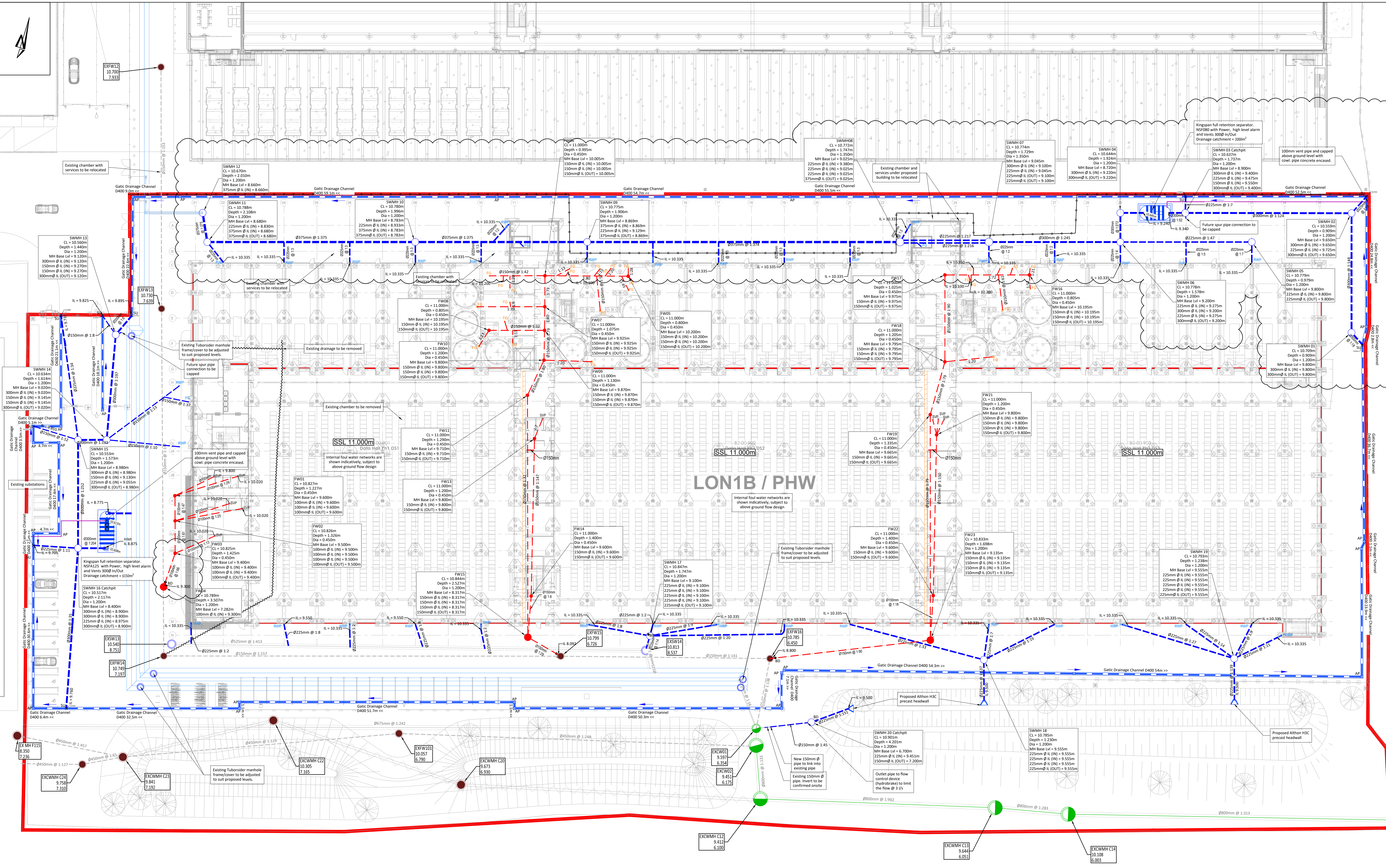


GENERAL NOTES:

- This drawing shall be read in conjunction with all the relevant architects, engineers' and service engineers drawings specifications.
- Do Not Scale off the drawing.

KEY:

- Site Boundary
- Proposed Building Level
- Proposed Surface Water Pipe & Chamber
- Proposed Foul Water Pipe & Chamber
- Proposed Slot Drain & Sump Unit
- Proposed Vent Pipe
- Indicative 500mm Services Trench
- Foul Water Pops
- Rain Water Downspout (10.335mm u.n.o)
- Proposed Backdrop
- Rodding Eye
- Existing Surface Water Pipe & Chamber
- Existing Foul Water Pipe & Chamber
- Existing Combined Water Pipe & Chamber
- Existing Drainage to be Removed
- Existing Temporary Fence Line



REV	DATE	BY	DESCRIPTION	CHKD
C05	20.07.23	SMB	SWMH101 to SWMH102 pipes invert amended Backdrops @ FW03 removed	SN
C04	14.07.23	SMB	Generator floor gullies and pipes run removed SWMH105 to SWMH108 pipes run amended	SN
C03	06.07.23	SMB	Pipe runs amended Canopy rainwater downpipes added	SN
C02	29.06.23	SMB	Pipes and Chambers added	SN
C01	22.06.23	SMB	Construction Issue	SN
PO3	25.05.23	SMB	Internal drainage revised	SN
PO2	15.05.23	SMB	Channel drainage revised	SN
PO1	18.04.23	SMB	First Issue	SN

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Burrows Graham

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PROJECT: **NTT LON 1B DATA CENTRE DAGENHAM**

DRAWING TITLE: **PROPOSED DRAINAGE PLAN**

REV	DATE	BY	DESCRIPTION	CHKD
C05	20.07.23	SMB	SWMH101 to SWMH102 pipes invert amended Backdrops @ FW03 removed	SN
C04	14.07.23	SMB	Generator floor gullies and pipes run removed SWMH105 to SWMH108 pipes run amended	SN
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PO2	15.05.23	SMB	Channel drainage revised	SN
PO1	18.04.23	SMB	First Issue	SN

SCALE: 1:250

DATE: 18.04.2023

OFFICE: SOUTH

DRAWN BY: SMB

CHECKED BY: SN

PROJECT NUMBER: 22216

DRAWING STATUS: CONSTRUCTION

PROJECT: LON1B-BGL-SP-XX-DR-C-00250

REV: C05

- Notes:**
- This drawing is to be read in conjunction with all relevant drawings, specifications and documentation.
 - The position, size and levels of all drains are to be confirmed on site prior to the commencement of the works and any discrepancies reported immediately to the Engineer.
 - Do not scale from this drawing, work to dimensions or co-ordinates provided. All levels are in metres and all dimensions are in millimetres, unless otherwise noted.
 - The Contractor shall allow for the protection, temporary and permanent support and diversion works as necessary, to all existing services to the satisfaction of the public utilities.
 - The Contractor shall allow for dealing with surface water run-off into excavations and from groundwater by means of pumps, pumping and de-watering as appropriate, in order to keep the excavation as reasonably dry as possible during the works.
 - All private drainage within the site is to comply with the requirements of the relevant British/European Standard and the Building Regulations Part H.
 - Concrete protection to pipework is to be provided as follows:
 - All pipework within pedestrian/soft areas with less than 600mm cover.
 - All pipework subject to vehicular overrun with less than 1.2m cover.
 - All pipework within manholes are to be laid soffit to soffit (U.N.O). All chamber invert levels are for the outgoing pipe levels. Backdrop pipework shall be located by the architect.
 - Any gradients of drains indicated are indicative only and the Contractor shall install the drains to the specified levels shown for each manhole (U.N.O). Catchpit invert levels are for the outgoing pipe with the sump level specified separately.
 - Co-ordinate setting out information for manholes is to the intersection of the drains and not the centre of the manhole.
 - Cover levels of the manholes are provisional and subject to adjustment on site to suit the finished ground levels. All external works construction areas to be as located by the architect.
 - Manhole covers and frames are to be in accordance with the relevant British/European Standard and the following:
 - Vehicular Areas: Class E600, double triangular, 150mm deep ductile iron cover and frame with three point cover seating, badged FW or SW for Foul or Surface Water drainage.
 - Pedestrian Areas: Class B125, 100mm deep, badged FW or SW for Foul or Surface Water drainage.
 - Double seal manhole covers and frames are to be used on internal foul water drainage chambers. Finish to be confirmed by the Architect.
 - Heavy duty cover slabs are to be used within vehicular traffic areas.
 - Gully gratings and steel channel covers are to be in accordance with the relevant British/European Standard as follows:
 - Areas subject to vehicular overrun. Class D400 minimum.
 - Areas not subject to regular vehicle overrun (adjacent to kerbs etc.) Class C250.
 - Gully gratings adjacent to kerbs shall be hinged on the side of the traffic direction (left hand side).
 - Positions and sizes of above ground foul and surface water drainage connections are to be confirmed prior to construction with the Architect and M&E Engineer.
 - All oil/petrol separators to have oil alarm system in accordance with Client's requirements and vents in accordance with manufacturer's details/recommendations. Separator to have full concrete surround to manufacturer's recommendations.

- Diameter of PCC manholes varies with pipe size, and is to be in accordance with the tables shown on the accompanying Burrows Graham Standard Details drawings.
- Drainage channels are to be sized by the supplier and approved by the Engineer in writing prior to ordering. Drainage channels to be installed to manufacturers' requirements. Design of channels shall be based on a 1 in 30 year storm return period, 15 minute duration.
- All brickwork in connection with drainage is to be solid Class B Engineering Brick to the relevant British/European Standard.
- All precast concrete pipes, chamber products and road gullies shall be to the relevant British/European Standard and should be Kite-marked/CE marked accordingly.
- In situ concrete grades to be as stated on the drawings. Design chemical class for all precast concrete products shall be C4 unless agreed otherwise.
- All separators shall be in accordance with the Environment Agency document PPG3.
- All below ground plastic/gro tanks shall be installed in accordance with the manufacturers' instructions. They shall be provided with sufficient concrete surround to counter floatation and shall have a wall thickness adequate to resist the highest ground water level which could be encountered at their location.
- All existing drainage/structures to be abandoned shall be broken out and removed from site, the excavation shall be backfilled with a suitable granular material to the required level. Alternatively, deep drains may be cleaned and grouted with a 1:10 cementitious grout, with structures broken down 1m below finished ground level and backfilled with a suitable granular material.
- Where utility/land drainage trenches etc cross over drain trenches, the Contractor shall construct an impermeable barrier to prevent groundwater infiltrating into the drainage trench.
- Upon completion of the works the Contractor shall clean all drainage by jetting, removing all debris from site, no debris shall be permitted to enter the existing drainage system.
- All works are assumed to be within public highway or within land owners lands & no works are required on third party land owners property.
- All RWP, gully and channel connections shall be 150mm dia U.N.O. Waste/soil stack connections shall be 150mm dia U.N.O and shall have internal above ground rodding eyes or large access fittings in accordance with Building Regulations.
- Design assumes that no water authority sewers or other drainage systems require modification, diversion or abandonment.
- Backfill to all drainage trenches to be Class GFI material.
- All works within the public highway to be reinstated to highway authority requirements.
- Unless otherwise agreed all outfalls to ponds and watercourses to be proprietary PCC Units. Headwall details to be approved by local Internal Drainage Board where applicable.
- Peristocks where indicated shall be electronically operated complete with power supply and connection (refer to service engineers drawings for cable and ducting etc).
- No deep rooting trees/vegetation should be planted within 5.0m of any drainage works.
- All WPC's, SRWPC's and RWPC's are shown inductively. Locations shall be confirmed by others.
- All manholes less than 1.5m deep are considered as none man entry and shall be maintained from ground level.
- Below ground drainage connections to be provided to all canopy downpipes - 150mm dia with concrete bed and surround U.N.O.

