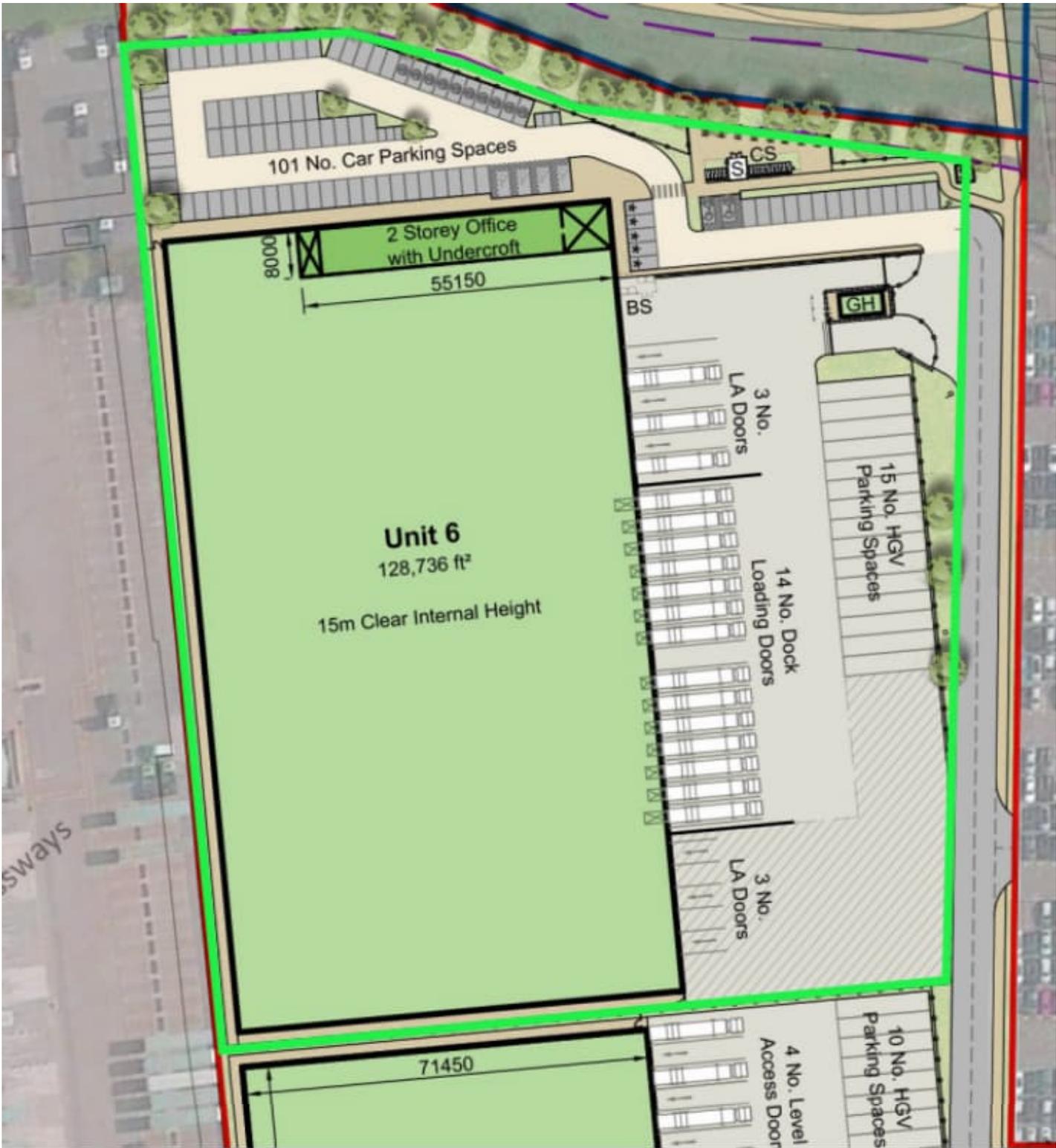


Appendix B

SITE PLAN WITH SITE BOUNDARY





Appendix C

SITE DRAINAGE PLAN





Key Plan

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING:

CONSTRUCTION

MAINTENANCE

DEMOLITION

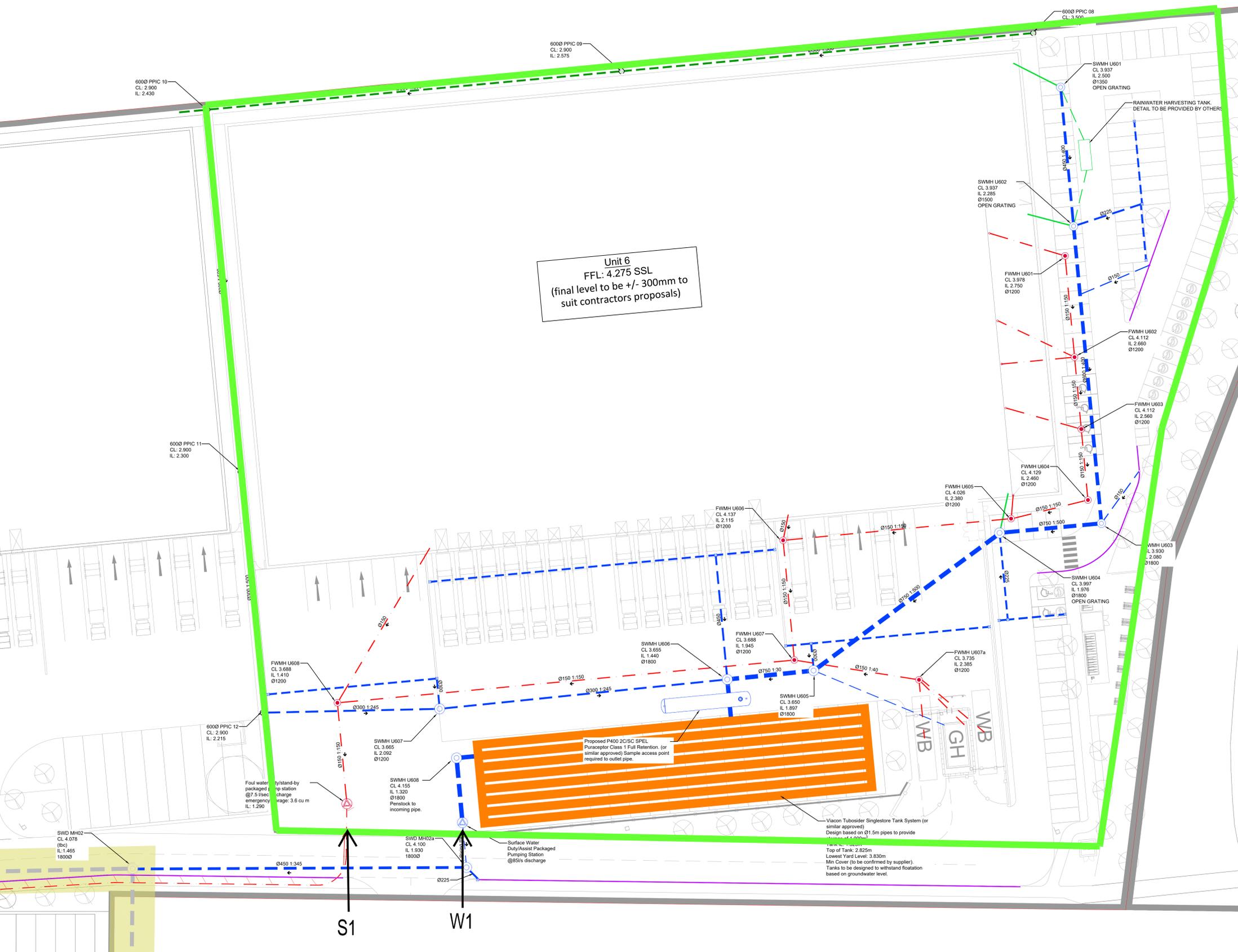
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT

Key

- Surface Water Drainage
- Kerb Drainage
- Surface Water Drainage Channel
- Oil Separator
- Surface Water Attenuation Tank
- Surface Water Rising Main (specialist)
- Proposed Surface Water Pumping Chamber
- Siphonic Roof Downpipe (specialist design)
- Foul Water Drainage
- Foul Water Rising Main (specialist)
- Existing Surface Water Drainage Pipe
- Proposed Foul Water Pumping Chamber
- Diverted Surface Water Drain
- Polypropylene Inspection Chamber
- Filter drain
- Permit Boundary

Drawing 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 sumps, pumping and de-watering as appropriate, in order to keep the excavation as reasonably dry as possible during the construction of 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.
 - 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 connected at soffit to soffit with the rodding access level specified.
- 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 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 D400, 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 trafficked 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/grease 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 ACO Qmax in service yards and ACO Multidrain in car parks, or similar approved. Channels are to be sized by the supplier and approved by the Engineer in writing prior to ordering. Drainage channels to be installed to manufacturer's 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 D4 unless agreed otherwise.
- All separators shall be in accordance with the Environment Agency document PPG3.
- All below ground plastic/grp tanks shall be installed in accordance with the manufacturer's 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 drainage 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 100mm dia U.N.O. Waste/soil stack connections shall be 100mm 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 abandoning.
- Backfill to all drainage trenches to be Class 6F1 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.
- Peristicks where indicated shall be electronically operated complete with power supply and connection (refer to service engineers drawings for cable and ducting etc).
- Siphonic break chambers (i.e. with SRWP entering) to be constructed with open grated manhole covers, (overway 2000 or similar approved).
- No deep rooting trees/vegetation should be planted within 5.0m of any drainage works.
- All WPC's, SRWP's and RWP'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.
- All sprinkler drains and gully locations and flow rates to be confirmed by the sprinkler Contractor. Potential local storage manholes for sprinkler discharge are to be confirmed following definition of system requirements. It is assumed that future sprinkler installation points will be located close to foul water drainage runs.
- Below ground drainage connections to be provided to all canopy downpipes - 150mm dia with concrete bed and surround U.N.O.
- All sewers to be adopted shall be in accordance with sewers for adoption and local water board details.



REV	DATE	BY	DESCRIPTION	CHKD
P04	13.06.25	JB	Surface water attenuation tank updated to a Singstore Tank System.	JW
P03	03.06.25	JB	Surface water inverts amended to suit attenuation tank depths.	JW
P02	16.04.25	JB	Latest Architect layout overlaid. Gatehouse drainage added.	JW
P01	26.03.25	JB	Issued for information	JW

Burrows Graham

North Office: 5 Ambassador Place, Stockport Road, Altrincham WA15 6JH
Tel: +44 (0)161 804 8846

South Office: Burdett House, Dover Men, High Street, Beckenham SE26 2BL
Tel: +44 (0)1473 505 602

CLIENT: **Goodman**

PROJECT: **CROSSWAYS PHASE 2 CLIPPER BOULEVARD, DARTFORD**

DRAWING TITLE: **TENANT DRAINAGE LAYOUT UNIT 6**

BGL PROJECT NUMBER: 21061	DRAWING STATUS: PRELIMINARY	OFFICE: NORTH
SCALE @ A0: 1:250	DATE: 26.03.2025	DRAWN BY: JB
DRAWING No: 21061-BGL-XX-XX-SK-C-00005	REV: P04	CHECKED BY: JW