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Engineering *your* Environment

Unit 12 & 12A, TESLA

SuDS Maintenance Schedule

16185
June 2026



ISO 9001
Cert No GB01604

ISO 14001
Cert No GB01604

ISO 45001
Cert No GB01604



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1 INTRODUCTION

1.1 SCOPE OF DOCUMENT

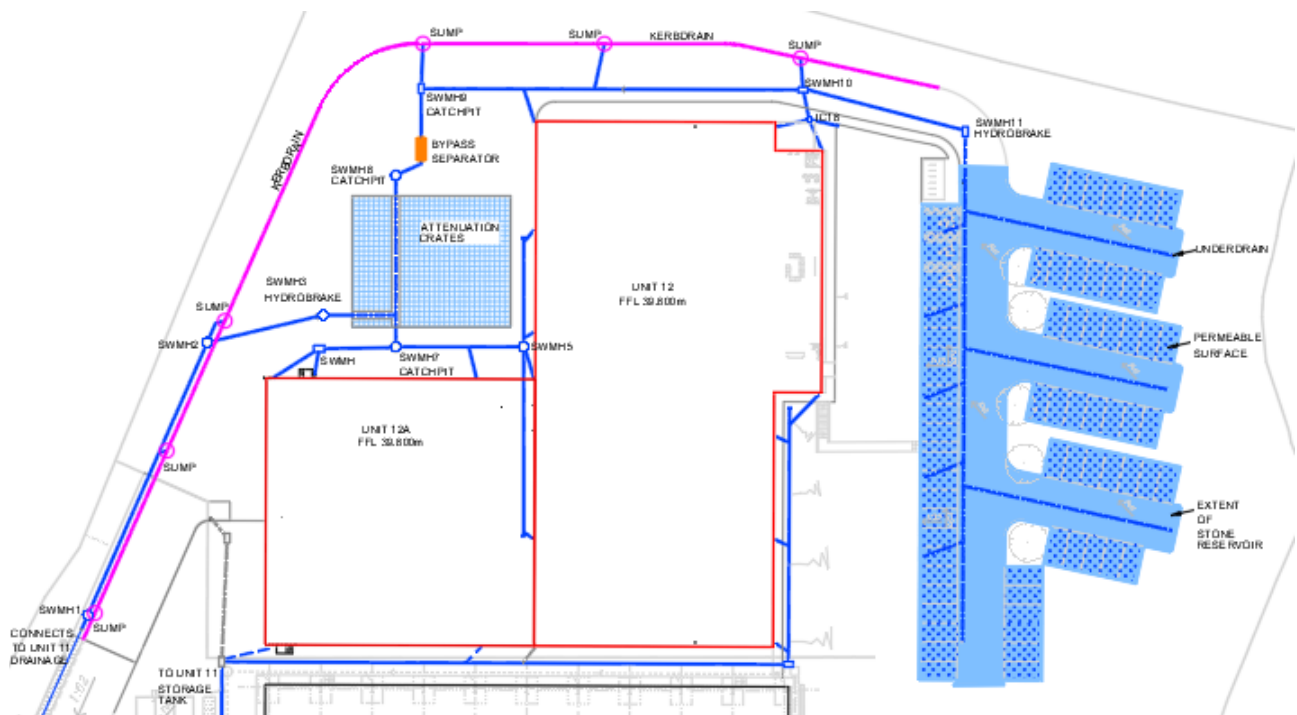
This document outlines the following elements: -

- The location of all surface water drainage elements on the site;
- A brief summary of how the techniques work, their purpose and how they can be damaged;
- Their maintenance requirements (a maintenance plan) and a maintenance record;
- Confirmation of who is responsible for maintenance of the system;
- Explanation of the consequences of not carrying out the maintenance that is specified;
- Identification of areas where certain activities are prohibited (for example stockpiling materials on pervious surfaces);
- An action plan for dealing with accidental spillages;
- Advice on what to do if alterations are to be made to a development, for example if service companies undertake excavations or other similar works carried out that could affect the drainage.

1.2 SuDS TECHNIQUES USED ON THIS SCHEME

- Geocellular Crate Soakaway
- Permeable Pavement
- Petrol Interceptor
- Silt traps and catchpits

The locations of the drainage features are shown on drawings 15367-102 rev M and 16185-02 rev K, and illustrated on the schematic below.



1.3 SUMMARY OF HOW THE TECHNIQUES WORK

The surface water drainage scheme works thus:

1. The car park to the east of Unit 12 is constructed as a permeable car park. The car park bays are surfaced with permeable tarmac which permits the passage of water through the surface into an underlying stone reservoir for storage. This stone extends under the full area of the car park although the circulation aisles are surfaced with a traditional asphalt concrete. Water within the stone is drained down via a series of perforated pipes and discharges into the main pipe system via a Hydrobrake in SWMH11 which limits the flow rate to 2 lps.
2. Additional access roads and hardstandings discharge into a combined kerb drain with sumped outfalls and then through a bypass separator, along with the 2 lps from upstream, before entering the attenuation storage crate system. The attenuation crates are wrapped in an impermeable membrane as the underlying soils have been deemed unsuitable for infiltration.
3. Most of the rainwater from the roofs of Unit 12 and 12A are collected from a series of rainwater downpipes and discharge into the storage crates, although these do not pass through the bypass separator.
4. The outflow from the tank then discharges through the Hydrobrake in manhole SWMH3 which limits the outflow to 6.3 lps. This outflow the discharges downstream into the sitewide system before ultimately discharging into the stream.
5. The remainder of the roof water from Units 12 & 12A discharges into the Unit 11 drainage system.

1.4 MAINTENANCE REQUIREMENTS

A suggested Maintenance Schedule has been prepared for the site managers, and it will be their responsibility to implement a suitable maintenance regime. A copy of this Maintenance Schedule is provided at Appendix A.

1.5 ACCESS FOR MAINTENANCE

Access to the site is via the entrance from Water Lane. All of the elements of the scheme to be maintained lie within areas accessible to vehicular traffic and so the necessary precautions should be taken with respect to operator safety.

1.6 WHO IS RESPONSIBLE FOR MAINTENANCE OF THE SUDS FEATURES USED FOR THIS SCHEME?

All drainage elements of the scheme located inside the site boundary will remain in the ownership of TESLA. These new elements will be added to the existing maintenance regime.

The current facilities manager is David Cracknell.

1.7 AREAS WHERE ACTIVITIES ARE PROHIBITED

Heavy loads should not be allowed in areas where geo-cellular crates are located. Failure to do so may cause structural damage and collapse of the cellular units.

Permeable paving – No stock piling of materials should take place on areas of permeable paving as this will cause the surface to block and prevent the through flow of rainwater.

1.8 ACCIDENTAL SPILLAGES

Health and safety consideration are a priority and addressing accidental spillages should only be attempted if the nature of the spillage is known and the potential hazardous properties understood. The source of the spillage should be stopped, and excess surface spillage removed by suction tank or absorption mats. Silt traps and sumps should be emptied by suction tanker. Areas of affected permeable paving should have the surface and laying course removed. The surfacing blocks should be cleaned and re-laid on new bedding material. Heavy pollution of the sub-base will require removal and replacement of the sub-base.

1.9 ALTERATIONS

If any alterations are proposed to the development, the design engineer must be notified so that the impact/implications of the work can be assessed.

2 OPERATION AND MAINTENANCE ACTIVITY CATEGORIES

There are likely to be three categories of maintenance activities:

1. Regular maintenance (including inspections and monitoring).
2. Occasional maintenance.
3. Remedial maintenance.

Regular maintenance consists of basic tasks done on a frequent and predictable schedule, including vegetation management, litter and debris removal, and inspections.

Occasional maintenance comprises tasks that are likely to be required periodically, but on a much less frequent and predictable basis than the regular tasks (e.g., sediment removal or filter replacement). Appendix A summarises the required maintenance activities required for each component.

Remedial maintenance describes the intermittent tasks that may be required to rectify faults associated with the system, although the likelihood of such faults can be minimised by regular maintenance activities. Where remedial work is found to be necessary, it is likely to be due to site-specific characteristics or unforeseen events, and so timings are difficult to predict.

Remedial maintenance can comprise activities such as:

- inlet/outlet repairs
- erosion repairs
- infiltration surface rehabilitation
- replacement of blocked filter fabrics
- system rehabilitation immediately following a pollution event.

It is important to note that these remedial activities will not be required for all systems, but for the purpose of estimating whole life maintenance costs, a contingency sum of 15-20% should be added to the annual regular and occasional maintenance costs to cover the risk of these activities being required.

Manufacturer's recommendations for servicing should be included within the O&M Manuals, and these should be available for inspection in the site-specific Health and Safety File. The manufacturers recommendation should be adhered to.

The maintenance regime of a site also needs to consider the response to extreme pollution events. A response action plan should be developed and communicated to all those involved in the operation of a site, so that if a spillage occurs it can be prevented from causing pollution to receiving waters.

2.1 REGULAR MAINTENANCE ACTIVITIES

INSPECTIONS AND REPORTING

Regular SuDS scheme inspections will:

- help determine optimum future maintenance activities
- confirm hydraulic, water quality, amenity and ecological performance
- allow identification of potential system failures, e.g., blockage, poor infiltration, poor water quality etc.

Inspections can generally be required at monthly site visits (e.g., for grass cutting) for little additional cost, and should, therefore, be subsumed into regular maintenance requirements. During the first year of operation,

inspections should ideally be carried out after every significant storm event to ensure proper functioning, but in practice this may be difficult or impractical to arrange.

Typical routine inspection questions that will indicate when occasional or remedial maintenance activities are required, and/or when water quality requires investigation include:

- are inlets or outlets blocked?
- does any part of the system appear to be leaking?
- is there evidence of poor water quality (e.g. algae, oils, milky froth, odour, unusual colourings)?
- is there evidence of sediment build-up?
- is there evidence of ponding above an infiltration surface?
- is there any evidence of structural damage that requires repair?
- are there areas of erosion or channelling over vegetated surfaces?

LITTER/DEBRIS REMOVAL

This is an integral part of SuDS maintenance and reduces the risks of inlet and outlet blockages, retains amenity value and minimises pollution risks.

VACUUM SWEEPING AND BRUSHING

Pervious surfaces need to be regularly cleaned of silt and other sediments to preserve their infiltration capacity. Advice issued with permeable pre-cast concrete paving suggests a minimum of three sweepings per year.

2.2 IRREGULAR MAINTENANCE ACTIVITIES

SEDIMENT REMOVAL

To ensure long-term effectiveness, the sediment that accumulates in SuDS should be removed periodically. The required frequency of sediment removal is dependent on many factors including the characteristics of upstream catchment area (e.g., land use, level of imperviousness, upstream construction activities, erosion control management and effectiveness of upstream pre-treatment).

Sediment accumulation will typically be rapid for the entire construction period (including time required for the building, turfing and landscaping of all upstream development plots). Once a catchment is completely developed and all vegetation is well-established, sediment mobility and accumulation is likely to drop significantly.

OIL REMOVAL AND CLEANING OR REPLACING FILTERS IN PROPRIETY SYSTEMS

Oil removal from proprietary treatment systems should be undertaken at intervals recommended by the manufacturer.

2.3 REMEDIAL MAINTENANCE

There will come a time with most SuDS techniques when a major overhaul of the system is required to remove clogged filters, geotextiles, gravel etc. This will typically be between 10 and 25 years, depending on the technique and factors such as the type of catchment and sediment load.

Ideally this work should be possible without causing major disruption. For example, the use of geotextiles close to the surface in pervious surfaces traps the majority of sediment in a relatively easily accessible

location. Reconstruction of the surface layer and bedding layer is all that is required, rather than reconstruction of the whole pavement depth.

Major overhaul is most likely to be required on techniques that rely on filtration through soils or aggregates, such as sand filters and infiltration devices. Other SuDS techniques are unlikely to need major overhaul if routine maintenance is undertaken as required. Rehabilitation activities for each SuDS component are described in the individual component sections.

3 FREQUENCY OF MAINTENANCE TASKS

SuDS maintenance inspections are generally recommended to be carried out monthly; this should allow for an inspection of all SuDS features and checking all inlets and outlets.

Certain SuDS maintenance tasks however fall outside this monthly cycle and are itemised in Appendix A for guidance.

Tesla Unit 12 & 12A

APPENDIX A

MAINTENANCE SCHEDULE

GULLIES, CHANNELS, SILT TRAPS, MANHOLES, CATCHPITS & PIPEWORK

DESCRIPTION

Silt traps and catchpits are circular or rectangular manholes and /or chambers with a sump in them to collect suspended solids. Some chambers have removeable silt buckets to assist with the removal of accumulated silt deposits. Catchpits are usually concrete ring or segment structures and silt traps preformed plastic chambers.

OPERATION AND MAINTENANCE REQUIREMENTS

Regular inspection and maintenance are required to ensure the effective long-term operation of below ground silt traps and catchpits systems. Maintenance requirements are described in the table below.

Table 1: Silt traps and catchpits - operation and maintenance requirements

Maintenance Schedule	Required Action	Frequency
Regular Maintenance	Silt, litter and debris removal from gullies and channel drains.	Three monthly initially and then as required Remove autumn leaf fall
	Clean oils/other liquids from gullies and channel drains.	Immediately following spillages/incidents or as required
Monitoring	Open and inspect gullies and channel drains.	Monthly/after large storms

GEO-CELLULAR ATTENUATION TANKS

DESCRIPTION

Modular plastic geocellular systems with a high void ratio, that can be used to create a below ground infiltration (soakaway) or storage structure.

OPERATION AND MAINTENANCE REQUIREMENTS

Regular inspection and maintenance is required to ensure the effective long-term operation of below ground modular storage systems. Maintenance responsibility for systems should be placed with a responsible organization. Maintenance requirements for modular systems are described in the table below. Specific maintenance needs of the system should be monitored, and maintenance schedules adjusted to suit requirements

Occasional CCTV inspection may be needed to monitor the condition of the tanks. It is suggested that this is done at the end of the construction maintenance period and from then on, the pipework should be surveyed every 10 years or when unexpected flooding problems occur.

Table 2 : Modular systems - operation and maintenance requirements

Maintenance Schedule	Required Action	Frequency
Regular Maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action.	Three monthly initially, then as required.
	Cleaning of gutters and any filters on downpipes.	Annually (or as required based on inspections).
	Debris removal from catchment surface (where this may cause risk to performance).	Monthly.
	Remove sediment and debris from pre-treatment structures (catchpit/silt traps/gullies)	Quarterly or as required.
Occasional Maintenance	Remove sediment and debris from the floor of the inspection tube/module.	As required based on inspections.
Remedial Action	Repair of inlets, outlet, overflows and vents.	As required.
Monitoring	Inspect and check all inlets, outlet, overflows and vents to ensure they are in good condition and operating as designed.	Annually.
	Survey inside of tank for sediment build-up, and remove if necessary.	Annually, after large storms or as required.

PETROL INTERCEPTORS

DESCRIPTION

Petrol interceptors (or oil separators) are designed to separate gross amounts of oil and large size suspended sediments from surface water. They do this by allowing light non-aqueous phase liquids to float and large sediment particles to sink.

OPERATION AND MAINTENANCE REQUIREMENTS

Regular inspection and maintenance is required to ensure the effective long-term operation of the interceptor. Maintenance requirements are described in the table below.

Petrol interceptors will need to be inspected on a regular basis. We suggest that this is done every three months during the first year of site operation. After this period, the frequency could be reduced to every six months or annually as the manufacturer might recommend.

Occasional CCTV inspection will be needed to monitor the condition of the tanks. It is suggested that this is done at the end of the maintenance period referred to above. From then on, the pipework should be surveyed every 5 years or when unexpected flooding problems occur.

The system is to be jetted clear if necessary and any defects to the pipework should be rectified in a reasonable timescale.

Any requirement for cleaning or maintenance of these features will need to be identified as part of the above inspections and action taken in reasonable time to prevent damage to the systems or the interceptors themselves.

Regular servicing of the petrol interceptors will also be needed to ensure efficient and problem free operation and to prevent damage to the systems or the interceptors themselves. Manufacturer's recommendations for servicing should be included within the O&M Manuals and these should be available for inspection in the site-specific Health and Safety File.

The manufacturers recommendation should be adhered to.

PERMEABLE PAVEMENTS

DESCRIPTION

Pervious pavements provide a pavement suitable for pedestrian and/or vehicular traffic, while allowing rainwater to infiltrate through the surface and into the underlying layers. The water is temporarily stored before infiltration to the ground, reuse, or discharge to a watercourse or other drainage system. Pavements with aggregate sub-bases can provide good water quality treatment.

OPERATION AND MAINTENANCE REQUIREMENTS

Regular inspection and maintenance are important for the effective operation of pervious pavements. Maintenance responsibility for a pervious pavement and its surrounding area should be placed with an appropriate responsible organisation. Before handing over the facility to the client, it should be inspected for clogging, litter, weeds and water ponding and all failures should be rectified. After handover, the facility should be inspected regularly, preferably during and after heavy rainfall to check effective operation and to identify any areas of ponding.

Pervious surfaces need to be regularly cleaned of silt and other sediments to preserve their infiltration capability. Experience in the UK is limited, but advice issued with permeable precast concrete paving has suggested a minimum of three surface sweepings per year. Manufacturers' recommendations should always be followed.

A brush and suction cleaner, which can be a lorry-mounted device or a smaller precinct sweeper, should be used and the sweeping regime should be as follows:

1. End of winter (April) – to collect winter debris.
2. Mid-summer (July/August) – to collect dust, flower and grass-type deposits.
3. After autumn leaf fall (November).

Care should be taken in adjusting vacuuming equipment to avoid removal of jointing material. Any lost material should be replaced.

The likely design life (or period before pavement rehabilitation is required) has yet to be established for the UK. However, it should be no different from standard paving assuming that an effective maintenance regime is in place to minimise risks of infiltration clogging.

If reconstruction is necessary, the following procedure should be followed:

- 1 Lift surface layer and laying course.
- 2 Remove any geotextile filter layer.
- 3 Inspect sub-base and remove, wash and replace if required.
- 4 Renew any geotextile layer.
- 5 Renew laying course, jointing material and concrete block paving.

The reconstruction of failed areas of concrete block pavement should be less costly and disruptive than the rehabilitation of continuous concrete or asphalt porous surfaces due to the reduced area that is likely to be affected. Materials removed from the voids or the layers below the surface may contain heavy metals and hydrocarbons and may need to be disposed of as controlled waste. Sediment testing should be carried out before disposal to confirm its classification and appropriate disposal methods.

Table 3: Pervious pavement - operation and maintenance requirements

Maintenance Schedule	Required Action	Frequency
Regular maintenance	Brushing and vacuuming.	Three times/year at end of winter, mid-summer, after autumn leaf fall, or as required based on site-specific observations of clogging or manufacturers' recommendations.
Occasional maintenance	Stabilise and mow contributing and adjacent areas.	As required.
	Removal of weeds.	As required
Remedial actions	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50mm of the level of the paving.	As required.
	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users.	As required.
	Rehabilitation of surface and upper sub-structure.	As required (if infiltration performance is reduced because of significant clogging).
Monitoring	Initial inspection	Monthly for 3 months after installation.
	Inspect for evidence of poor operation and/or weed growth. If required, take remedial action.	3-monthly, 48h after large storms.
	Inspect silt accumulation rates and establish appropriate brushing frequencies.	Annually.
	Monitor inspection chambers.	Annually.

HYDROBRAKE

A Hydro-Brake, or vortex control, is a passive flow control device designed to manage the discharge rate of stormwater runoff within drainage systems. It operates based on fluid dynamics principles and does not rely on mechanical parts.

The hydrobrakes will need to be inspected on a regular basis. We suggest that this is done every three months during the first year of site operation. After this period, the frequency could be reduced to every six months or annually as the manufacturer might recommend.

Blockage of the hydrobrakes will potentially lead to flooding at the site.

The chamber itself should be inspected and maintained as detailed for manholes / catchpits above.

MONITORING AND MAINTENANCE RECORD

You need to keep a record of the checks you have completed that are set out in the checklist below along with any additional checks you have made.

If you have a maintenance contract with a contractor, keep a record of any work carried out on your pond system by them. If invoices state the work carried out, these will be sufficient. If you do the checks you should enter:

- The check or maintenance job
- Who did it;
- The result (for example when abnormal noise heard, called in specialist to investigate).

MONITORING AND MAINTENANCE RECORD			
Action	Date and Time	Carried out by	Result
For example, inlet and outlet pipes checked	XX.XX.XX @ X.XX	John Smith	Obstruction cleared

ACCIDENT AND INCIDENT RECORD

You should record any accidents, other incidents or near misses relating to the operation of the SUDS system for example untreated sewage being released into the ponds. The form could also be used to record health and safety incidents.

“Other incidents” covers impacts on the environment that are not accidents, such as failing to maintain the system, or vandals causing damage to the equipment.

ACCIDENT AND INCIDENT RECORD	
Date and time of the incident	
What happened, what was it about?	
Was anyone else aware of this – other witnesses? If so, who?	
What caused it?	
What action did you take to fix the problem?	
What have you done to make sure that it does not happen again?	
Was there any significant pollution – for example oil being discharged into a drain, river or stream? Yes/No If yes, what pollution?	
If there was significant pollution, then you must notify the Environment Agency on 0800 807060 as soon as possible. Have you done so?	Yes/No/Not Applicable At what time did you phone? EA Incident reference no.
You must also write or send an email to confirm this to the local office (see your accident management plan for the address). Have you done so?	Yes/No/Not Applicable
Please print your name, sign and date	

KEY SITE AND EMERGENCY CONTACTS

This table contains information and contacts you may need in an emergency

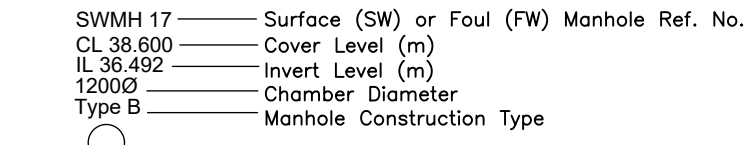
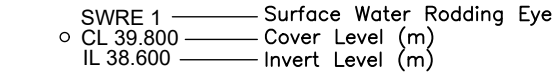
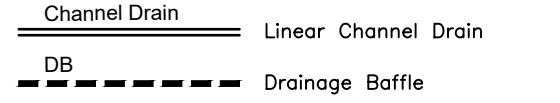
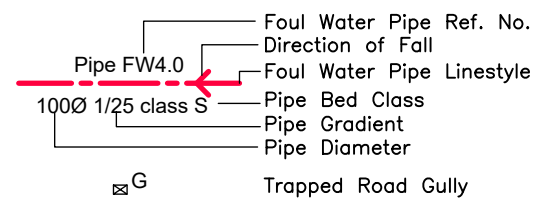
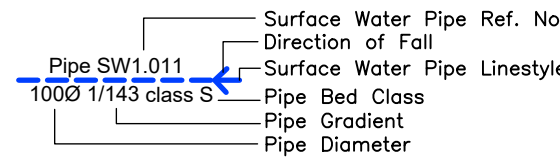
EMERGENCY CONTACT DETAILS			
SITE DETAILS			
SITE CONTACTS		Office Hours (specify)	Out of hours
Store manager:			
Store deputy manager:			
EMERGENCY SERVICES		Office Hours	Out of hours
Medical:			
Police:			
Fire:			
REGULATORS		Office Hours	Out of hours
Health and Safety Executive (HSE)			
Kent County Council			
Environment Agency	General number		
	24-hour emergency hotline		
OTHER KEY CONTACTS		Office Hours	Out of hours

DRAWINGS

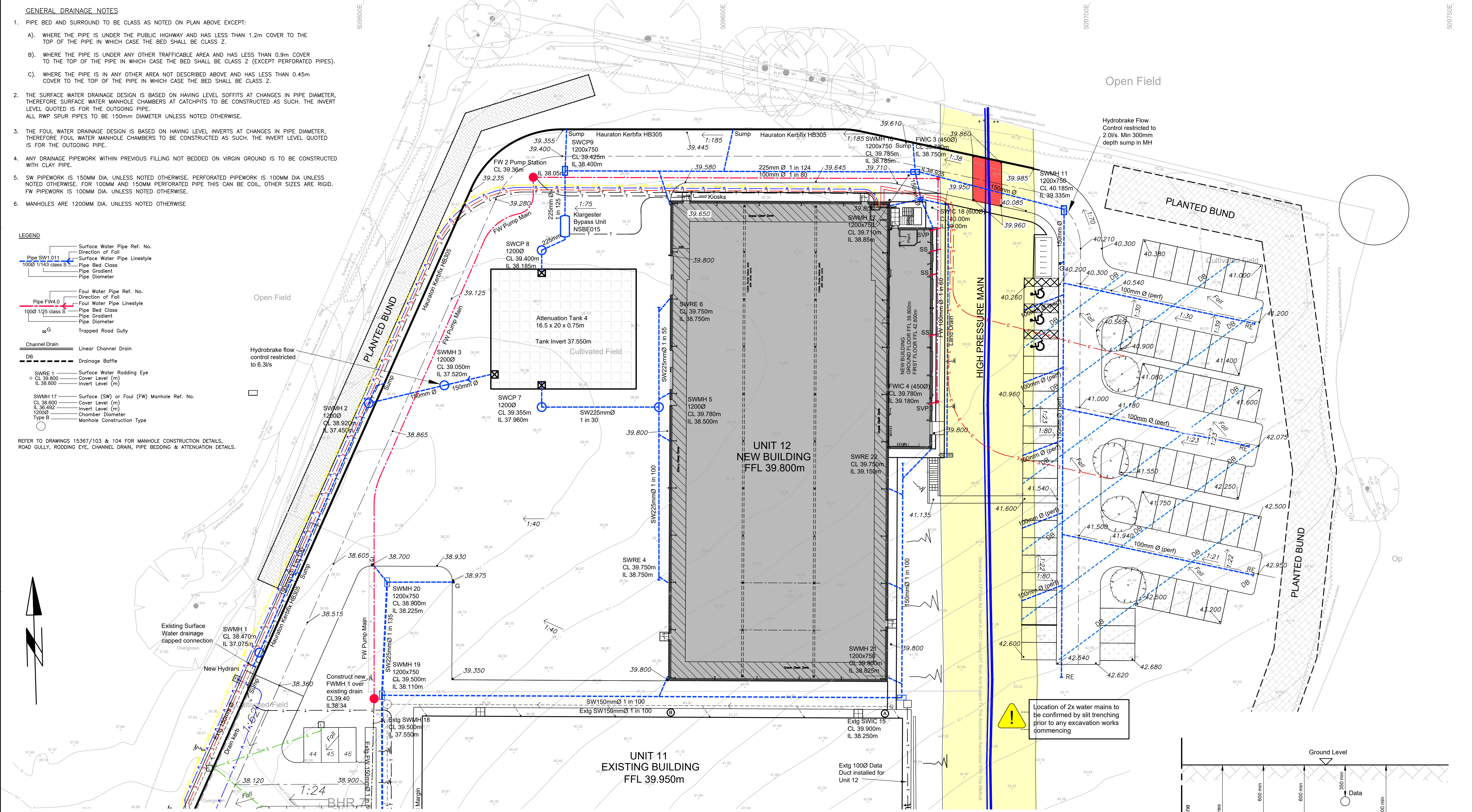
GENERAL DRAINAGE NOTES

- PIPE BED AND SURROUND TO BE CLASS AS NOTED ON PLAN ABOVE EXCEPT:
 - WHERE THE PIPE IS UNDER THE PUBLIC HIGHWAY AND HAS LESS THAN 1.2m COVER TO THE TOP OF THE PIPE IN WHICH CASE THE BED SHALL BE CLASS Z.
 - WHERE THE PIPE IS UNDER ANY OTHER TRAFFICABLE AREA AND HAS LESS THAN 0.9m COVER TO THE TOP OF THE PIPE IN WHICH CASE THE BED SHALL BE CLASS Z (EXCEPT PERFORATED PIPES).
 - WHERE THE PIPE IS IN ANY OTHER AREA NOT DESCRIBED ABOVE AND HAS LESS THAN 0.45m COVER TO THE TOP OF THE PIPE IN WHICH CASE THE BED SHALL BE CLASS Z.
- THE SURFACE WATER DRAINAGE DESIGN IS BASED ON HAVING LEVEL SOFFITS AT CHANGES IN PIPE DIAMETER, THEREFORE SURFACE WATER MANHOLE CHAMBERS AT CATCHPITS TO BE CONSTRUCTED AS SUCH. THE INVERT LEVEL QUOTED IS FOR THE OUTGOING PIPE. ALL RWP SPUR PIPES TO BE 150mm DIAMETER UNLESS NOTED OTHERWISE.
- THE FOUL WATER DRAINAGE DESIGN IS BASED ON HAVING LEVEL INVERTS AT CHANGES IN PIPE DIAMETER, THEREFORE FOUL WATER MANHOLE CHAMBERS TO BE CONSTRUCTED AS SUCH. THE INVERT LEVEL QUOTED IS FOR THE OUTGOING PIPE.
- ANY DRAINAGE PIPEWORK WITHIN PREVIOUS FILLING NOT BEDDED ON VIRGIN GROUND IS TO BE CONSTRUCTED WITH CLAY PIPE.
- SW PIPEWORK IS 150MM DIA. UNLESS NOTED OTHERWISE. PERFORATED PIPEWORK IS 100MM DIA UNLESS NOTED OTHERWISE. FOR 100MM AND 150MM PERFORATED PIPE THIS CAN BE COIL, OTHER SIZES ARE RIGID. FW PIPEWORK IS 100MM DIA. UNLESS NOTED OTHERWISE.
- MANHOLES ARE 1200MM DIA. UNLESS NOTED OTHERWISE

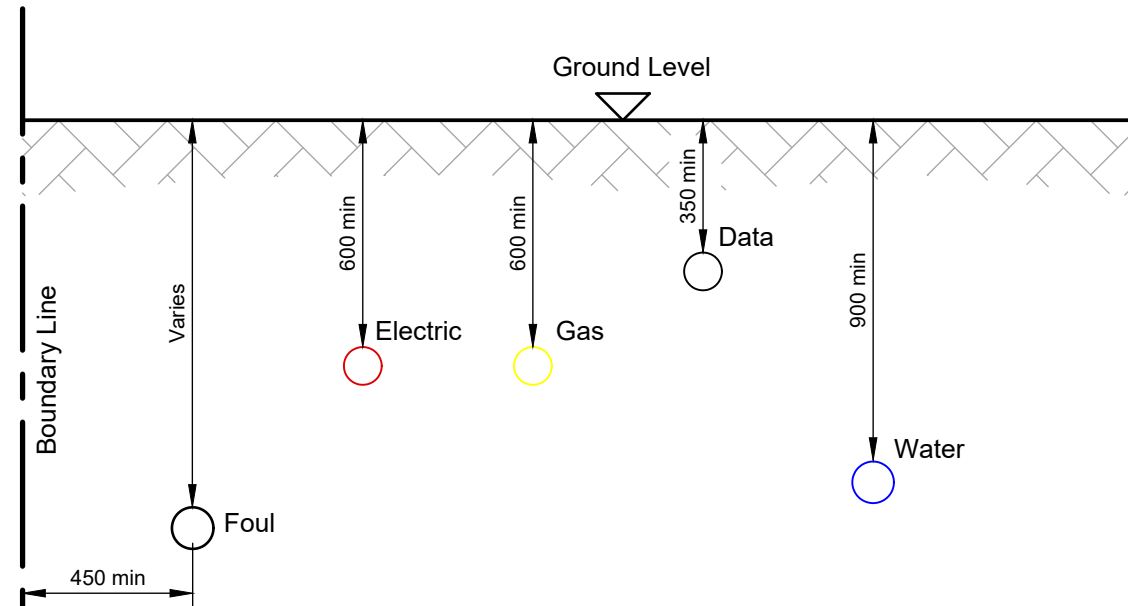
LEGEND



REFER TO DRAWINGS 15367/103 & 104 FOR MANHOLE CONSTRUCTION DETAILS, ROAD GULLY, RODDING EYE, CHANNEL DRAIN, PIPE BEDDING & ATTENUATION DETAILS.



- E DENOTES ELECTRIC UNDERGROUND SERVICES (SUPPLY)
- GAS DENOTES GAS UNDERGROUND SERVICES
- T DENOTES DATA UNDERGROUND SERVICES
- W DENOTES WATER UNDERGROUND SERVICES
- E DENOTES 100mm ELECTRIC SUPPLY TO PUMPING STATION & TANKS
- E DENOTES 50mm LIGHTING FEED DUCTS
- DENOTES FOUL WATER DRAINAGE



Typical Services Layout
Scale 1:20

As Built

©



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- Project Managers
- Land & Building Surveyors
- CDM Consultants
- Geo-Environmental Engineers
- Contract Administrators

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Evans & Langford is part of the RB Group

Revisions	Checked	Date
A Unit 12 indicative drainage sizes & Foul Water system added.	DPM	31.08.21
B Unit 12 handed, Car Park and hardstanding updated.	DPM	31.03.23
C Unit 12 mirrored, Offices relocated, Car Park and hardstanding updated.	DPM	28.04.23
D Building moved west by 2m, easement zone amended, drainage revised to suit.	DPM	30.06.23
E Access levels in NW corner amended, and drainage revised to suit.	DPM	14.07.23
F Drainage through attenuation tank amended, Manholes clouded adjusted to suit.	CPS	03.08.23
G Drainage rear runs moved clear foundation bases, MH Nos, rainwater harvesting and carpark outfall added.	DPM	13.09.23

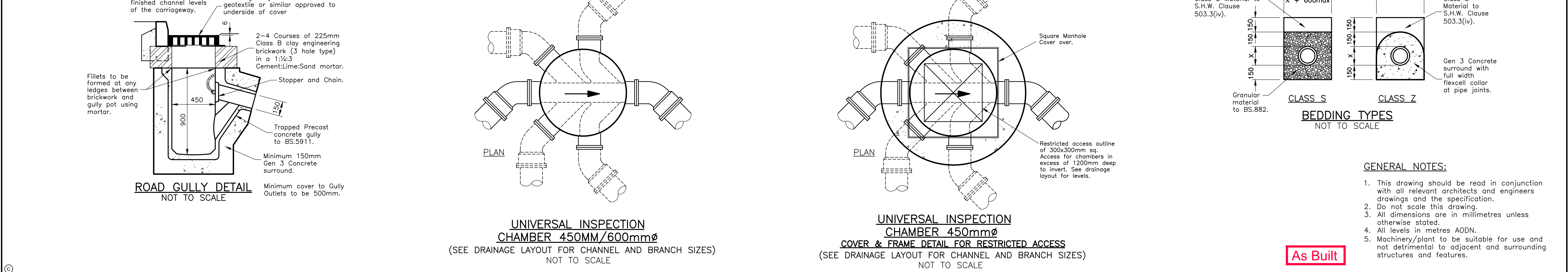
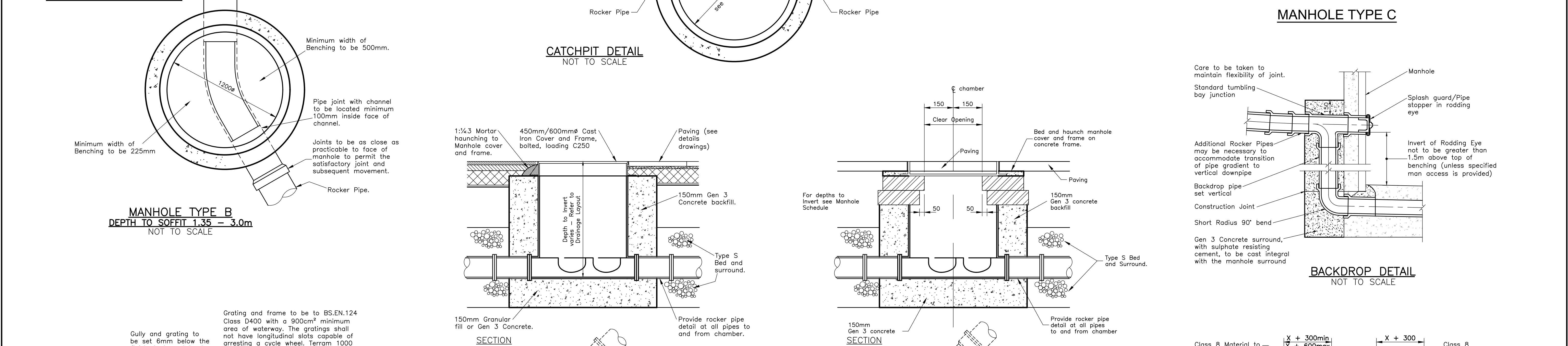
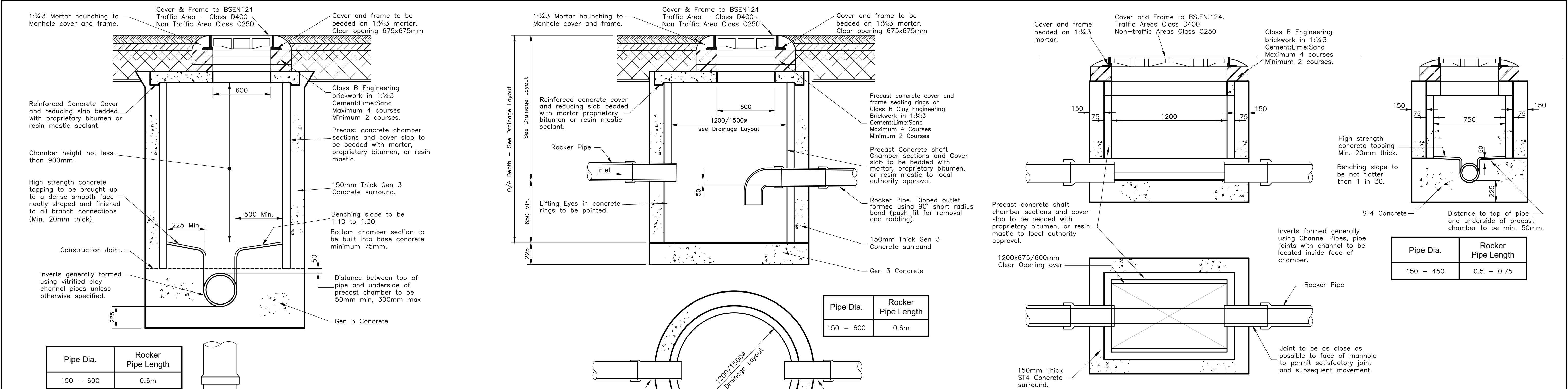
Revisions	Checked	Date
H Pump station relocated, car parking adjusted and RWP harvesting system removed.	DPM	01.11.23
I SW drain south of office amended to 150mm dia.	DPM	03.11.23
J Car park levels amended, steps adjusted to suit.	DPM	20.12.23
L As Built Issue.	DPM	28.02.24

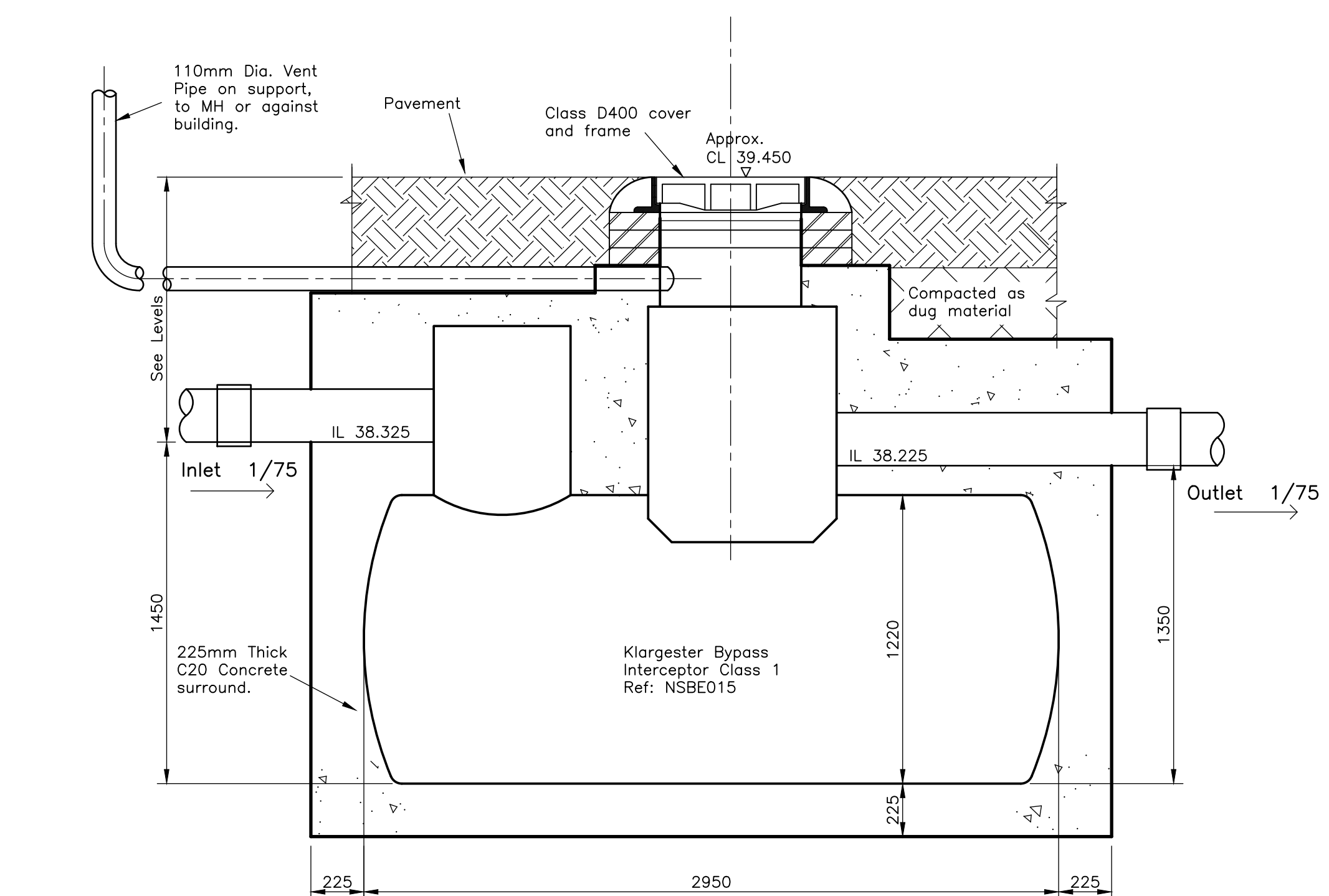
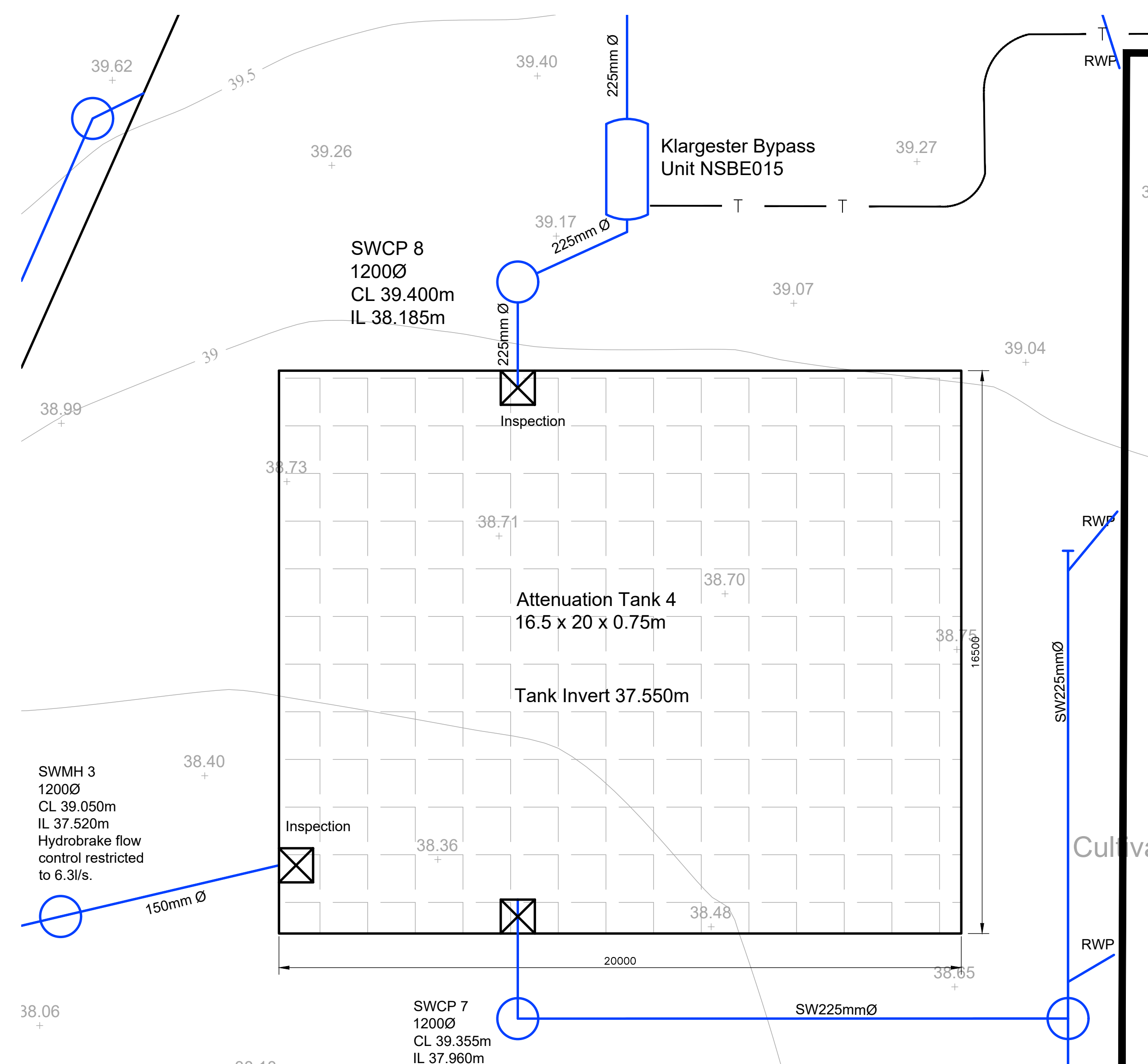
Tesla Engineering
Proposed Industrial Unit
Water Lane, Storrington, West Sussex
Unit 12
Site Layout - Drainage Plan

Scale 1:250 © A1	Drawn PRF Date July 21
	Checked DPM Date Aug 21
	Approved SGR Date 31.08.21

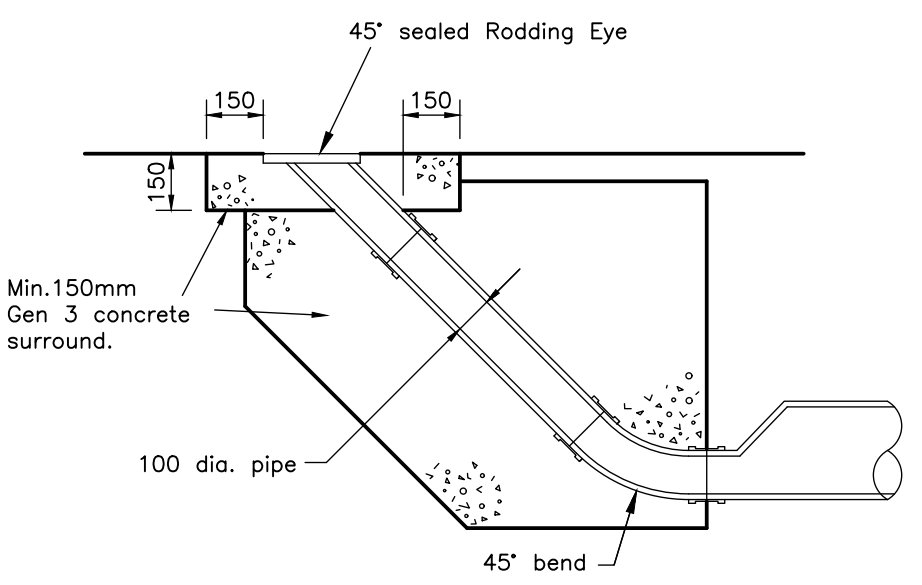
Drg No. 15367/102

Rev. L

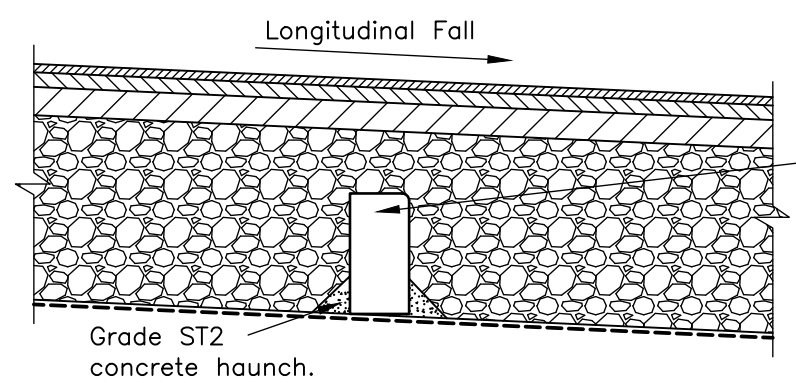




Surface Water Interceptor Detail
To be read in conjunction with the manufacturers recommended installation guide.



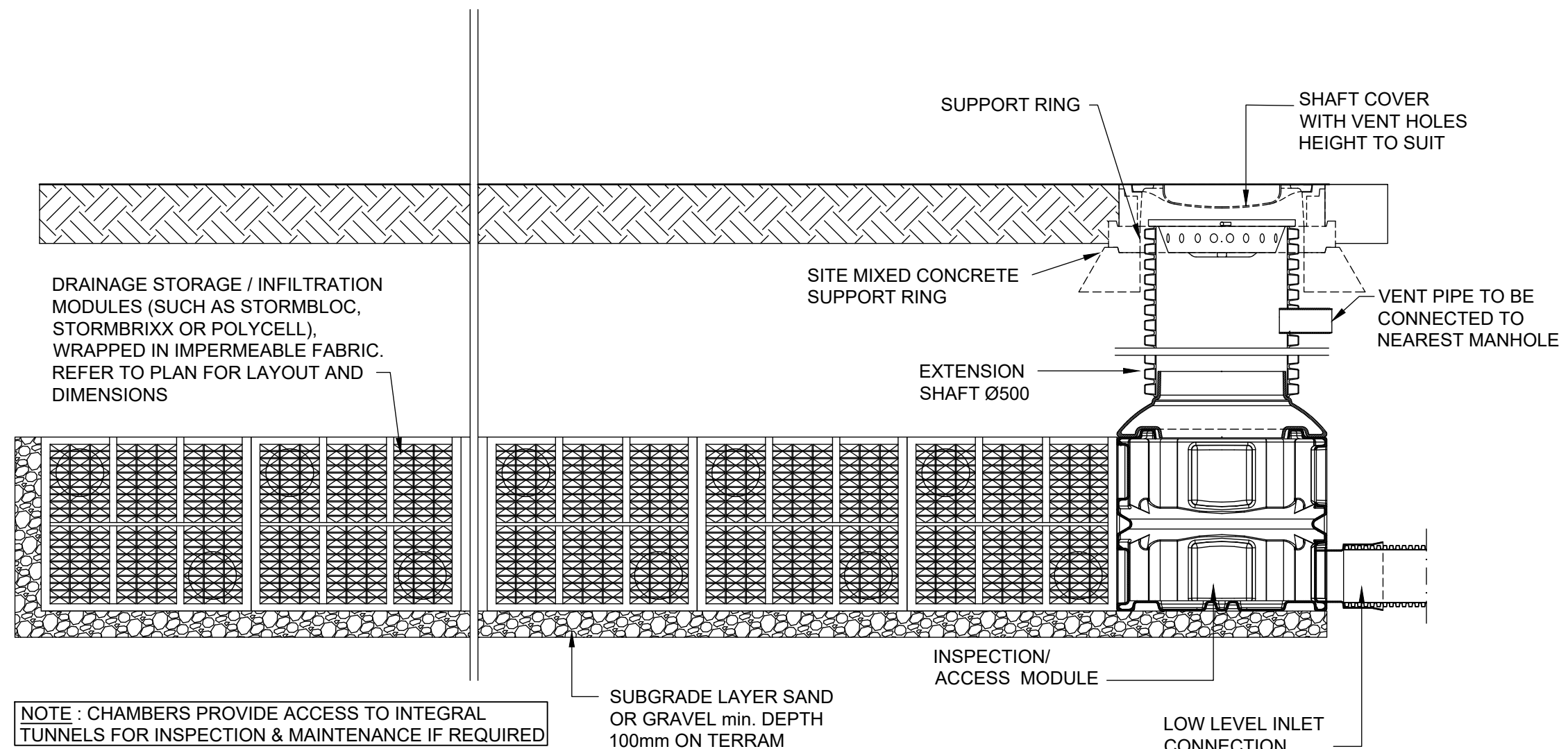
RODDING POINT DETAIL
NOT TO SCALE



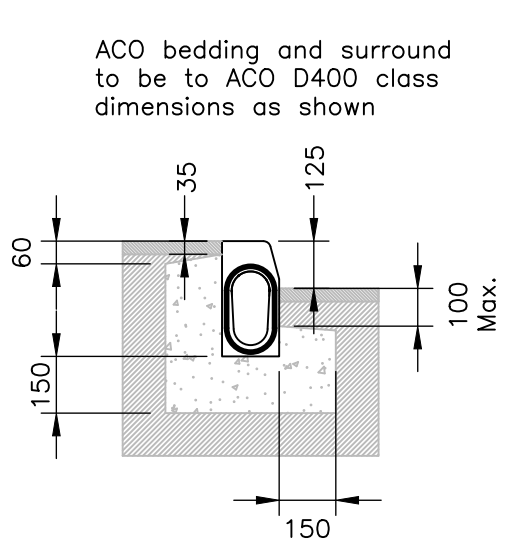
Concrete Baffle Detail

Concrete Baffle arrangement precast concrete kerb (125x255mm aisles, 125x150mm spaces) with haunching. Bullnosed kerb with 25mm open perp end joint at alternate kerbs ie. 1800mm centres. Ensure haunch does not cover open joint.

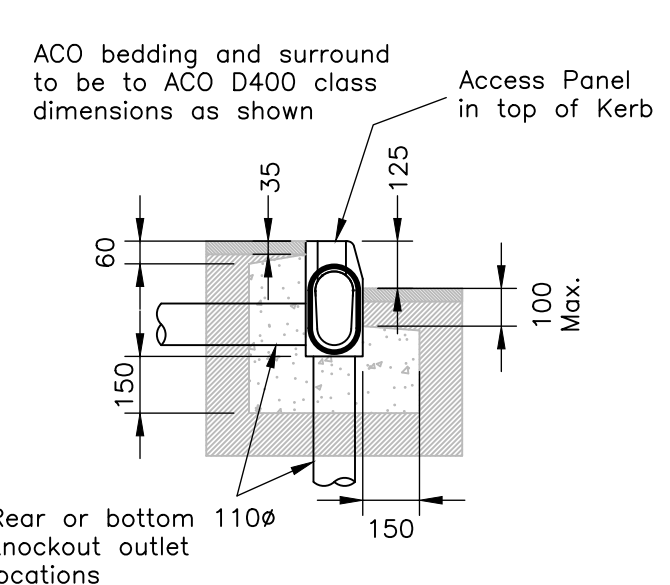
Alternate construction is min 150mm height concrete haunching with 25mm dia draindown pipe at base at 2m centres, pipe ends to be wrapped in filter sock to prevent blockages.



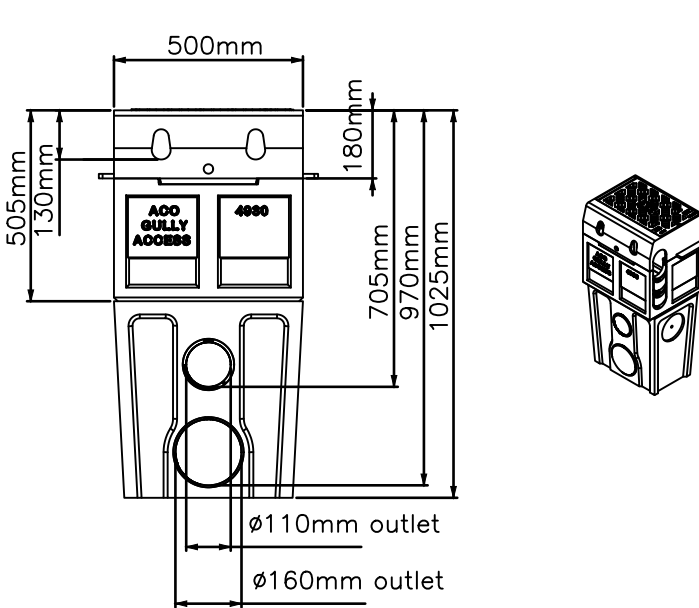
TYPICAL SECTION THROUGH SURFACE ATTENUATION TANK
(NTS)



ACO Kerbdrain HB305
NOT TO SCALE



ACO Kerbdrain HB305
Access Unit
NOT TO SCALE

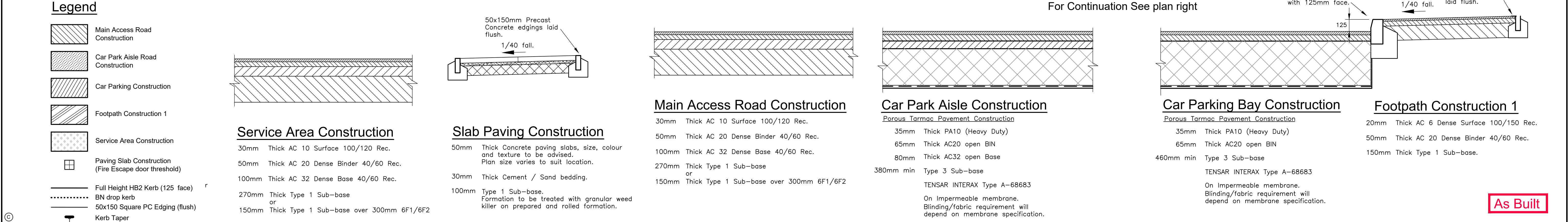
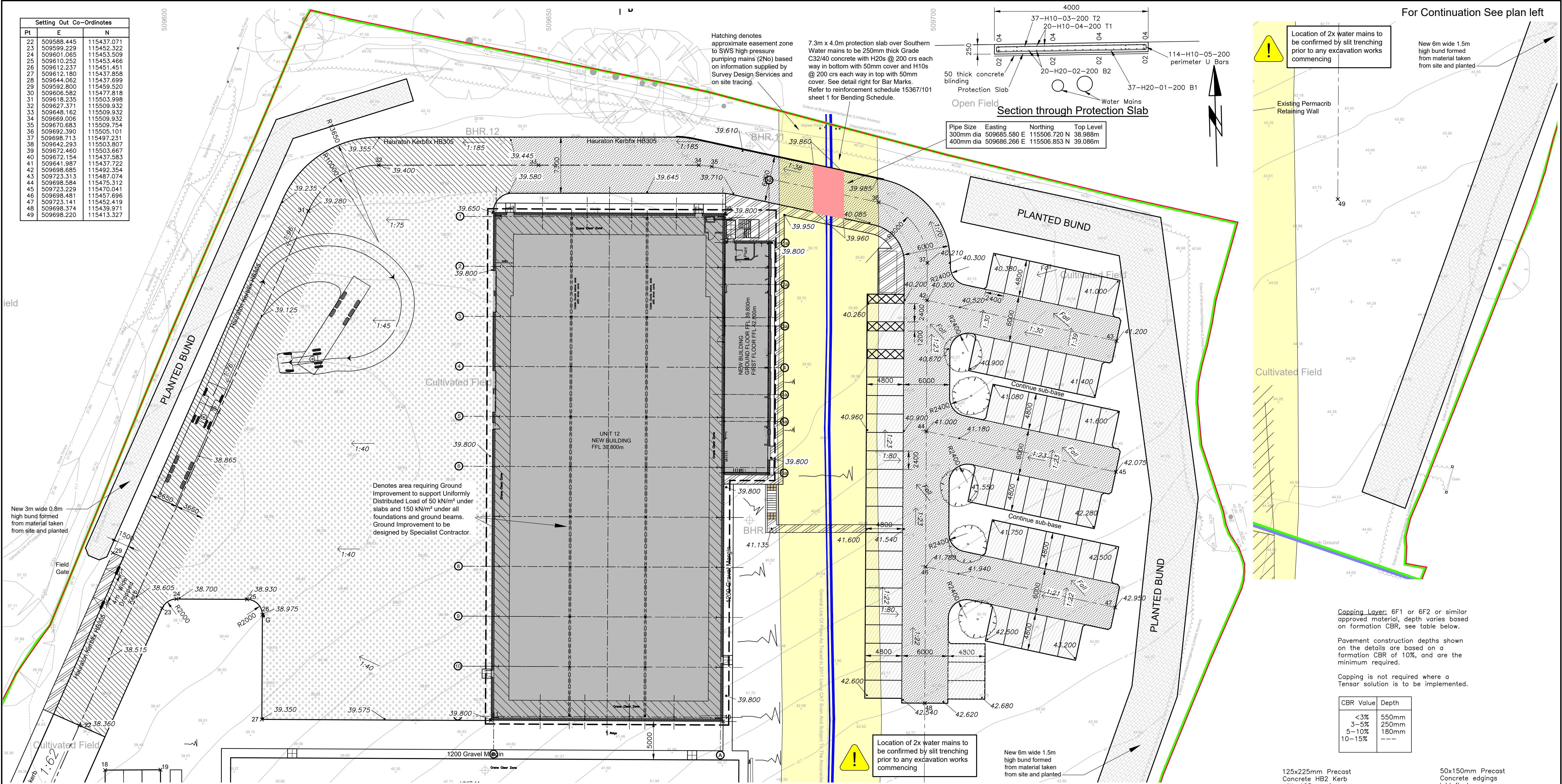


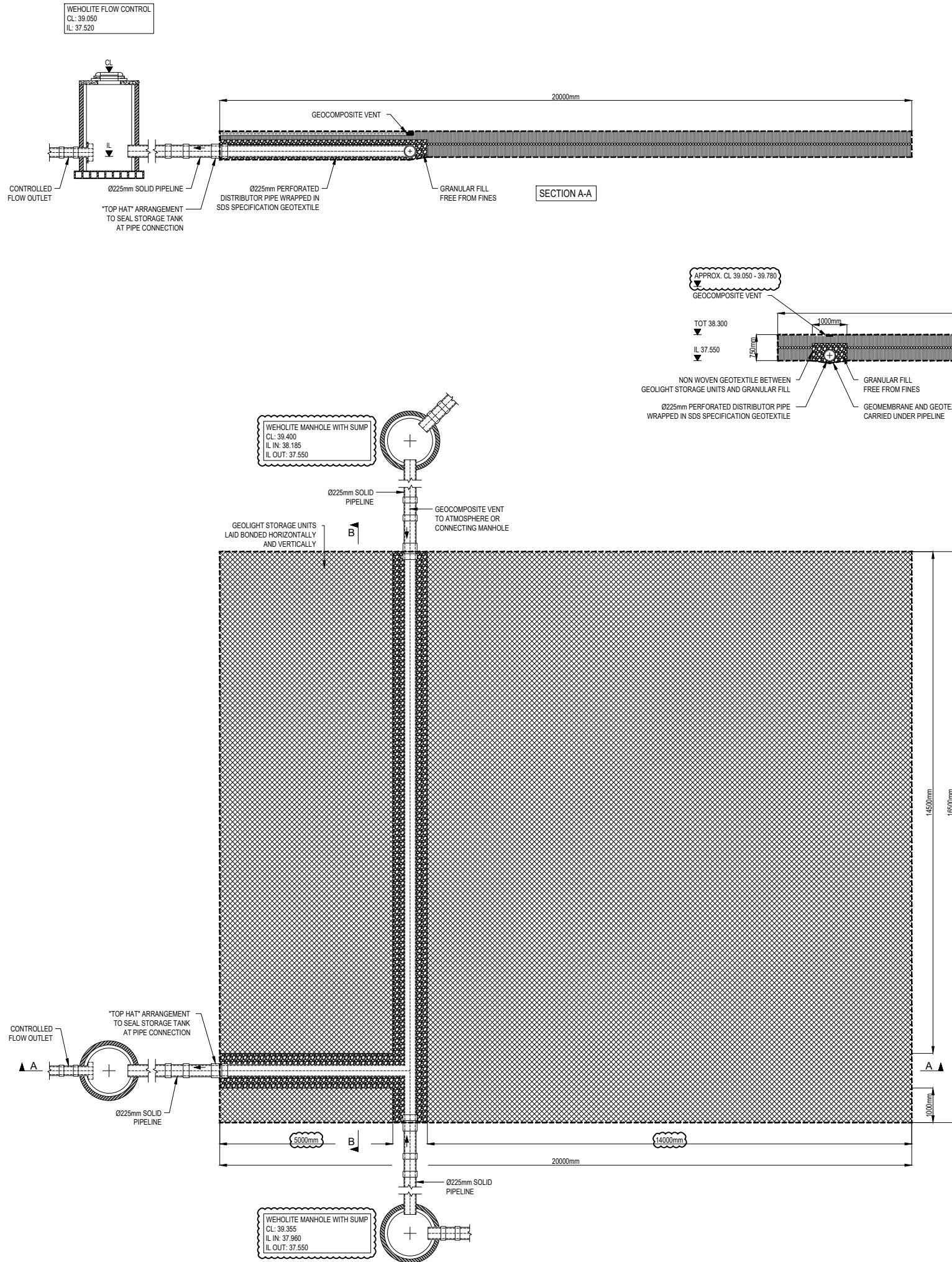
ACO Kerbdrain HB305
Gully/Sump Unit (HB611)
NOT TO SCALE

GENERAL NOTES:

1. This drawing should be read in conjunction with all relevant architects and engineers drawings and the specification.
2. Do not scale this drawing.
3. All dimensions are in millimetres unless otherwise stated.
4. All levels in metres AODN.
5. Machinery/plant to be suitable for use and not detrimental to adjacent and surrounding structures and features.

Setting Out Co-Ordinates		
Pt	E	N
22	509588.445	115437.071
23	509599.229	115452.322
24	509601.065	115453.509
25	509610.252	115453.466
26	509612.237	115451.451
27	509612.180	115437.858
28	509644.062	115437.699
29	509592.800	115459.520
30	509606.582	115477.818
31	509618.235	115503.998
32	509627.371	115509.932
33	509648.162	115509.932
34	509669.006	115509.932
35	509670.683	115509.754
36	509692.390	115505.101
37	509698.713	115497.231
38	509642.293	115503.807
39	509672.460	115503.667
40	509672.154	115437.583
41	509641.987	115437.722
42	509698.685	115492.354
43	509723.313	115487.074
44	509698.584	115475.312
45	509723.229	115470.041
46	509698.481	115457.696
47	509723.141	115452.419
48	509698.374	115439.971
49	509698.220	115413.327





Notes:

This Drawing is to be read in conjunction with all relevant Architect's Engineer's and specialists' drawings and specifications.

Do not scale from this drawing in either paper or digital form. Use written dimensions only.

SDS to leave solid stub only, exiting tank for connection by others.

All external Manholes, Access Points, Junctions & Pipe are shown for guidance only and not part of the SDS program unless otherwise agreed.

B	LEVELS & PIPE OFFSET UPDATE	08.08.23
	ISSUED FOR APPROVAL	RJ SP
A	DIMENSION & LEVELS UPDATE	31.07.23
	ISSUED FOR APPROVAL	RJ SP
-	ISSUED FOR APPROVAL	12.07.23
		RJ RJ
Rev	Comments	Date
		DRW CHK



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[sdslimited.com](https://www.sdslimited.com)

Project
TESLA ENGINEERING

Client
SUNNINGHILL CONSTRUCTION
CO. LIMITED

Title
ATTENUATION TANK 1 DETAIL

REFERENCE DRAWINGS:			
Drawing Number	Revision	Drawing Title	Date
15367/102	F	SITE LAYOUT - DRAINAGE PLAN	03.08.23

Scale NTS	Date 12.07.23
Drawing No E231022_01	Rev B

Notes

This drawing is to be read in conjunction with all relevant Engineers and Architects drawings and the specification.

Do not scale the drawing.

All dimensions are in millimetres.
All levels are in metres.

All dimensions and levels to be checked on site and the engineer notified immediately of any discrepancies prior to commencement of the works.

No deviation from the details shown on this drawing is permitted without prior permission from the engineer. Machinery/plant to be suitable for use and not detrimental to adjacent and surrounding structures and features.

Cutting of pavements, kerbs and channels shall be of an approved mechanical means.

All soft spots and voids shall be removed before construction and replaced with suitable fill material.

Where necessary all excavated spoil shall be disposed off-site at an approved tip.

All surface water manholes may be single seal cover and frames.

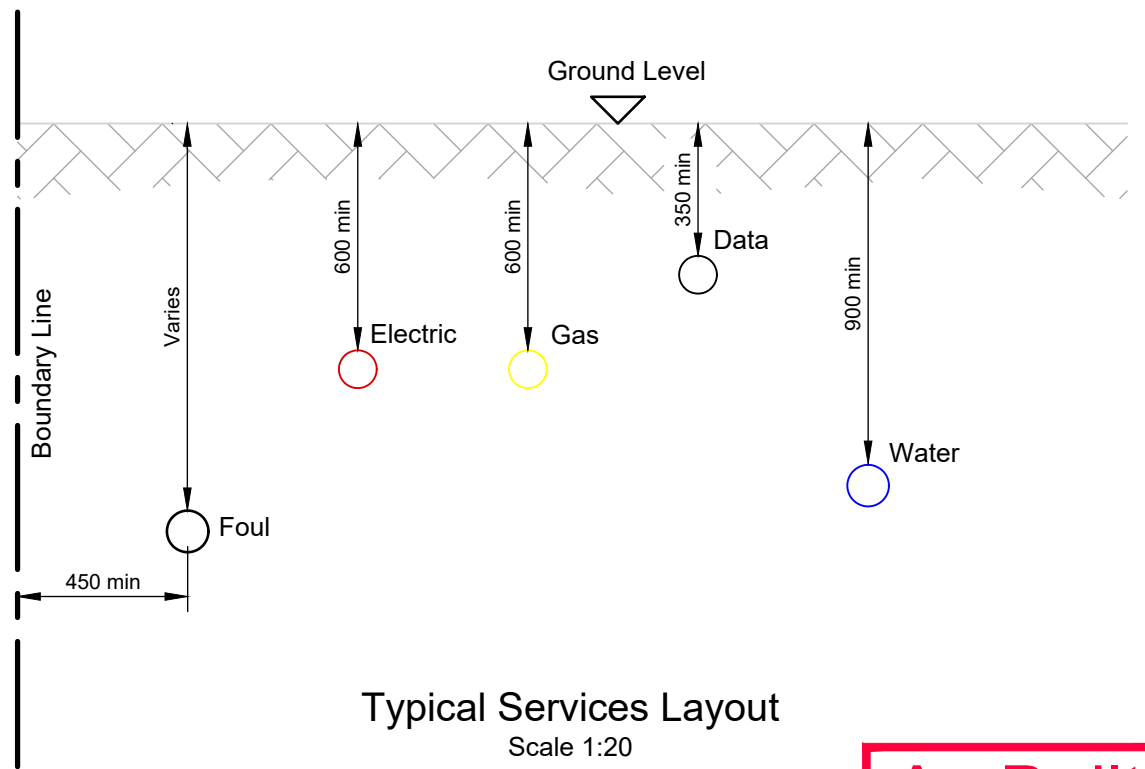
All manholes to have either SW or FW cast into the cover as appropriate.

All pipes built into the manhole invert should be installed with soffits level where possible.

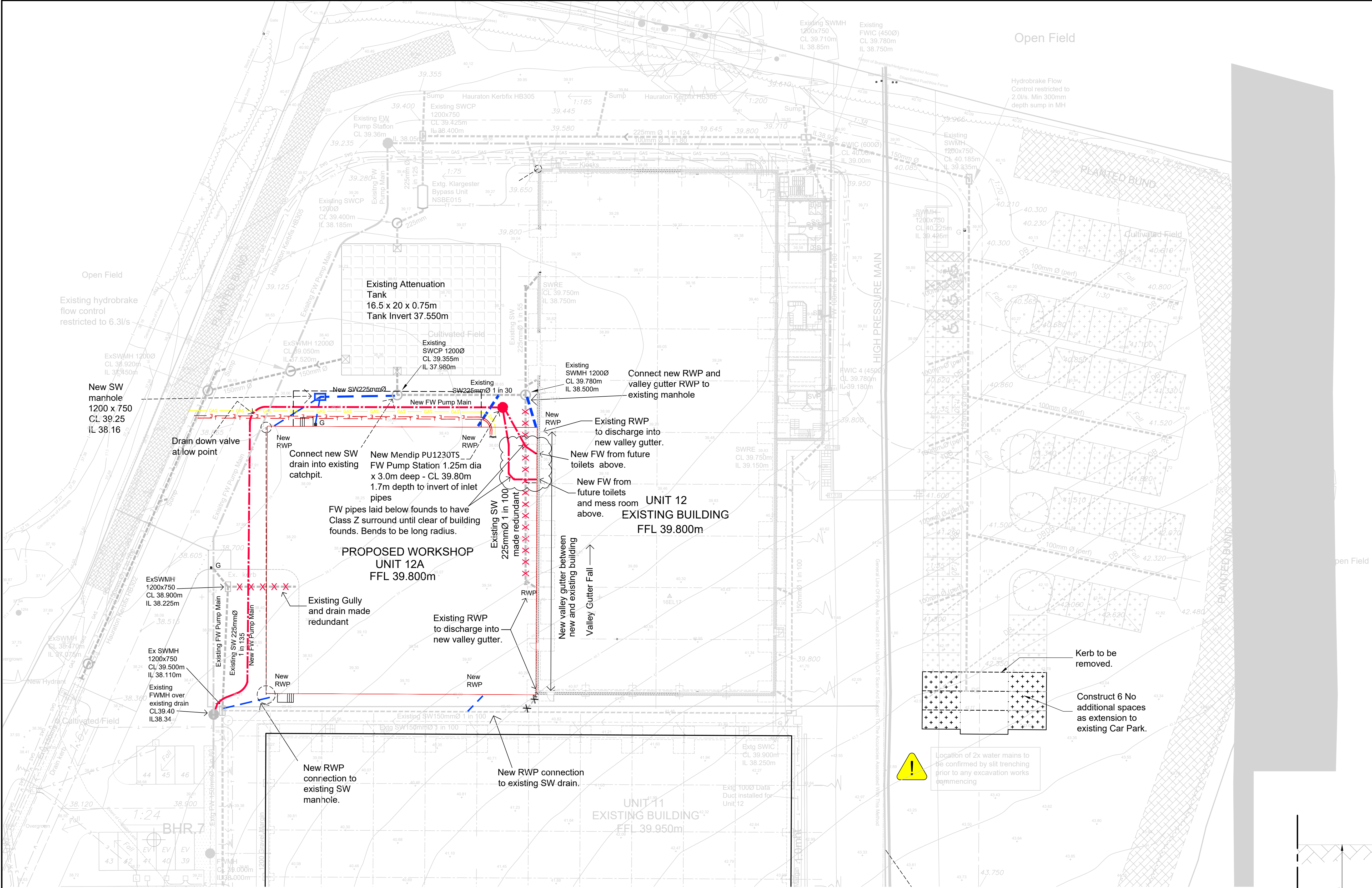
Pipes are uPVC up to 300mm diameter.

Key:

- SW 150dia 1in60 Surface Water Drain
- RWP Rainwater Pipe with 100mØ connection pipe
- SWIC 225mm / 450mm / 600mm Surface Water Polypropylene Inspection Chamber
- CL00.00 IL00.00
- Flow control Chamber
- Channel Drain
- Threshold Drain
- Surface Water Gully
- Foul Water Drain
- FW 100dia 1in60 225mm / 450mm Foul Water Polypropylene Inspection Chamber
- CL00.00 IL00.00
- SVP Soil Vent Pipe with 100mØ connection pipe
- SVP/AAV Soil Vent Pipe or Air Admittance Valve
- FG Floor Gully
- X X X X X To be Redundant
- New SW Manhole
- New Gully Connection
- New Pipe Connection (RWP)
- New Foul Water Connection
- New Foul Water Pump Connection



As Built

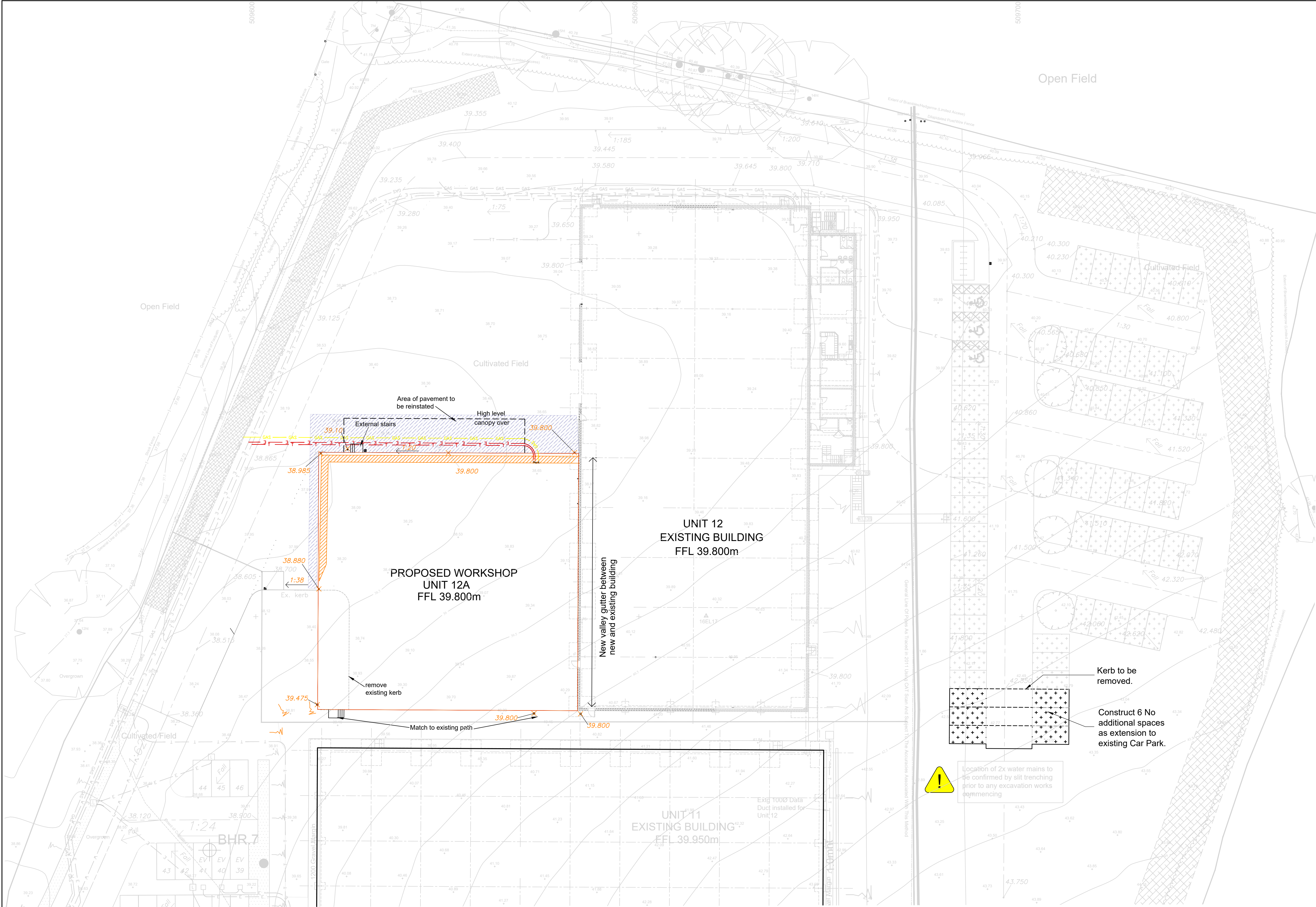


- E DENOTES ELECTRIC UNDERGROUND SERVICES (SUPPLY)
- GAS DENOTES GAS UNDERGROUND SERVICES
- T DENOTES DATA UNDERGROUND SERVICES
- W DENOTES WATER UNDERGROUND SERVICES
- E DENOTES 100mm ELECTRIC SUPPLY TO PUMPING STATION & TANKS
- E DENOTES 50mm LIGHTING FEED DUCTS
- - - DENOTES FOUL WATER DRAINAGE



 Evans & Langford Engineering your Environment		Revisions		Checked	Date	Revisions	Checked	Date	Tesla Engineering Water Lane, Storrington West Sussex Proposed Unit 12A Drainage Layout		Scale 1:250 A1	Drawn KJB Date July 23		Rev. K
♦ Structural & Civil Engineers		A.	Unit 12A amended. Mezzanine Floor added.	DPM	22/03/24	H.	Stage 4/5 Construction Issue.	SB	26/11/25	16185 - 02		Checked DPM Date Jan 24		
♦ Land & Building Surveyors		B.	Length of Unit 12A amended.	DPM	26/03/24	J.	Minor amendment to foul drainage location.	SB	10/12/25			Approved SB Date 20.10.25		
♦ Geo-Environmental Engineers		C.	Drainage layout amended.	DPM	24/01/25	K.	As Built.	SB	01/06/26					
♦ Contract Administrators		D.	Drawing's name updated to 'Drainage Layout'. Building outline updated.	DPM	13/02/25									
Evans & Langford Consultants Ltd, RB House, The Square, Lenham ME17 2PG www.evanslangford.co.uk Tel +44 (0) 1622 690120 mail@evanslangford.co.uk Evans & Langford is part of the RB Group		E.	Minor amendment to suit dim grid C-B increase by 400mm.	SB	01/05/25									
		F.	6 No additional parking spaces shown.	SB	26/09/25									
		G.	Stage 3 Issue.	SB	30/09/25									

B



- Notes:
1. This drawing is to be read in conjunction with the relevant specification and all other related drawings issued by the engineer.
 2. Do not scale from this drawing. Work from figured dimensions only.
 3. All dimensions shown on this drawing are in millimetres unless otherwise stated.
 4. All dimensions and levels are to be checked on site and the engineer notified immediately of any discrepancies prior to the commencement of the works.
 5. No deviation from the details shown on this drawing is permitted without prior permission from the engineer.
 6. The contractor shall undertake such materials testing as indicated in the specifications and shall include the cost of testing in the tender.
 7. Cutting of pavements, kerbs and channels shall be of an approved mechanical means.
 8. All soft spots and voids shall be removed before construction and replaced with suitable fill material.
 9. Where necessary, all excavated material shall be disposed of at an approved tip off-site.
 10. Approved residual weedkiller, which does not contain atrazine or simazine, must be applied to all formations.
 11. All concrete and cement mortar must be sulphate resisting to BS4021.
 12. All redundant connections in existing manholes/chambers that are affected by the works shall be sealed.

- Key :
- 97.65 × Proposed Surface Level
 - (97.65) × Existing Surface Level
 - 1/20 Surfacing Gradient
 - Banking
 - Underbuild Face Brickwork
 - Area of Pavement to be Reinstated
 - New Building Extension
- Legend:
- E DENOTES ELECTRIC UNDERGROUND SERVICES (SUPPLY)
 - GAS DENOTES GAS UNDERGROUND SERVICES
 - T DENOTES DATA UNDERGROUND SERVICES
 - W DENOTES WATER UNDERGROUND SERVICES
 - 100mm DENOTES 100mm ELECTRIC SUPPLY TO PUMPING STATION & TANKS
 - 50mm DENOTES 50mm LIGHTING FEED DUCTS
 - DENOTES FOUL WATER DRAINAGE



As Built

Evans & Langford
Engineering your Environment

- Structural & Civil Engineers
- Land & Building Surveyors
- Geo-Environmental Engineers
- Project Managers
- CDM Consultants
- Contract Administrators

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Revisions		Checked	Date
A.	Minor amendment to suit dim grid C-B increase by 400mm.	SB	01/05/24
B.	6 No additional parking spaces shown.	SB	26/09/25
C.	Stage 3 Issue.	SB	30/09/25
D.	Stage 4 Issue.	SB	20/10/25
E.	As Built.	SB	01/06/26

Revisions		Checked	Date

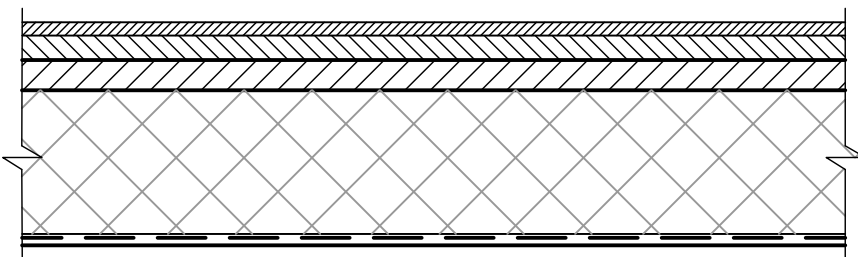
Tesla Engineering
Water Lane, Storrington
West Sussex
Proposed Unit 12A
External Works Layout

Scale	1:250
Drawn	KJB
Date	July 23
Checked	DPM
Date	Jan 24
Approved	SB
Date	20.10.25



Drg No. 16185 - 16

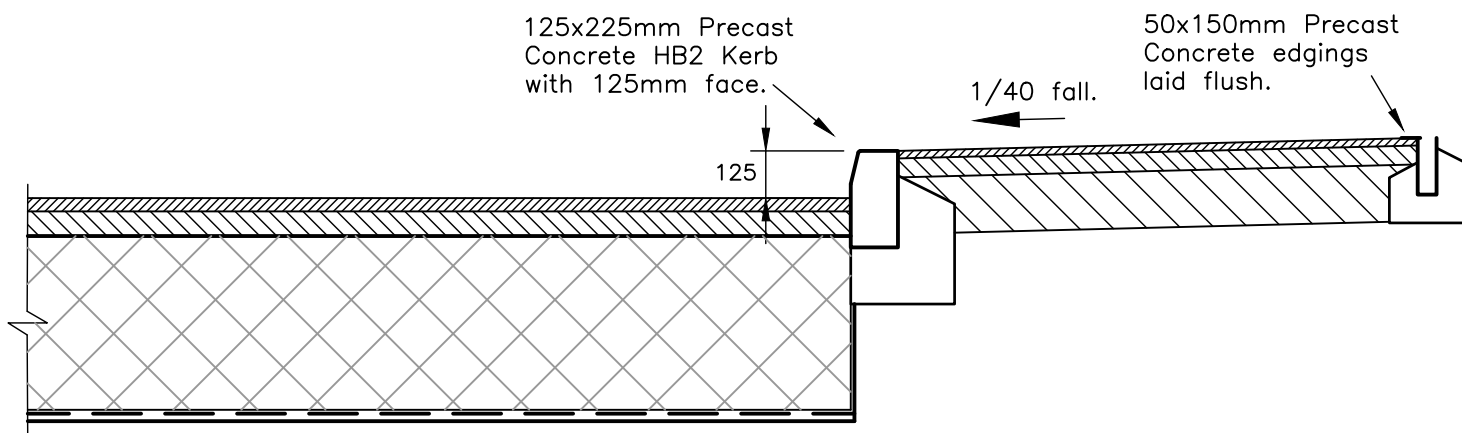
Rev. E



Car Park Aisle Construction

Porous Tarmac Pavement Construction

- 35mm Thick PA10 (Heavy Duty)
- 65mm Thick AC20 open BIN
- 80mm Thick AC32 open Base
- 380mm min Type 3 Sub-base
- TENSAR INTERAX Type A-68683
- On Impermeable membrane.
- Blinding/fabric requirement will depend on membrane specification.



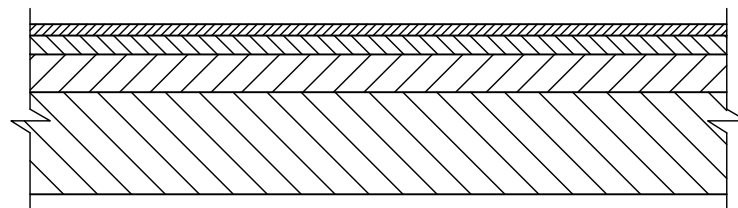
Car Parking Bay Construction

Porous Tarmac Pavement Construction

- 35mm Thick PA10 (Heavy Duty)
- 65mm Thick AC20 open BIN
- 460mm min Type 3 Sub-base
- TENSAR INTERAX Type A-68683
- On Impermeable membrane.
- Blinding/fabric requirement will depend on membrane specification.

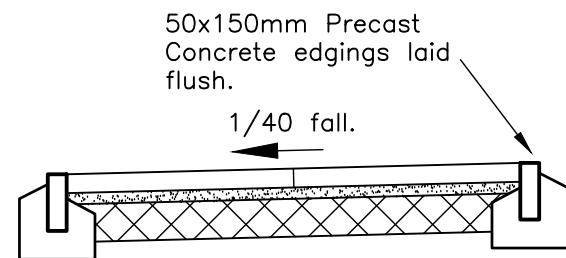
Footpath Construction 1

- 20mm Thick AC 6 Dense Surface 100/150 Rec.
- 50mm Thick AC 20 Dense Binder 40/60 Rec.
- 150mm Thick Type 1 Sub-base.



Service Area Construction

- 30mm Thick AC 10 Surface 100/120 Rec.
- 50mm Thick AC 20 Dense Binder 40/60 Rec.
- 100mm Thick AC 32 Dense Base 40/60 Rec.
- 270mm Thick Type 1 Sub-base or
- 150mm Thick Type 1 Sub-base over 300mm 6F1/6F2



Slab Paving Construction

- 50mm Thick Concrete paving slabs, size, colour and texture to be advised.
- Plan size varies to suit location.
- 30mm Thick Cement / Sand bedding.
- 100mm Type 1 Sub-base.
- Formation to be treated with granular weed killer on prepared and rolled formation.

Capping Layer: 6F1 or 6F2 or similar approved material, depth varies based on formation CBR, see table below.

Pavement construction depths shown on the details are based on a formation CBR of 10%, and are the minimum required.

Capping is not required where a Tensar solution is to be implemented.

CBR Value	Depth
<3%	550mm
3-5%	250mm
5-10%	180mm
10-15%	---

As Built

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RB Group

Revisions		Checked	Date
A.	Permeable car park construction added	DPM	15/10/25
B.	Stage 4 Issue.	SB	20/10/25
C.	As Built.	SB	01/06/26

Revisions		Checked	Date

Tesla Engineering
Water Lane, Storrington,
West Sussex
Workshop Unit 12A
External Works Details

Scale 1:20 A1	Drawn	DPM
	Date	Oct 25
	Checked	SB
	Date	20.10.25
Drg No.	Approved	SB
	Date	20.10.25



16185 - 17

Rev.
C