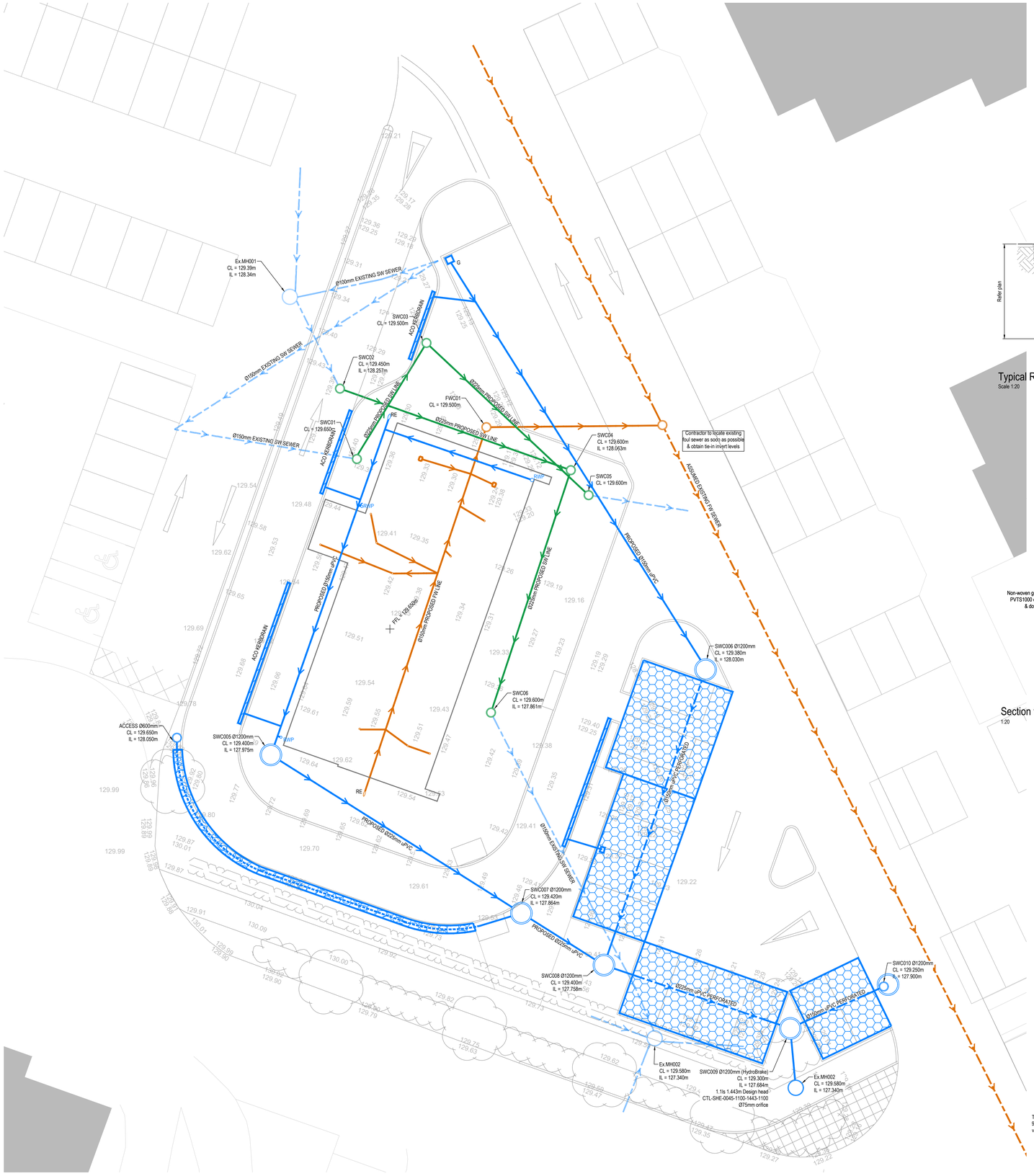
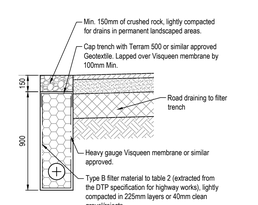
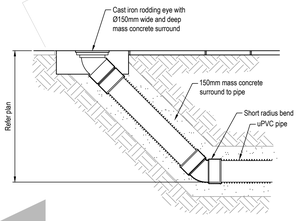


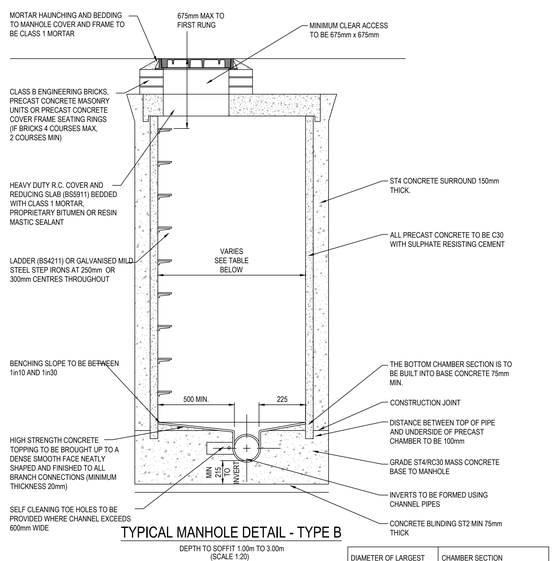
Proposed Drainage Layout
1:100



Filter Drain Detail
Scale 1:20

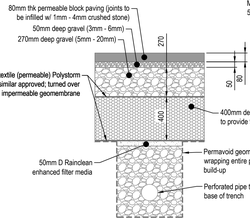


Typical Rodding Eye Detail
Scale 1:20

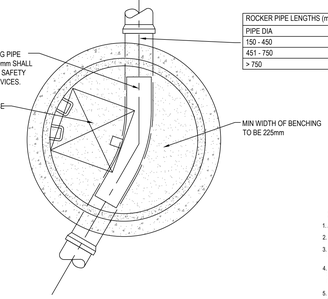


TYPICAL MANHOLE DETAIL - TYPE B
DEPTH TO SOFFIT 1.00m TO 3.00m (SCALE 1:20)

DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	CHAMBER SECTION DIAMETER (mm)
LESS THAN 375	1200 (1050 WHERE DEPTH TO SOFFIT IS 1.35m - 1.5m)
375 - 450	1350
500 - 700	1500
750 - 900	1800



Section through parking bays
1:20

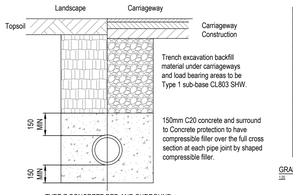


TYPICAL PLAN ON MH TYPE B

ROCKER PIPE LENGTHS (mm)	
PIPE DIA	PIPE LENGTH
150 - 450	500 - 750
451 - 750	750 - 1000
> 750	1250

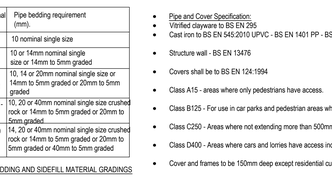
GULLY NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. GULLY POT LINER FORM TO BE PLASTIC.
3. GULLY POT SHALL BE TRAPPED AND BE PROVIDED WITH A RODDING EYE STOPPER.
4. GULLY POT LINER TO BE SURROUNDED WITH 150mm MINIMUM CONCRETE SURROUND MIX GEN 3, ST4 WITH CONSISTENCY CLASS S2 COMPLYING WITH BS 8500-1:2006.
5. 58kg HORSESHOE GULLY COVER SEATING SLAB 600mm x 450mm x 100mm ELIMINATES BROKWORK WEAKSPOTS AND PROVIDES GREATER STABILITY.

GULLY NOTES (Con't):-
6. ALL MORTAR SHALL BE A PROPRIETARY QUICK SETTING MORTAR OR EPOXY RESIN MORTAR, AS APPROVED BY THE ENGINEER.
7. GULLY GRATING AND FRAME TO BE TO BS EN 124 CLASS D400. GRATING TO BE HINGED WITH A CAPTIVE SYSTEM TO PREVENT UNAUTHORISED REMOVAL.
8. GULLY GRATING TO BE SET WITH TOP EDGE 15mm BELOW NORMAL LEVEL OF ROAD SURFACE AND SLOPING WITH THE CARRIAGEWAY CROSSFALL.
9. GULLY FRAME TO BE BEDDED ON, AND HAUNCHED WITH MORTAR AS PREVIOUSLY DESCRIBED, AND POSITIONED CENTRALLY OVER GULLY POT AND ABUTTING WITH THE KERB FACE.



TYPE S GRANULAR SURROUND BED

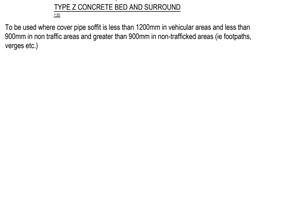
To be used where cover pipe soffit is greater than 1200mm in vehicular areas and greater than 900mm in non traffic areas and greater than 900mm in non-trafficked areas (ie footpaths, verges etc.)



CONCRETE SLAB PROTECTION (ALTERNATIVE TO CLASS Z)

To be used where cover pipe soffit is less than 1200mm in vehicular areas and greater than 900mm in non traffic areas and less than 900mm in non-trafficked areas (ie footpaths, verges etc.)

NOTE: Slab must span trench completely bearing on original ground both sides. Bearing width (150mm min) will vary with pipe size, consult Engineer.

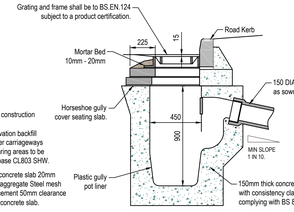


TYPE Z CONCRETE BED AND SURROUND

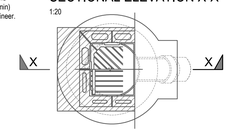
To be used where cover pipe soffit is less than 1200mm in vehicular areas and less than 900mm in non traffic areas and greater than 900mm in non-trafficked areas (ie footpaths, verges etc.)

Pipe nominal size (DN)	Pipe bedding requirement (mm).
100	10 nominal single size
Over 100-150	10 or 14mm nominal single size or 14mm to 5mm graded
Over 150-300	10, 14 or 20mm nominal single size or 14mm to 5mm graded or 20mm to 5mm graded
Over 300 - 550	10, 20 or 40mm nominal single size crushed rock or 14mm to 5mm graded or 20mm to 5mm graded
Over 550	14, 20 or 40mm nominal single size crushed rock or 14mm to 5mm graded or 20mm to 5mm graded or 40mm to 5mm graded

GRANULAR BEDDING AND SIDEFILL MATERIAL GRADINGS



SECTIONAL ELEVATION X-X
1:20



TYPICAL PLAN ON INSITU CONCRETE TRAPPED ROAD GULLY
1:20

- Pipe and Cover Specification:
- Vitrified clayware to BS EN 295.
- Cast iron to BS EN 545:2010 UPVC - BS EN 1401 PP - BS EN 1852.
- Structure wall - BS EN 13476
- Covers shall be to BS EN 124:1994
- Class A15 - areas where only pedestrians have access.
- Class B125 - For use in car parks and pedestrian areas where occasional vehicular access is likely
- Class C250 - Areas where not extending more than 500mm from kerb face into the carriageway.
- Class D400 - Areas where cars and lorries have access including carriageways, hard shoulders.
- Cover and frames to be 150mm deep except residential cul-de-sacs.

ALL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEERS AND SPECIALISTS DRAWINGS. ALL SETTING-OUT AND DIMENSIONS TO ARCHITECTS DRAWINGS ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHECK ALL DIMENSIONS ON SITE AND ANY DIMENSIONS SHOWN ON THESE DRAWINGS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. DO NOT SCALE OFF ANY DRAWINGS.

Hardstanding Legend
- Denotes area of proposed carriageway construction.
 - 40mm Hot-rolled Asphalt
 - 160mm Dense Macadam combined roadbase & basecourse.
 - 225mm Type 1 Sub-base
 - 6F2 Capping Layer (Refer Table 1.)
- Denotes area of monoblock/paving surface treatment.
 - Monoblock/Paving to Architects spec.
 - 30mm Bedding layer of sharp sand/crushed rock.
 - Min. 225mm HA type 1 sub-base
- Denotes area of permeable block paving.
 - 80mm Permeable Paving.
 - 50mm Deep Gravel (3-6mm)
 - 100mm Deep Gravel (5-20mm)
 - 400mm Deep Attenuation Crates
- Denotes area of landscaping to Architects spec.

Table 1.

CBR Value	Capping Layer	Sub-Base
< 2%	600mm	150mm
2% - 5%	350mm	150mm
> 5%	0mm	225mm

Kerbing Legend

Reference	Description	Dimensions
K1	Half Batter Road Kerb	125x255mm
K2	Bull Nose Road Kerb	125x150mm
K3	Square Road Kerb	125x255mm
K6	Round Top Edging Kerb	50x200mm
K7	Weir Kerb	125x255mm
K8	Transition/Dropper Kerb	Varies to suit kerb.
K9	ACO KerbDrain 'HB255'	125x255mm

Drainage Legend
- Denotes Existing SW Drainage Line
- Denotes Existing FW Drainage Line
- Denotes Existing Combined Drainage Line
- Denotes Proposed SW Drainage Line
- Denotes Proposed FW Drainage Line
- Denotes Proposed Combined Drainage Line
- Ex.SWC Denotes Existing SW Chamber
- Ex.FWC Denotes Existing FW Chamber
- Ex.CC Denotes Existing Combined Chamber
- SWC Denotes Proposed SW Chamber
- FWC Denotes Proposed FW Chamber
- CC Denotes Proposed Combined Chamber
- RE Denotes Rodding Eye
- RWP Denotes Rainwater Pipe
- PU Denotes Pop-Up
- Denotes area of proposed attenuation below permeable paving. Attenuation Crates - 1No. Layer 400mm Deep by Enviorcrate or similar; bays lined w/ Permavoid geomembrane/similar
- Denotes area of proposed filter trench. 50mm D Rainclean over Type B filter material; trench lined w/ Permavoid geomembrane/similar

Rev	Date	Revison	By	Chk
A	06.12.24	PLANNING	SF	AF

Project
STARBUCKS
ROCHDALE

Drawing Title
PROPOSED DRAINAGE LAYOUT

PLANNING

Drawn by	Checked by	Scale @ A0
SF	AF	1:100

Drawing No. 2404-09-902 — Revison A

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