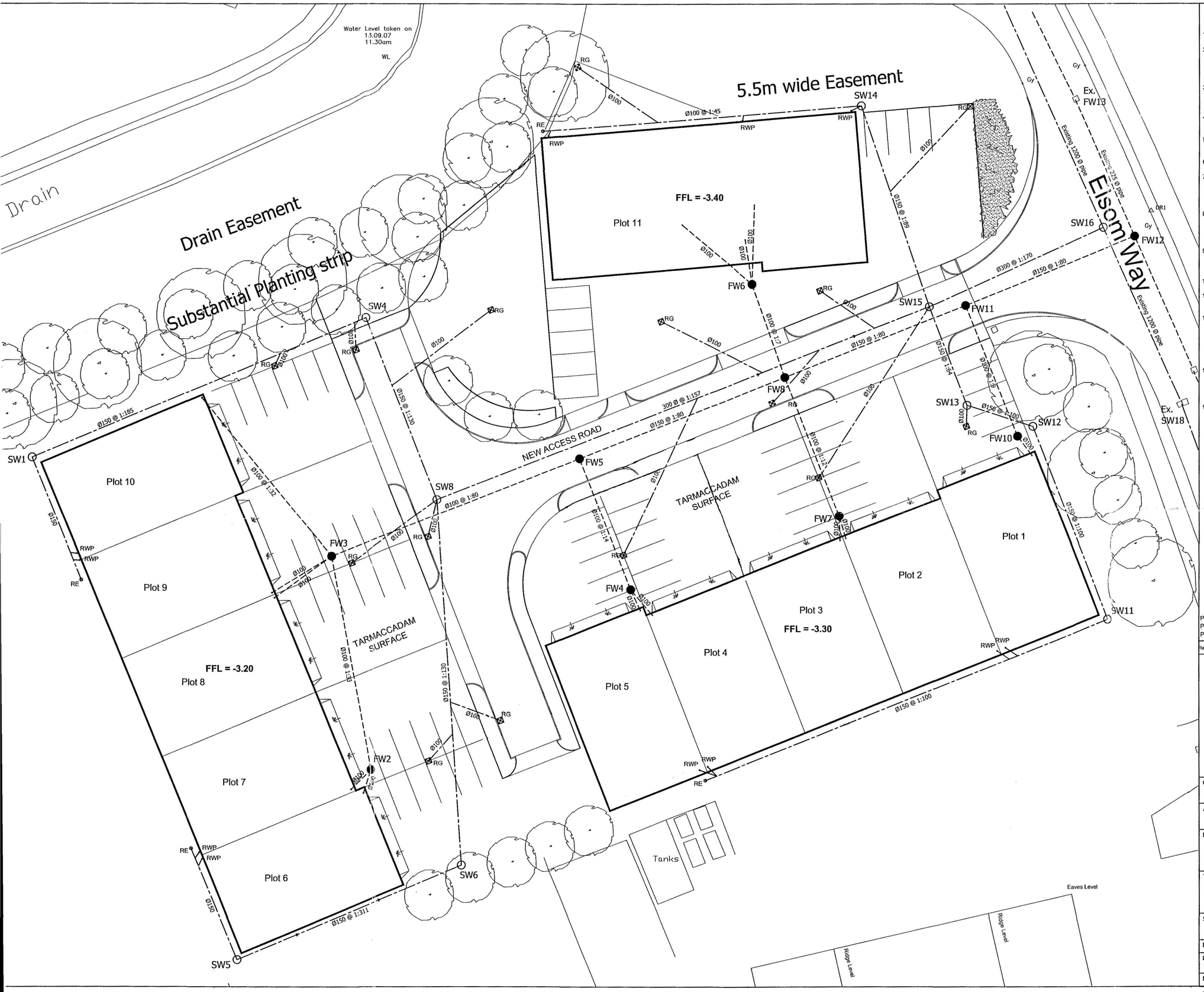


Notes:

1. DO NOT SCALE FROM THIS DRAWING.
2. Drawing is to be read in conjunction with drawing:- 24060-102, 103 & all relevant architects drawings. Any inconsistencies should be reported to PRP immediately.
3. All proprietary items to be installed in strict compliance with the manufacturers instructions & recommendations.
4. Invert levels of existing manholes to be checked on site prior to commencing any drainage works.
5. For positions of all rainwater pipes & foul outlets refer to Architects drawings.
6. Pipe material to be agreed with the Engineer.
7. All joints between precast manhole components shall have a minimum uncompressed thickness of 10mm of proprietary bitumen or resin mastic sealant.
8. Chambers & manholes with outgoing pipes of greater than Ø600mm shall be fitted with removable stainless steel (grade 316) safety chains or polypropylene rope.
9. Storm & foul branch connections are to be laid at gradients of between 1:10 & 1:80 & shall be Ø150 unless otherwise specified.
10. All in-situ concrete shall be minimum grade GEN3.
11. Precast concrete cover & reducing slabs to be heavy duty reinforced concrete to BS 5911.
12. Pipes up to Ø225mm to be clay in accordance with BS5911: Part 100.
    Rising mains shall be black MDPE SDR11 as WI 4-32-03 & joints & fittings to be in accordance with WI 4-32-04. Other approved pipe materials to be in accordance with their relevant BS.
13. Manhole covers & frames shall be manufactured in cast iron or ductile iron & shall comply with requirements of BS EN 124 & shall be kitemarked or equivalent.
14. Type of pipe bedding dependant on situation & depth. See details on drawing:- 24060-103.

Key

- Surface water manhole & pipe run (S1)
- Foul water manhole & pipe run (F1)
- RG — Gulley
- RE — Rodding Eye

Rev	Date	Description	Initials
P3	06/06/2008	Foul pipe added to Plot 11	SRS
P2	04/06/2008	Rodding eye added to rear of plot 4	SRS
P1	28/05/2008	Issued as Preliminary	SRS

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Client: Taylor Pearson

Architect: KMB Ltd.

Project: Industrial Units, Warden Tree Lane, Pinchbeck

Title: Drainage General Arrangement

DETERMINED PLAN

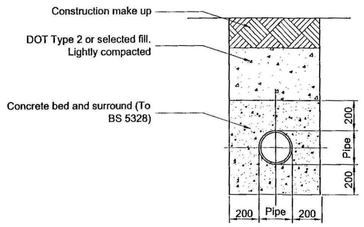
SHDC Planning & Development
18 MAR 2009
Ref: 0194/04

Status: **PRELIMINARY**

Drawn:	Checked:
Date: May 2008	Scale @ A1: 1:200

Drawing No: 24060-101P3

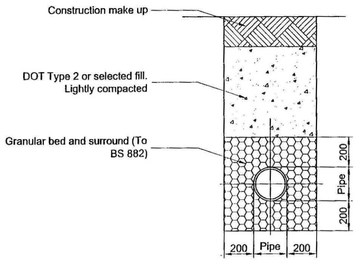
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Typical Pipe Bedding with Concrete Bed & Surround
1:20

Note: ST4 concrete bed and surround to be used where the depth between the finished construction level and the Barrel of the drain is less than 900mm.

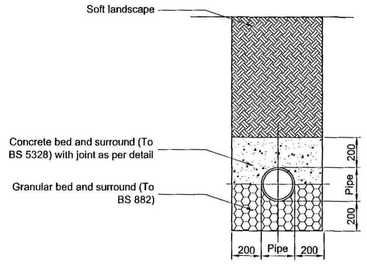
All dimensions are external pipe widths.



Typical Pipe Bedding with Granular Bed & Surround
1:20

Note: Granular bed and surround to be used where the depth between the finished construction level and the Barrel of the drain exceeds 900mm.

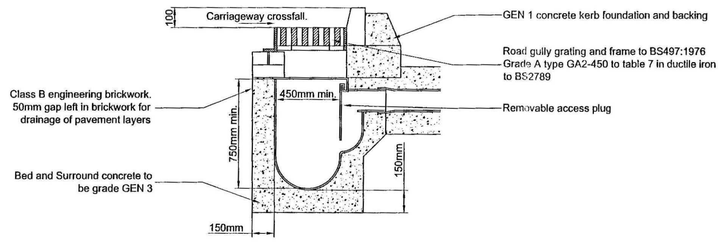
All dimensions are external pipe widths.



Typical Pipe Bedding with Concrete & Granular Bed & Surround
1:20

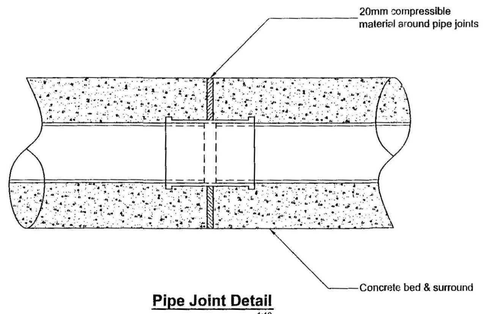
Note: Combined ST4 concrete & Granular bed and surround to be used where the depth between the finished construction level and the Barrel of the drain is less than 900mm & in soft landscape.

All dimensions are external pipe widths.

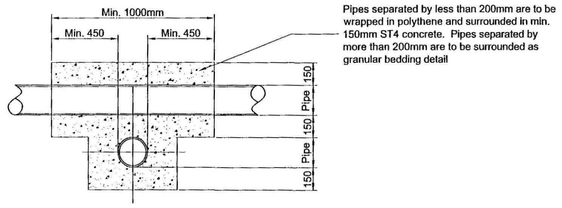


Typical Gulley Detail
1:20

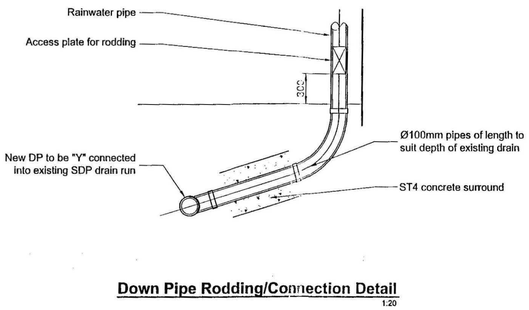
Note: All branch connections from gullies shall be made by means of a 45° oblique angled connection



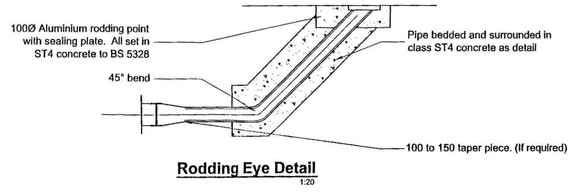
Pipe Joint Detail
1:10



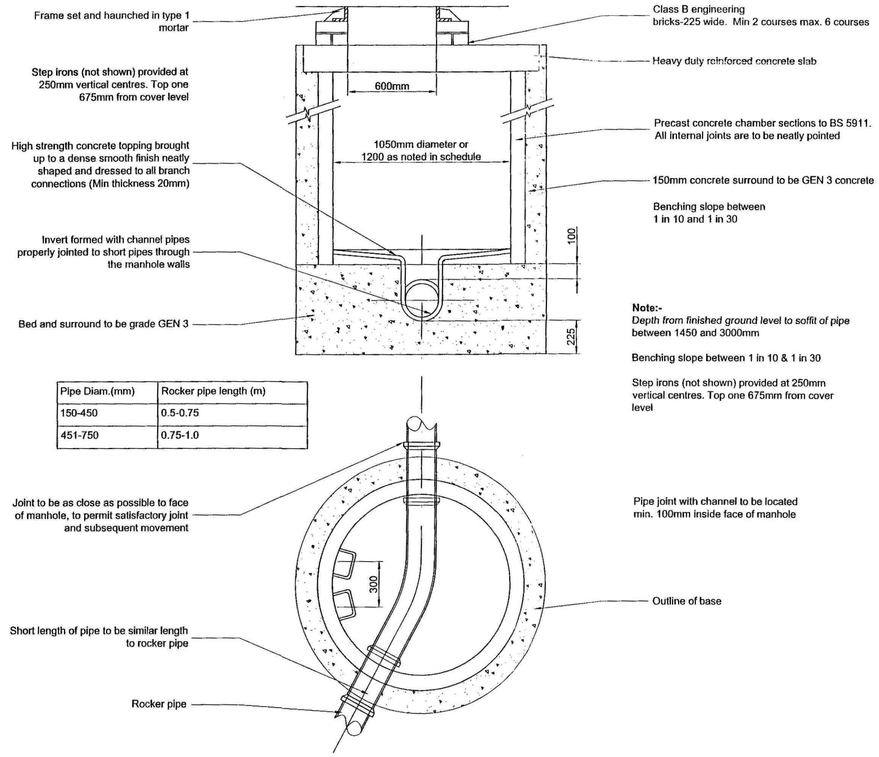
Typical Pipe Crossing Detail
1:20



Down Pipe Rodding/Connection Detail
1:20



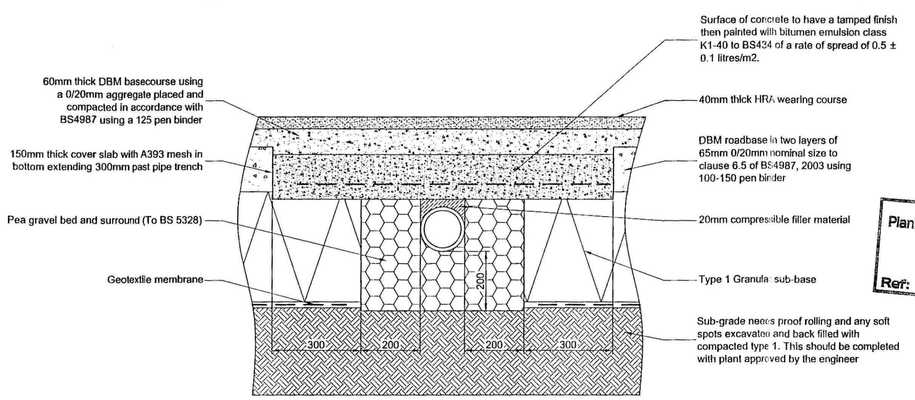
Rodding Eye Detail
1:20



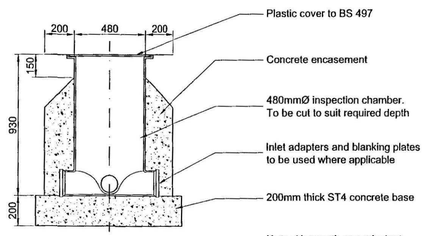
Pipe Diam.(mm)	Rocker pipe length (m)
150-450	0.5-0.75
451-750	0.75-1.0

Typical Circular Manhole Detail
1:20

Note: Depth from finished ground to soffit of pipe between 1450mm & 3000mm

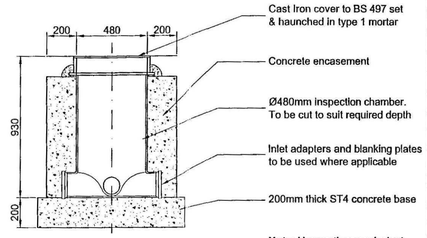


Cover Slab Detail
1:10



Note: Hepworth or equivalent

Light Duty Polypropelene Inspection Chamber (PPIC) Detail
1:20



Note: Hepworth or equivalent

Heavy Duty Polypropelene Inspection Chamber (PPIC) Detail
1:20

Notes:

1. DO NOT SCALE FROM THIS DRAWING.
2. Drawing is to be read in conjunction with drawing:- 24060-101, 102 & all relevant architect's drawings. Any inconsistencies should be reported to PRP immediately.

Rev	Date	Description	Initials
P2	06/06/2008	Typical Pipe Bedding with Granular & Concrete Bed & Surround detail amended	SRS
P1	28/05/2008	Issued as preliminary	JWG

SHDC Planning & Development 18 MAR 2009 Ref: 0194/09

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Client: Taylor Pearson

Architect: KMB Ltd.

Project: Industrial Units, Warden Tree Lane, Pinchbeck

Title: External Works Details

DETERMINED PLAN

Status: **PRELIMINARY**

Drawn:	Checked:
Date: May 2008	Scale @ A1: 1:20

Drawing No: 24060-103P2

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Water Level taken on
13.09.07
11.30am
WL

Drain

Drain Easement

Substantial Planting strip

5.5m wide Easement

Elsom Way

FFL = 3.40

Plot 11

NEW ACCESS ROAD

TARMACCADAM SURFACE

TARMACCADAM SURFACE

Plot 1

Plot 2

Plot 3

FFL = 3.30

Plot 4

Plot 5

Plot 6

FFL = 3.20

Plot 7

Plot 8

Plot 9

Plot 10

Tanks

Eaves Level

Ridge Level

Ridge Level

Notes:

1. DO NOT SCALE FROM THIS DRAWING.
2. Drawing is to be read in conjunction with drawing:- 24060-105 & all relevant architect's drawings. Any inconsistencies should be reported to PRP immediately.
3. All proprietary items to be installed in strict compliance with the manufacturers instructions & recommendations.
4. Catchpits and manholes may be proprietary plastics or alternatively be concrete to a depth and number of branches as shown on drawing.
5. All materials within 450mm of final surface to be non-frost susceptible.
6. All materials to be laid and compacted in accordance with the specification for highway works.
7. Sub-base and capping layer to be laid in layers not exceeding 150mm thick and compacted using plant approved by the engineer.
8. Contractor to investigate location of all cables, pipes and ducts in highway and verge around new entrance.
9. Landscaping schemes by others
10. Tarmaccadam and concrete road surfaces surfaces to parking areas to engineers details
11. Paving to perimeter of building to be constructed as follows:-

    a, Concrete path edgings bedded in mortar to external edge of paving line to be bedded in mortar.

    b, 100mm well consolidated hardcore

    c, 50mm sharp sand

    d, 450x450mm concrete paving slabs

    e, Kiln dried sand to joints in paving

    f, Allow for min 100mm gravel strip against building

Key

HB	= Half Batter kerb
DK	= Dropped Kerb
ED	= Edge detail
+2.000	= New Level
RG	= Road Gulley

Rev	Date	Description	Initials
P2	04/06/2008	Levels amended to suit gulley	JM
P1	23/05/2008	Issued as Preliminary	SRS

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DETERMINED PLAN

SHDC Planning & Development 18 MAR 2009 Ref: 0194/09

Client:

Architect: KMB Ltd.

Project: Industrial Units
Warden Tree Lane
Pinchbeck

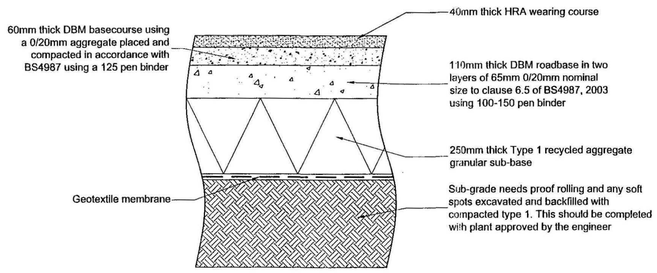
Title: External Works
General Arrangement

Status: **PRELIMINARY**

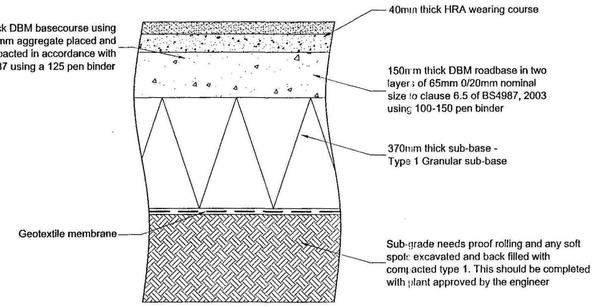
Drawn: SRS	Checked: JM
Date: May 2008	Scale @ A1: 1:200

Drawing No: 24060-104 P2

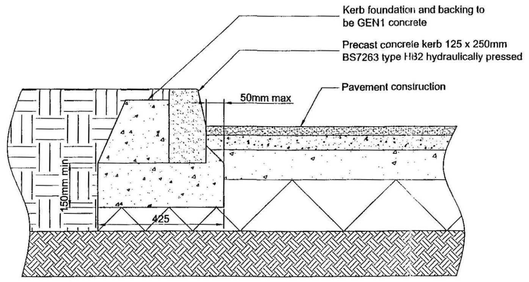
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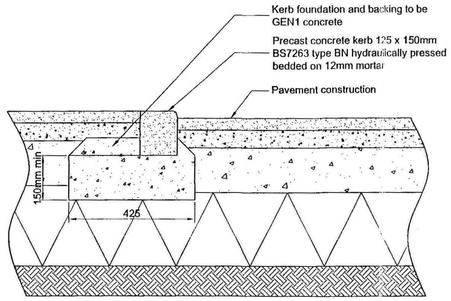
Detail 1
Car Park Make-up
1:10



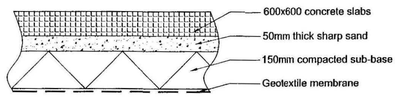
Detail 2
Roadway Make-up
1:10



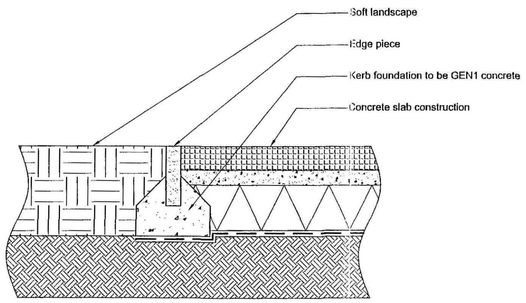
Half Batter Kerb Detail (HB)
(Where Kerb Meets Soft Landscape)
1:10



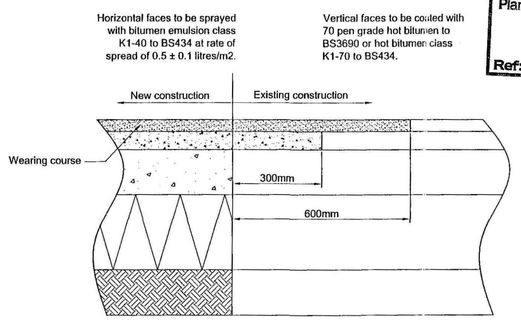
Bull Nose Kerb Detail (BN)
(Where Kerb Meets Pavement)
1:10



Concrete Slab Construction
1:10



Edge Detail
(Concrete Slabs - Soft Landscape)
1:10



Carriageway Tie-in Detail
1:10

SHDC
Planning & Development
18 MAR 2009
Ref: 0194/09

Notes:

1. DO NOT SCALE FROM THIS DRAWING.
2. Drawing is to be read in conjunction with drawing:- 24060-104 & all relevant architect's drawings. Any inconsistencies should be reported to PRP immediately.
3. All proprietary items to be installed in strict compliance with the manufacturers instructions & recommendations.
4. All materials within 450mm of final surface to be non-frost susceptible.
5. All materials to be laid and compacted in accordance with the specification for highway works.
6. Sub-base and capping layer to be laid in layers not exceeding 150mm thick and compacted using plant approved by the engineer.
7. Contractor to investigate location of all cables, pipes and ducts in highway and verge around new entrance.

Rev	Date	Description	Initials
P1	23/05/2008	Issued as preliminary	JWG

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Client: Taylor Pearson

Architect: KMB Ltd.

Project: Industrial Units, Warden Tree Lane, Pinchbeck

DETERMINED PLAN

Title: External Works Details

Status: **PRELIMINARY**

Drawn: SRS	Checked: AK
Date: May 2008	Scale @ A1: 1:10
Drawing No: 24060-105P1	

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Surface Water Manhole Schedule

Manhole	Cover Level (m)	Invert Level (m)	Cover Type	Manhole Type	Eastings	Northings	Manhole Diameter (mm)	Notes
SW1	3.050	2.650	Standard	PPIC	-	-	-	
SW4	2.932	2.426	Standard	PPIC	-	-	-	
SW5	3.050	2.664	Standard	PPIC	-	-	-	
SW6	3.050	2.575	Standard	PPIC	-	-	-	
SW8	3.110	2.256	Heavy Duty	Concrete	-	-	-	
SW11	3.150	2.370	Standard	PPIC	-	-	-	
SW12	3.150	2.135	Standard	PPIC	-	-	-	
SW13	3.130	2.056	Heavy Duty	PPIC	-	-	-	Encased in concrete
SW14	3.250	2.139	Standard	PPIC	-	-	-	
SW15	3.823	1.871	Heavy Duty	Concrete	-	-	-	
SW16	-	1.45	Heavy Duty	Concrete	-	-	-	

Pipe Run Schedule

Pipe Run	Pipe Size (mm)	Length (m)	Gradient (1 in x)	Ouput Invert Level	Notes
SW1-SW4	150	-	185		
SW4-SW8	150	-	130		
SW5-SW6	150	-	311		
SW6-SW8	150	-	130		
SW8-SW15	225	-	140		
SW11-SW12	150	-	100		
SW12-SW13	150	-	100		
SW13-SW15	150	-	64		
SW14-SW15	150	-	89		
SW15-SW16	300	-	170	1.743	With cover slab. See 24060-105

Foul Water Manhole Schedule

Manhole	Cover Level (m)	Invert Level (m)	Cover Type	Manhole Type	Eastings	Northings	Manhole Diameter (mm)	Notes
FW2	3.000	2.747	Heavy Duty	PPIC	-	-	-	Encased in concrete
FW3	2.760	2.013	Heavy Duty	PPIC	-	-	-	Encased in concrete
FW4	3.034	2.800	Heavy Duty	PPIC	-	-	-	Encased in concrete
FW5	3.220	1.632	Heavy Duty	PPIC	-	-	-	Encased in concrete
FW6	3.275	2.900	Heavy Duty	PPIC	-	-	-	Encased in concrete
FW7	3.100	2.800	Heavy Duty	PPIC	-	-	-	Encased in concrete
FW8	3.275	1.320	Heavy Duty	PPIC	-	-	-	Encased in concrete
FW10	3.150	2.800	Heavy Duty	PPIC	-	-	-	Encased in concrete
FW11	3.925	1.045	Heavy Duty	PPIC	-	-	-	Encased in concrete
FW12	-	0.830	Heavy Duty	Concrete	-	-	-	

Pipe Run Schedule

Pipe Run	Pipe Size (mm)	Length (m)	Gradient (1 in x)	Ouput Invert Level
FW2-FW3	100	-	33	
FW3-FW5	100	-	80	
FW4-FW5	100	-	14	
FW5-FW8	150	-	80	
FW6-FW8	100	-	7	
FW7-FW8	100	-	12	
FW8-FW11	150	-	80	
FW10-FW11	100	-	9	
FW11-FW12	150	-	80	

DETERMINED PLAN

SHDC
Planning & Development
18 MAR 2009
Ref: 0194/09

Notes:

1. DO NOT SCALE FROM TH
2. Drawing is to be read in cor 24060-101, 103, & all relev Any inconsistencies should immediately.
3. Existing manhole levels prov Pearson.

Rev	Date	Description
P1	28/05/2008	Issued as Prelimin

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Client: Taylor Pearson

Architect: KMB Ltd.

Project: Industrial Units, Warden Tree Lane, Pinchbeck

Title: Drainage Tables

Status: PRELIM

Drawn: SRS

Date: May 2008

Drawing No: 24060-102

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