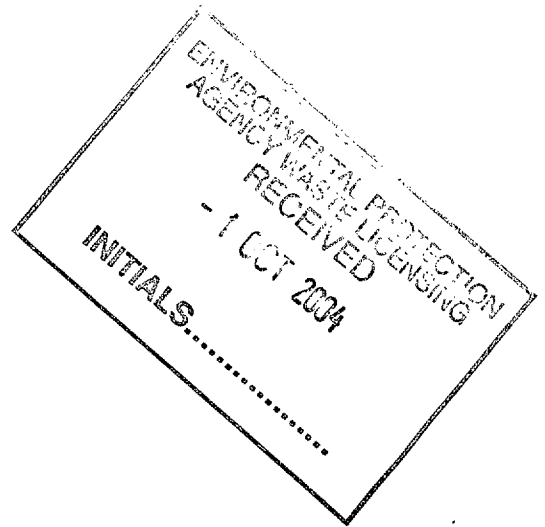


Attachment D



*For inspection purposes only.
Consent of copyright owner required for any other use.*

Attachment D1: Infrastructure

Attachment D1 includes all the infrastructure drawings to support this licence application.

It is attached as standalone document in the hardcopy of the waste licence application as a book of A1 drawings and has also been inserted into the actual hardcopy of the licence application as A3 drawings for convenience. In the digital copy of the licence application Attachment D1 drawings have not been inserted into the actual pdf version of the licence application but are instead attached in a separate file folder labelled Licence Drawings Attachment D1 on the same CD Rom.

However a Drawing Register is attached listing each drawing supplied with the waste licence application.

*For inspection purposes only.
Consent of copyright owner required for any other use.*

Client:	AVR - Environmental Solutions Ltd.	FINBARR GANNON & CO. LTD. CONSULTING ENGINEERS St. Patrick's House, Lower Glanmire Road, Cork, Ireland. Tel: +353-21-4508424 Fax: +353-21-4509104 E-mail: office@fgcl.ie
Project:	Proposed Waste Recovery/Transfer and Sludge Drying Facility at Foxhole, Youghal Co. Cork.	

DRAWING REGISTER & ISSUE SHEET		Issue Status	Waste Licence																
Document File Name	04409-DR-002.xls																		
FGCL File No.	04409																		
Client Project No.		Day	24																
Client Project Engineer	Aoife Foley	Month	09																
Issued By	Clement O' Sullivan	Year	04																

FGCL No.	APPENDIX	TITLE	SCALE	REVISIONS															
WASTE LICENCE APPLICATION DRAWING LIST																			
04409-200	D1	SITE LOCATION MAP	10560	A															
04409-201	D1	SITE LOCATION MAP	2500	A															
04409-202	D1 A	SITE SECURITY ARRANGEMENTS INCLUDING GATES AND FENCING. (Sheet 1 of 2)	250	A															
04409-203	D1 A	SITE SECURITY ARRANGEMENTS INCLUDING GATES AND FENCING. (Sheet 2 of 2)	20	A															
04409-204	D1 B	DESIGN FOR SITE ROADS	500	A															
04409-205	D1 C	DESIGN OF HARD STANDING AREAS	500	A															
04409-206	D1 D	PLANT - WEIGHBRIDGE DETAILS	50	A															
04409-207	D1 E	WHEEL WASH DETAILS	20	A															
04409-208	D1 F	LABORATORY FACILITIES	20	A															
04409-209	D1 G	DESIGN AND LOCATION OF FUEL STORAGE AREAS	50	A															
04409-210	D1 H	WASTE QUARANTINE AREA	50	A															
04409-211	D1 I	WASTE INSPECTION AREA	50	A															
04409-212	D1 J	TRAFFIC CONTROL	250	A															
04409-213	D1 K	SEWERAGE AND SURFACE WATER DRAINAGE INFRASTRUCTURE (Sheet 1 of 6)	250	A															
04409-214	D1 K	SEWERAGE AND SURFACE WATER DRAINAGE INFRASTRUCTURE (Sheet 2 of 6)	N.T.S.	A															
04409-215	D1 K	SEWERAGE AND SURFACE WATER DRAINAGE INFRASTRUCTURE (Sheet 3 of 6)	20	A															
04409-216	D1 K	SEWERAGE AND SURFACE WATER DRAINAGE INFRASTRUCTURE (Sheet 4 of 6)	N.T.S.	A															
04409-217	D1 K	SEWERAGE AND SURFACE WATER DRAINAGE INFRASTRUCTURE (Sheet 5 of 6)	50	A															
04409-218	D1 K	SEWERAGE AND SURFACE WATER DRAINAGE INFRASTRUCTURE (Sheet 6 of 6)	100	A															
04409-219	D1 L	ALL OTHER SERVICES	250	A															
04409-220	D1 M	PLANT, SHEDS / GARAGES (Sheet 1 of 2)	50	A															

Client:	AVR - Environmental Solutions Ltd.	FINBARR GANNON & CO. LTD. CONSULTING ENGINEERS St. Patrick's House, Lower Glanmire Road, Cork, Ireland. Tel: +353-21-4508424 Fax: +353-21-4509104 E-mail: office@fgcl.ie
Project:	Proposed Waste Recovery/Transfer and Sludge Drying Facility at Foxhole, Youghal Co. Cork.	

DRAWING REGISTER & ISSUE SHEET		Issue Status	Waste Licence																
Document File Name	04409-DR-002.xls																		
FGCL File No.	04409																		
Client Project No.		Day	24																
Client Project Engineer	Aoife Foley	Month	09																
Issued By	Clement O' Sullivan	Year	04																

FGCL No.	APPENDIX	TITLE	SCALE	REVISIONS															
04409-221	D1 M	PLANT, SHEDS / GARAGES (Sheet 2 of 2)	20	A															
04409-222	D1 N	SITE ACCOMMODATION (ADMINISTRATION AND STAFF FACILITIES)	100	A															
04409-223	D1 O	FIRE CONTROL SYSTEM, INCLUDING WATER SUPPLY (Sheet 1 of 2)	250	A															
04409-224	D1 O	FIRE CONTROL SYSTEM, INCLUDING WATER SUPPLY (Sheet 2 of 2)	50	A															
04409-225	D1 Q	OTHER WASTE RECOVERY INFRASTRUCTURE (Sheet 1 of 7)	100	A															
04409-226	D1 Q	OTHER WASTE RECOVERY INFRASTRUCTURE (Sheet 2 of 7)	150	A															
04409-227	D1 Q	OTHER WASTE RECOVERY INFRASTRUCTURE (Sheet 3 of 7)	75	A															
04409-228	D1 Q	OTHER WASTE RECOVERY INFRASTRUCTURE (Sheet 4 of 7)	100	A															
04409-229	D1 Q	OTHER WASTE RECOVERY INFRASTRUCTURE (Sheet 5 of 7)	150	A															
04409-230	D1 Q	OTHER WASTE RECOVERY INFRASTRUCTURE (Sheet 6 of 7)	75	A															
04409-231	D1 Q	OTHER WASTE RECOVERY INFRASTRUCTURE (Sheet 7 of 7)	20	A															
04409-232	D1 U	OTHER INFRASTRUCTURE (Sheet 1 of 2)	250	A															
04409-233	D1 U	OTHER INFRASTRUCTURE (Sheet 2 of 2)	250	A															

DISTRIBUTION MATRIX		DRAWING SETS ISSUED			N denotes Notification only	E denotes E-Mailed
		Full Scale	Reduced	Soft Copy		
Project File	FGCL				X	
Finbarr Gannon	FGCL		1		X	
Clement O' Sullivan	FGCL		1		X	
Eddie Ormond	FGCL		1		X	
Aoife Foley	SWS Group	1		1	X	
Licensing Authority	E.P.A.	1	1		X	
Planning Department	Cork County Council	6	1			



AVR - ENVIRONMENTAL SOLUTIONS Ltd.

**Proposed Waste Recovery/Transfer
and
Sludge Drying Facility
at
Foxhole, Youghal Co. Cork.**

SEPTEMBER 2004

Produced By:

FINBARR GANNON & CO. LTD.
CONSULTING ENGINEERS


St. Patrick's House, Lower Glanmire Road, Cork, Ireland.
Tel: +353-21-4508424 Fax: +353-21-4509104 E-mail:

DRAWING INDEX SHEET

AVR - Environmental Solutions Ltd.

Proposed Waste Recovery/Transfer and Sludge Drying Facility at Foxhole, Youghal Co. Cork.

DRAWING NUMBER	E.P.A. APPENDIX	DRAWING DESCRIPTION	DRAWING NUMBER	E.P.A. APPENDIX	DRAWING DESCRIPTION
04409-200	D1	SITE LOCATION MAP	04409-217	D1 (K)	SEWERAGE AND SURFACE WATER DRAINAGE INFRASTRUCTURE (Sheet 5 of 6)
04409-201	D1	SITE LOCATION MAP	04409-218	D1 (K)	SEWERAGE AND SURFACE WATER DRAINAGE INFRASTRUCTURE (Sheet 6 of 6)
04409-202	D1 (A)	SITE SECURITY ARRANGEMENTS INCLUDING GATES AND FENCING. (Sheet 1 of 2)	04409-219	D1 (L)	ALL OTHER SERVICES
04409-203	D1 (A)	SITE SECURITY ARRANGEMENTS INCLUDING GATES AND FENCING. (Sheet 2 of 2)	04409-220	D1 (M)	PLANT SHEDS / GARAGES (Sheet 1 of 2)
04409-204	D1 (B)	DESIGN FOR SITE ROADS	04409-221	D1 (M)	PLANT SHEDS / GARAGES (Sheet 2 of 2)
04409-205	D1 (C)	DESIGN OF HARD STANDING AREAS	04409-222	D1 (N)	SITE ACCOMMODATION (ADMINISTRATION AND STAFF FACILITIES)
04409-206	D1 (D)	PLANT - WEIGH BRIDGE DETAILS	04409-223	D1 (O)	FIRE CONTROL SYSTEM, INCLUDING WATER SUPPLY (Sheet 1 of 2)
04409-207	D1 (E)	WHEEL WASH DETAILS	04409-224	D1 (O)	FIRE CONTROL SYSTEM, INCLUDING WATER SUPPLY (Sheet 2 of 2)
04409-208	D1 (F)	LABORATORY FACILITIES	04409-225	D1 (Q)	OTHER WASTE RECOVERY INFRASTRUCTURE (Sheet 1 of 7)
04409-209	D1 (G)	DESIGN AND LOCATION OF FUEL STORAGE AREAS	04409-226	D1 (Q)	OTHER WASTE RECOVERY INFRASTRUCTURE (Sheet 2 of 7)
04409-210	D1 (H)	WASTE QUARANTINE AREA	04409-227	D1 (Q)	OTHER WASTE RECOVERY INFRASTRUCTURE (Sheet 3 of 7)
04409-211	D1 (I)	WASTE INSPECTION AREA	04409-228	D1 (Q)	OTHER WASTE RECOVERY INFRASTRUCTURE (Sheet 4 of 7)
04409-212	D1 (J)	TRAFFIC CONTROL	04409-229	D1 (Q)	OTHER WASTE RECOVERY INFRASTRUCTURE (Sheet 5 of 7)
04409-213	D1 (K)	SEWERAGE AND SURFACE WATER DRAINAGE INFRASTRUCTURE (Sheet 1 of 6)	04409-230	D1 (Q)	OTHER WASTE RECOVERY INFRASTRUCTURE (Sheet 6 of 7)
04409-214	D1 (K)	SEWERAGE AND SURFACE WATER DRAINAGE INFRASTRUCTURE (Sheet 2 of 6)	04409-231	D1 (Q)	OTHER WASTE RECOVERY INFRASTRUCTURE (Sheet 7 of 7)
04409-215	D1 (K)	SEWERAGE AND SURFACE WATER DRAINAGE INFRASTRUCTURE (Sheet 3 of 6)	04409-232	D1 (U)	OTHER INFRASTRUCTURE (Sheet 1 of 2)
04409-216	D1 (K)	SEWERAGE AND SURFACE WATER DRAINAGE INFRASTRUCTURE (Sheet 4 of 6)	04409-233	D1 (U)	OTHER INFRASTRUCTURE (Sheet 2 of 2)

DRAWING STATUS											
WASTE LICENCE											
CLIENT											
AVR - ENVIRONMENTAL SOLUTIONS LTD.											
PROPOSED WASTE RECOVERY/TRANSFER AND SLUDGE DRYING FACILITY AT FOXHOLE, YOUGHAL Co. CORK.		A 10-03-04		ISSUED FOR WASTE LICENCE		CO'S					
APPENDIX		No.		DATE		REVISION		BY		No. DATE REVISION BY	
		DRAWN		CO'S		CLIENT FILE No.		FINBARR GANNON & CO. LTD.		CONSULTING ENGINEERS	
		DESIGNED		EO		DATE MAY '04		S/PATRICK'S HOUSE, LOWER GLANBERRIE ROAD, CORK.		TEL: 021-4588424 FAX: 021-4509104 E-MAIL: office@fgcl.ie	
		APPROVED		FG		SCALE N.T.S.		FGCL FILE No. 04/409		CAD FILE NAME 04409-INDEX.dwg	
DRAWING TITLE		DRAWING NUMBER		04409-INDEX		REV		A			
DRAWING INDEX SHEET		CLIENT APPROVAL									



- Legend**
- Site Boundary
 - NCT Centre
 - Youghal Landfill (Cork Co.Co.)
 - Youghal Shipping Lands
 - Dwelling Houses
 - Foxhole Industrial Estate
 - Foxhole Business Park
 - Overhead Powerline



Title: Site Location Map

Client:
AVR - Environmental Solutions Ltd.

Drawing No:
04409-200 D1

Drawing Status: Issue

Drawn by: SC

Checked by: COC

Approved by: AF

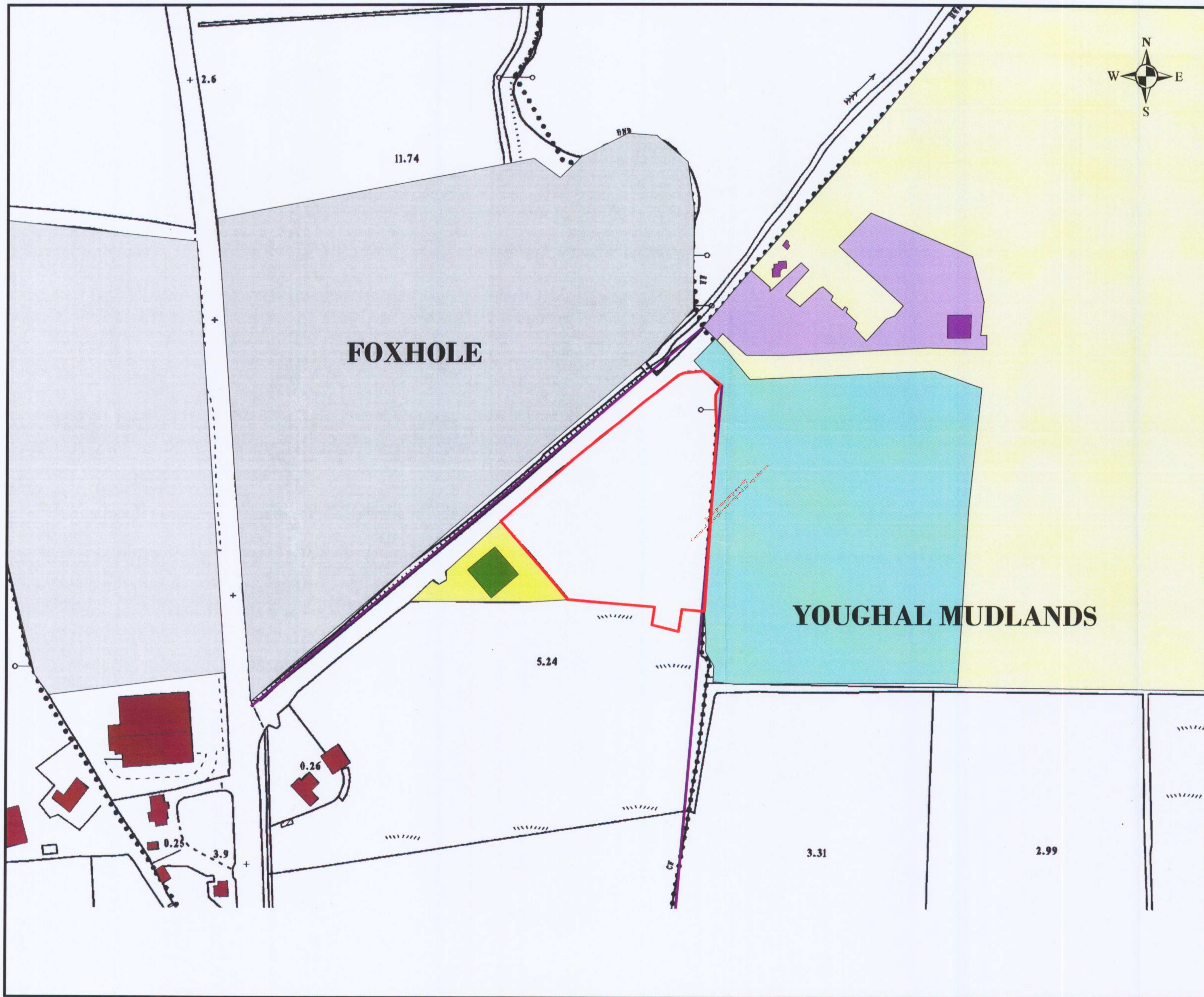
Project Ref: 2004_121

Ordnance Survey Ireland
License No: AR 0017004

OSi 1:10,560
Sheet No's: WD037 CK067

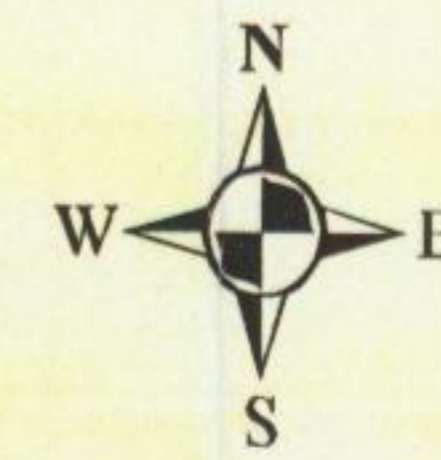
Scale: 1:10,560 (6")

SWS Environmental Services,
Shinagh House,
Bandon,
Co. Cork



Legend

- Site Boundary
- NCT Centre
- Youghal Landfill (Cork Co.Co.)
- Youghal Shipping Lands
- Dwelling Houses
- Foxhole Industrial Estate
- Foxhole Business Park
- Overhead Powerline



SWS Environmental Services
 MEMBER OF
 SWS Group

Title: Site Location Map

Client:
 AVR - Environmental Solutions Ltd.

Drawing No:
 04409-201 D1

Drawing Status: Issue

Drawn by: SC

Checked by: COC

Approved by: AF

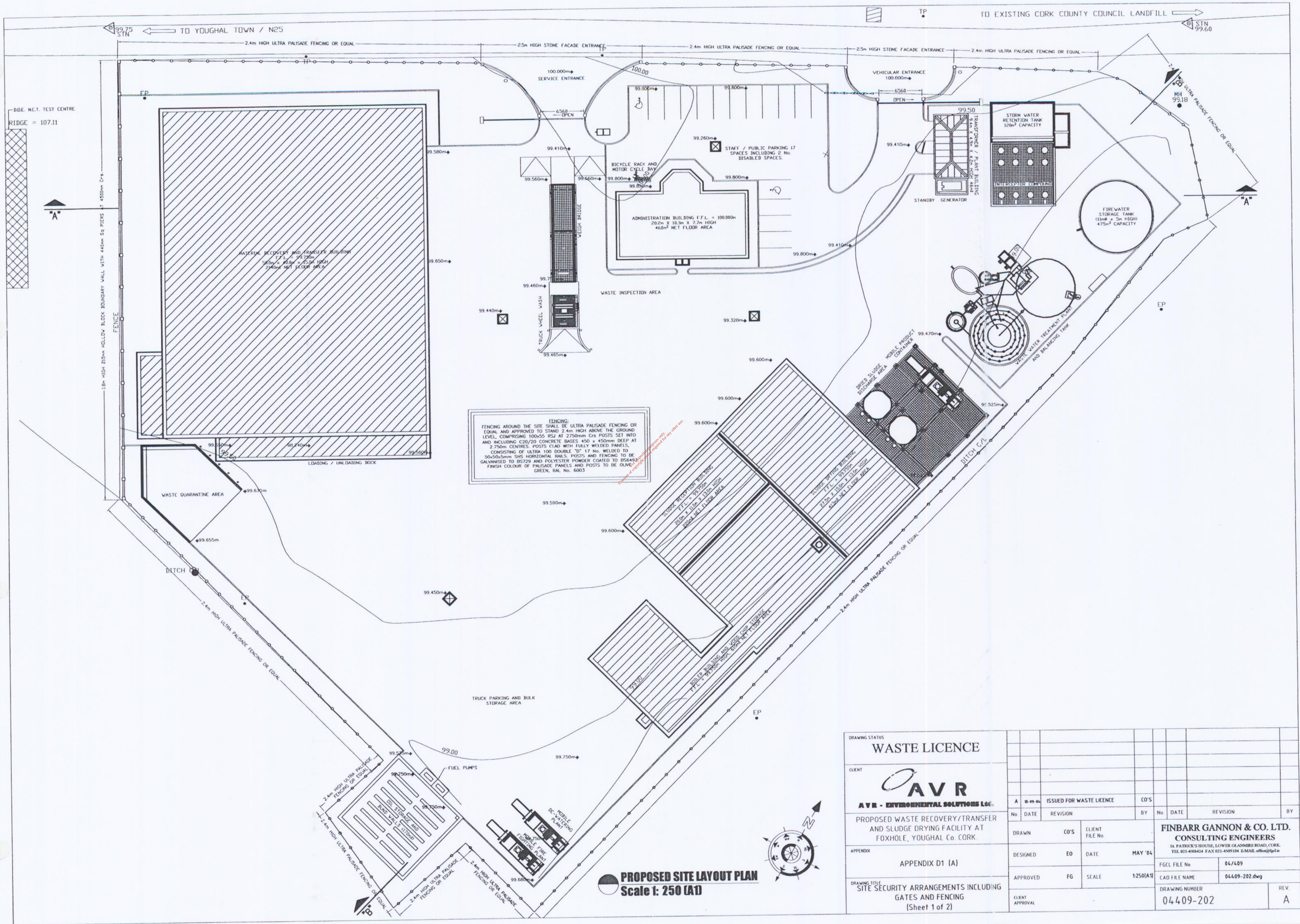
Project Ref: 2004_121

Ordnance Survey Ireland
 License No: AR 0017004

OSi 1:2500 Sheet No's:
 6253-C 6253-D

Scale: 1:2,500 (25")

SWS Environmental Services,
 Shinagh House,
 Bandon,
 Co. Cork



FENCING:
 FENCING AROUND THE SITE SHALL BE ULTRA PALISADE FENCING OR EQUAL AND APPROVED TO STAND 2.4m HIGH ABOVE THE GROUND LEVEL, COMPRISING 100x55 HSIJ AT 2750mm C/S POSTS SET INTO AND INCLUDING C20/20 CONCRETE BASES 450 x 450mm DEEP AT 2.75m CENTRES. POSTS CLAD WITH FULLY WELDED PANELS, CONSISTING OF ULTRA 100 DOUBLE "D" 17 No. WELDED TO 50x60x3mm SIS HORIZONTAL RAILS. POSTS AND FENCING TO BE GALVANISED TO BS729 AND POLYESTER POWDER COATED TO BS649. FINISH COLOUR OF PALISADE PANELS AND POSTS TO BE OLIVE GREEN, RAL No. 6003

PROPOSED SITE LAYOUT PLAN
 Scale 1: 250 (A1)

WASTE LICENCE

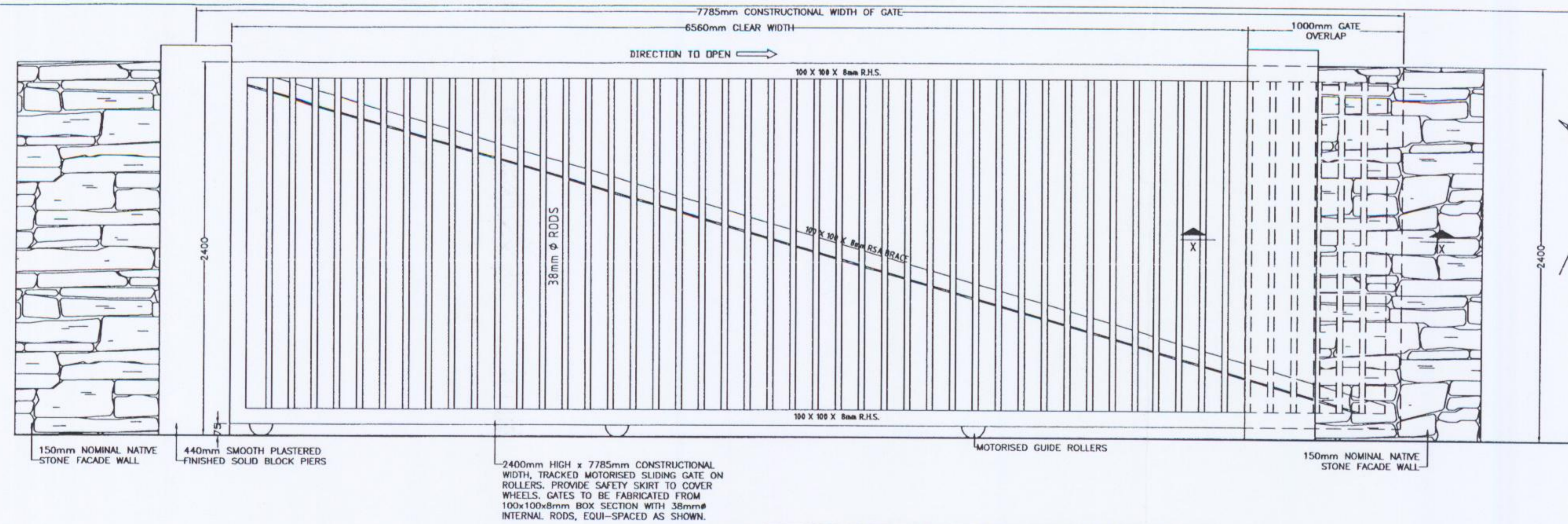


PROPOSED WASTE RECOVERY/TRANSFER AND SLUDGE DRYING FACILITY AT FOXHOLE, YOUGHAL Co. CORK.

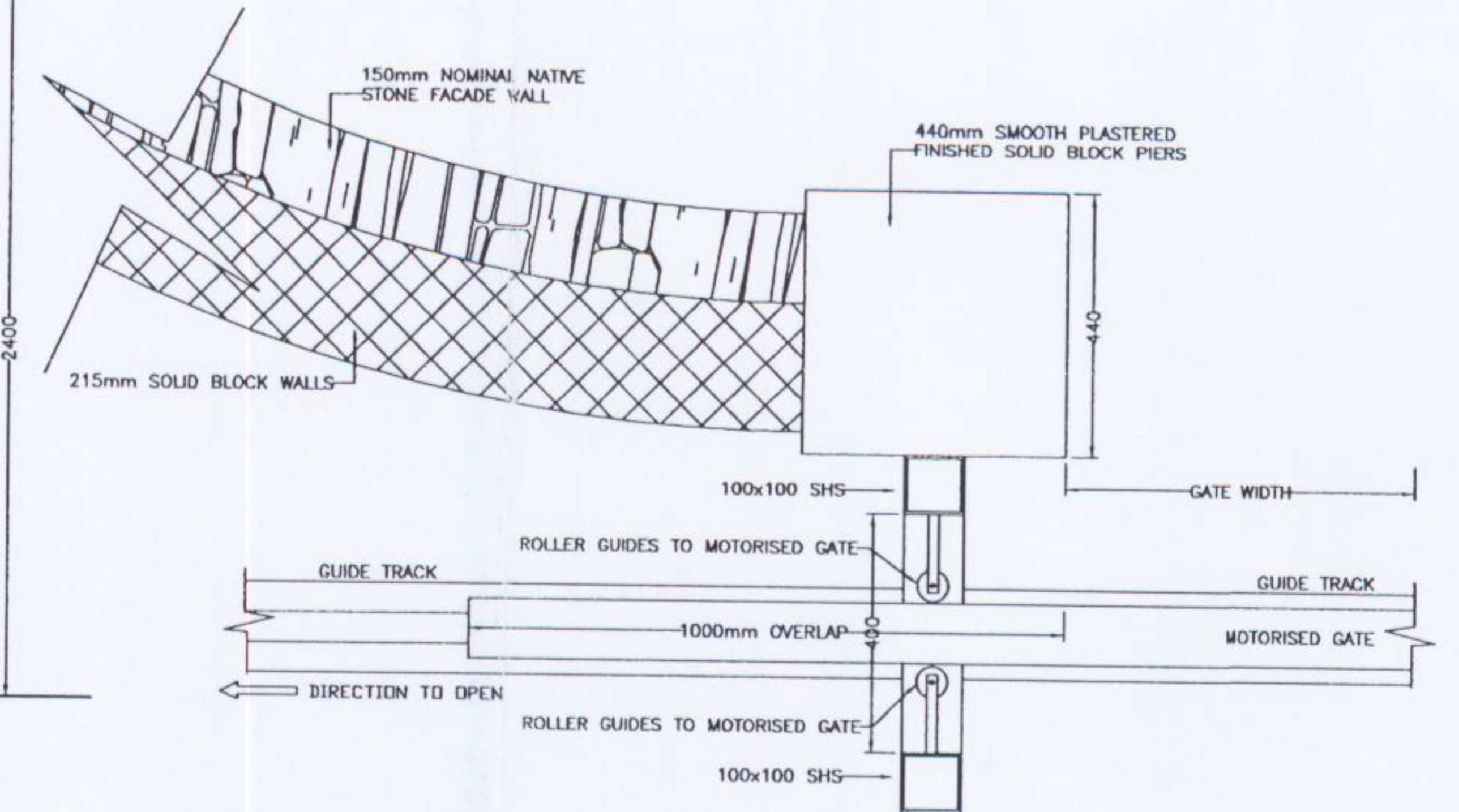
APPENDIX D1 (A)

DRAWING TITLE
 SITE SECURITY ARRANGEMENTS INCLUDING GATES AND FENCING (Sheet 1 of 2)

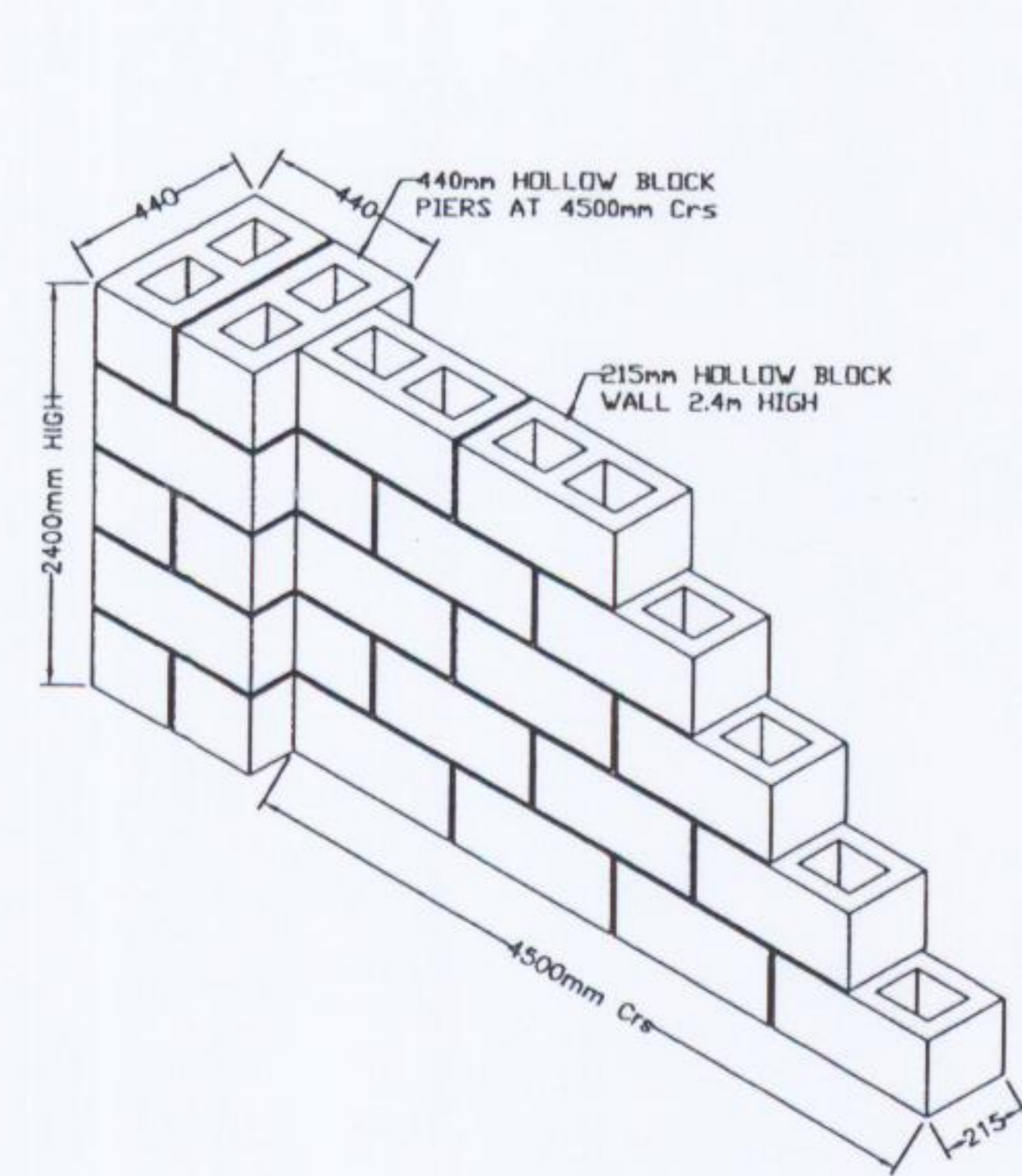
CLIENT		ISSUED FOR WASTE LICENCE		CO'S	
AVR - ENVIRONMENTAL SOLUTIONS LTD.		No.	DATE	REVISION	BY
DRAWN		CO'S	CLIENT FILE No.	FINBARR GANNON & CO. LTD.	
DESIGNED		EO	DATE	CONSULTING ENGINEERS	
APPROVED		FG	SCALE	ST PATRICK'S HOUSE, LOWER GLANMIRE ROAD, CORK.	
CLIENT APPROVAL				TEL 021-408424 FAX 021-4509104 E-MAIL office@fgcl.ie	
		APPENDIX		FGCL FILE No. 04/409	
				CAD FILE NAME 04409-202.dwg	
				DRAWING NUMBER 04409-202	
				REV. A	



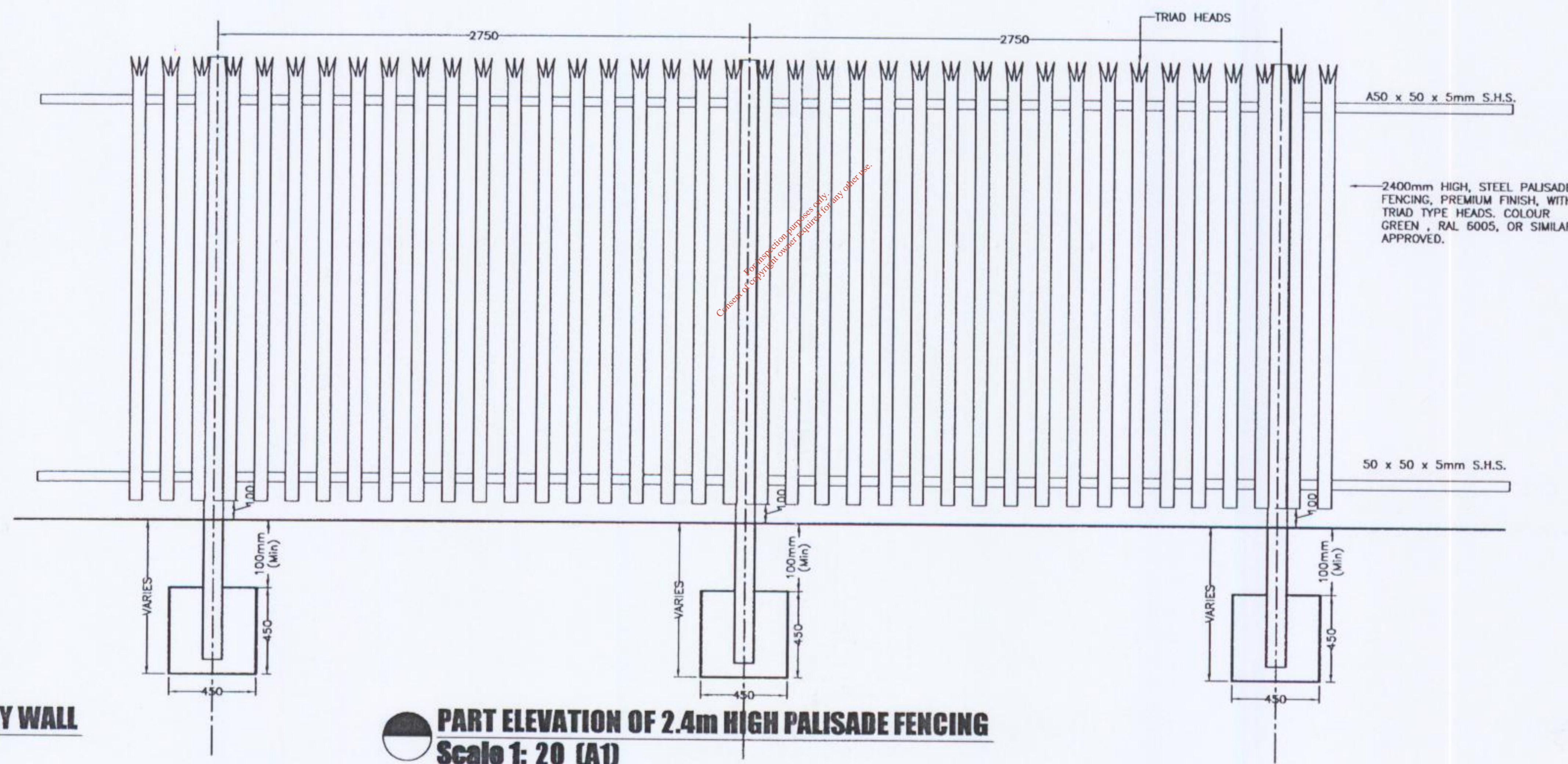
ELEVATION OF MOTORISED SLIDING ENTRANCE GATE
Scale 1: 20 (A1) (SERVICE AND VEHICULAR ENTRANCES)



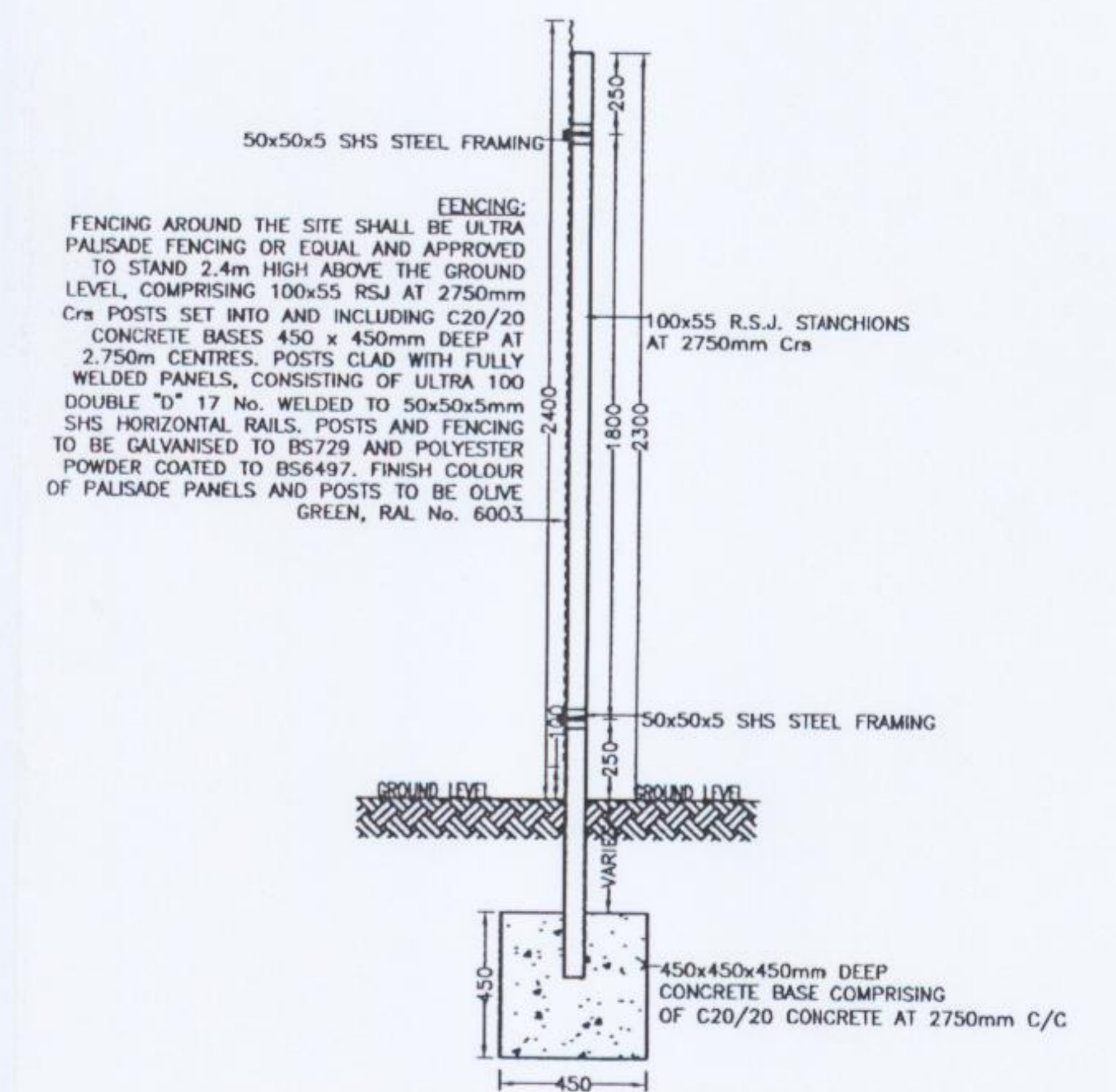
SECTION PLAN X-X
Scale 1: 10 (A1)



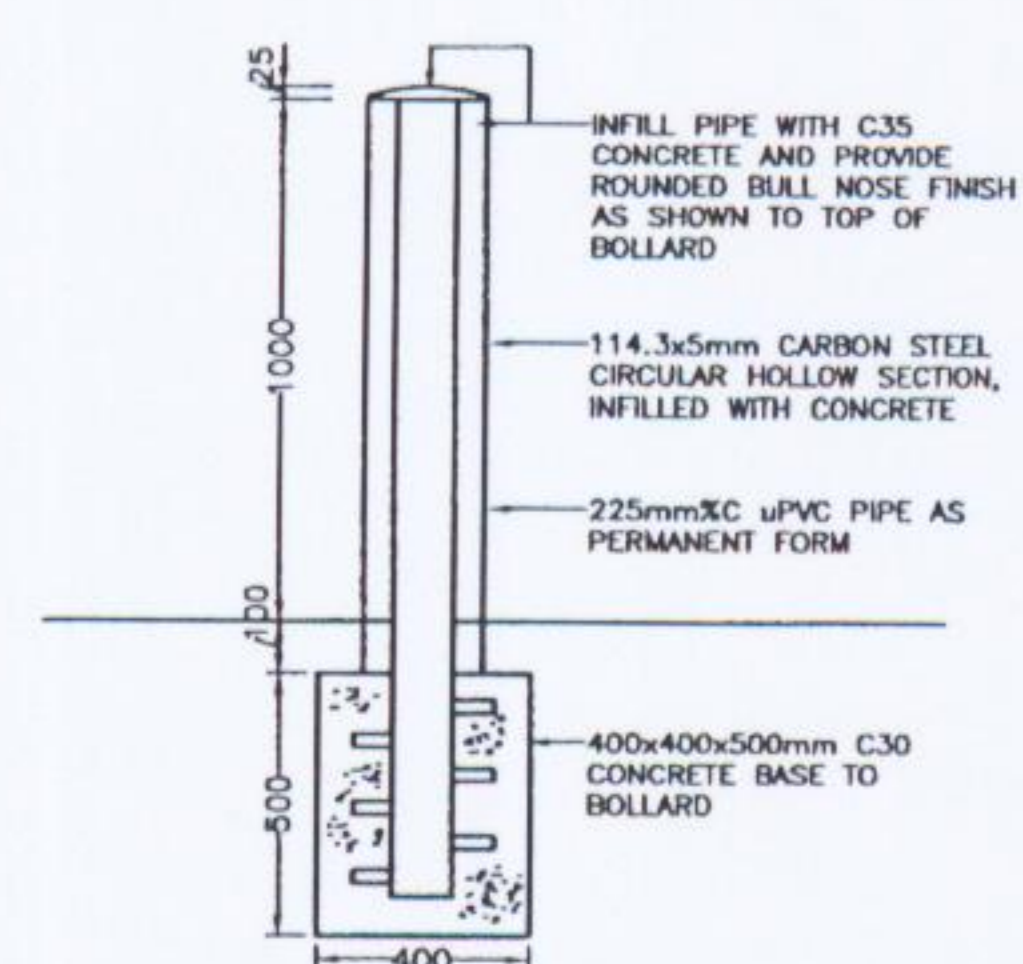
PART ELEVATION OF 2.4m HIGH BLOCK BOUNDARY WALL
Scale 1: 20 (A1)



PART ELEVATION OF 2.4m HIGH PALISADE FENCING
Scale 1: 20 (A1)

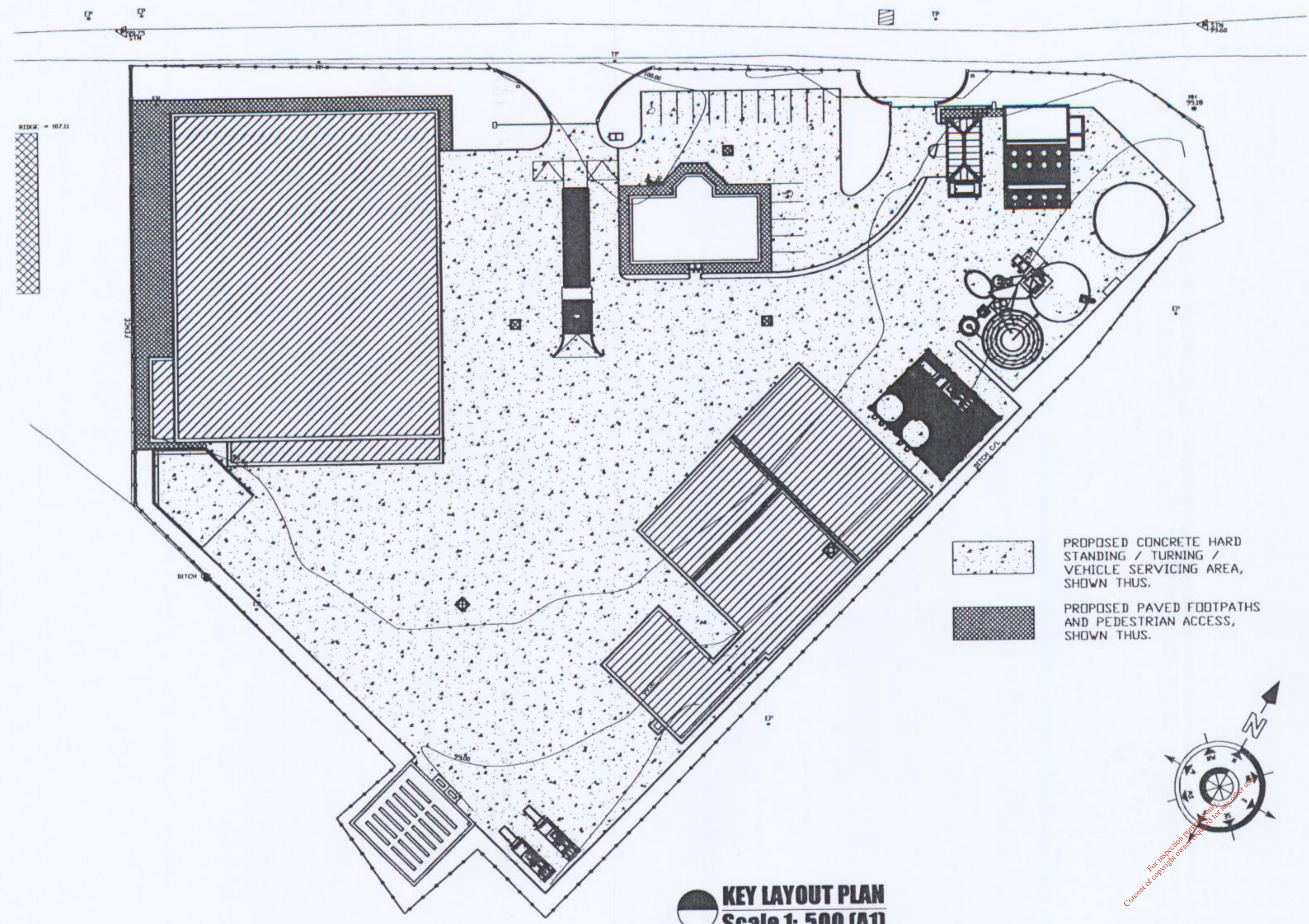


SECTION PALISADE FENCING
Scale 1: 20 (A1)



PROTECTIVE BOLLARDS
Scale 1: 20 (A1)

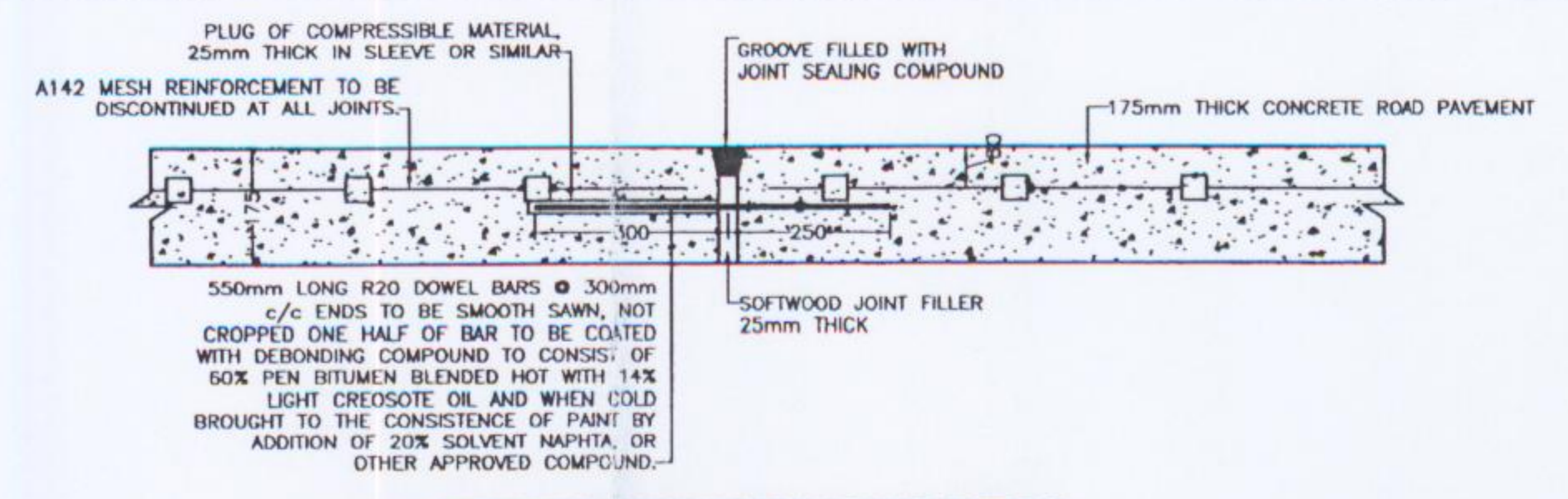
DRAWING STATUS WASTE LICENCE					
CLIENT AVR AVR - ENVIRONMENTAL SOLUTIONS Ltd.					
PROPOSED WASTE RECOVERY/TRANSFER AND SLUDGE DRYING FACILITY AT FOXHOLE, YOUGHAL Co. CORK.		A	18-09-04	ISSUED FOR WASTE LICENCE	CO'S
APPENDIX APPENDIX D1 (A)		No.	DATE	REVISION	BY
DRAWING TITLE SITE SECURITY ARRANGEMENTS INCLUDING GATES AND FENCING (Sheet 2 of 2)		DRAWN	CO'S	CLIENT FILE No.	
		DESIGNED	EO	DATE	MAY '04
		APPROVED	FG	SCALE	120(A1)
CLIENT APPROVAL		DRAWING NUMBER 04409-203		REV. A	
		FINBARR GANNON & CO. LTD. CONSULTING ENGINEERS 81 PATRICK'S HOUSE, LOWER GLANMIRE ROAD, CORK. TEL: 021-4598424 FAX: 021-4599104 E-MAIL: office@fgel.ie		FGCL FILE No. 04/409 CAD FILE NAME 04409-203.dwg	



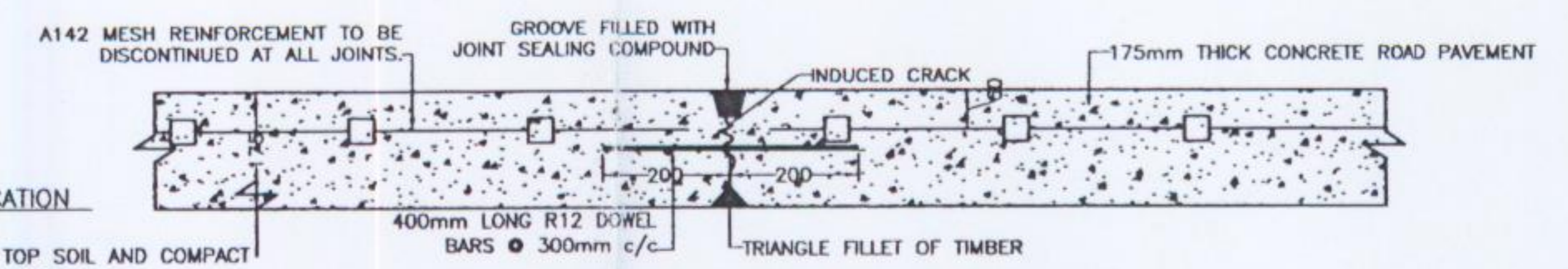
KEY LAYOUT PLAN
Scale 1: 500 (A1)

PROPOSED CONCRETE HARD STANDING / TURNING / VEHICLE SERVICING AREA, SHOWN THUS.

PROPOSED PAVED FOOTPATHS AND PEDESTRIAN ACCESS, SHOWN THUS.



TYPICAL EXPANSION JOINT DETAIL
Scale 1: 10 (A1)



ROAD SPECIFICATION

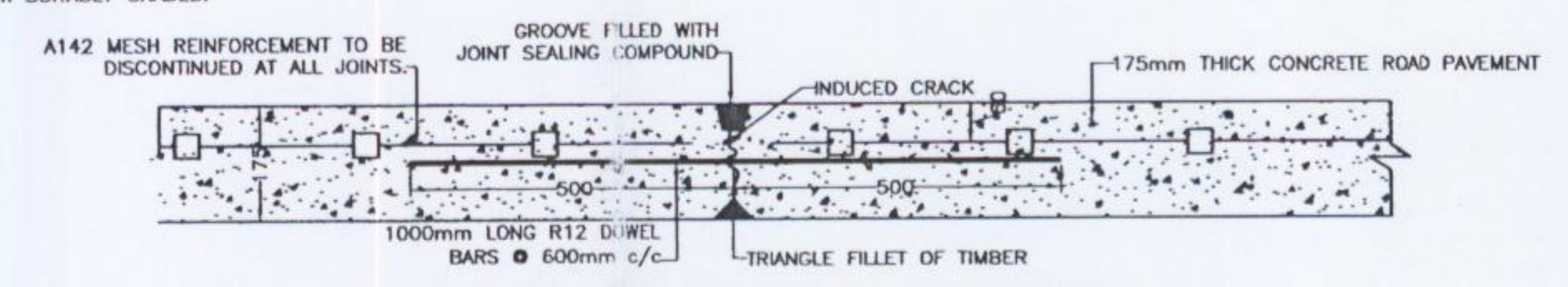
REMOVE EXISTING TOP SOIL AND COMPACT FORMATION LEVEL FOR:-

175mm GRADE C30 CONCRETE REINFORCED PAVEMENT WITH A142 MESH, 60mm COVER FROM TOP OF SLAB, WITH CONTRACTION JOINTS AT 6m CENTRES AND EXPANSION JOINTS AT 36m CENTRES MAXIMUM ON.

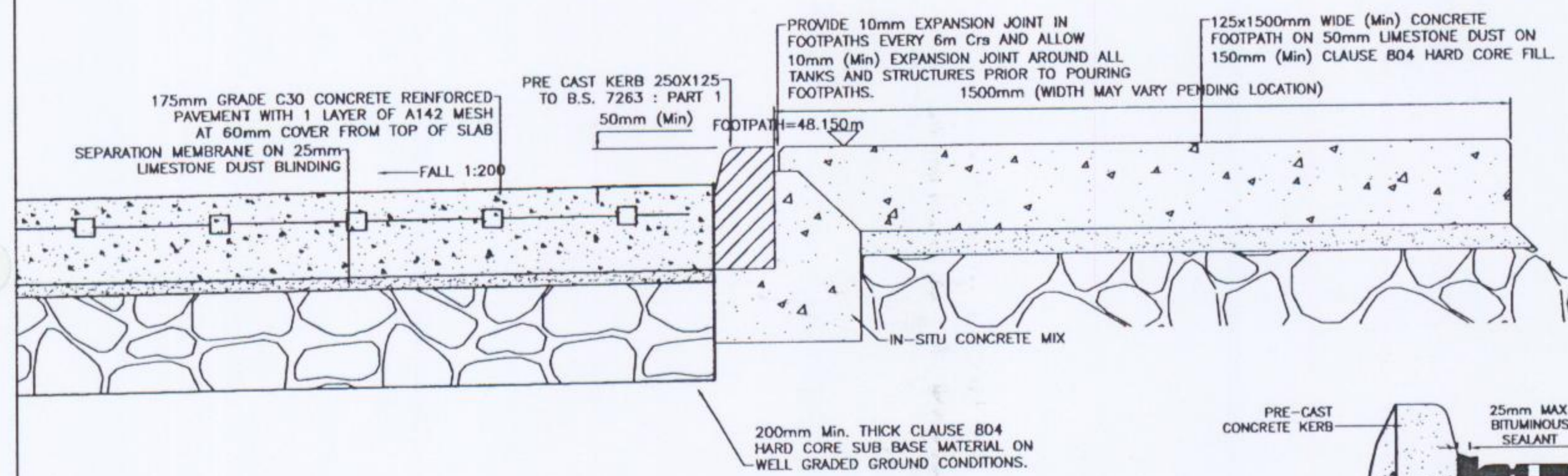
A SEPARATION MEMBRANE CONSISTING OF POLYTHENE SHEETS OR WATERPROOF PAPER LAPPED 300mm AT JOINTS ON.

25mm LIMESTONE DUST BLINDING ON, CLAUSE B04 CRUSHED ROCK, MINIMUM THICKNESS 200mm SUITABLY GRADED.

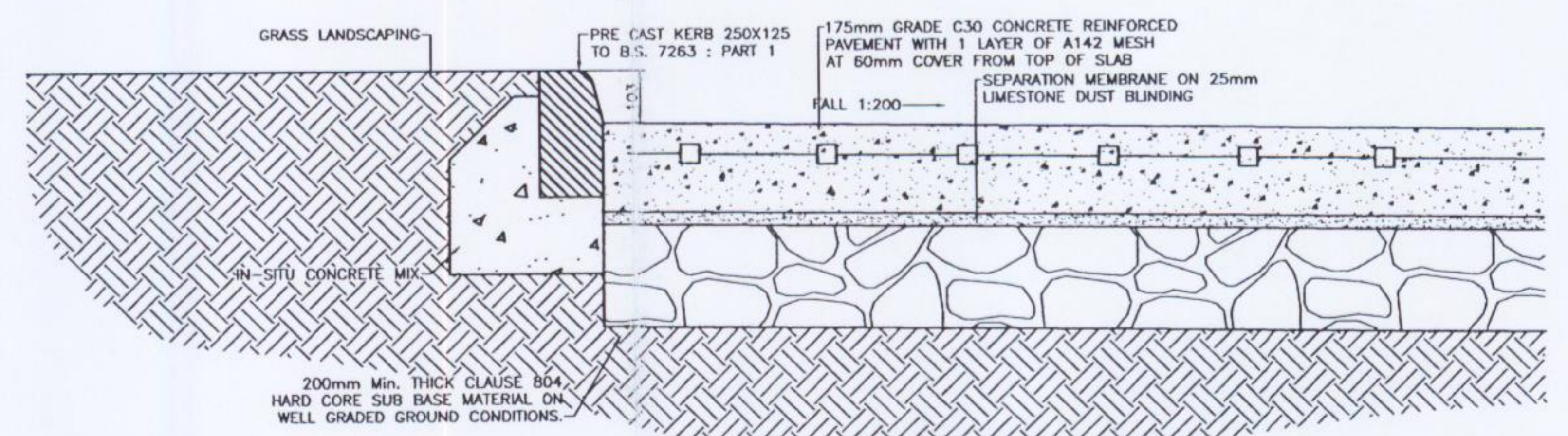
TYPICAL CONTRACTION JOINT DETAIL
Scale 1: 10 (A1)



TYPICAL LONGITUDINAL JOINT DETAIL
Scale 1: 10 (A1)

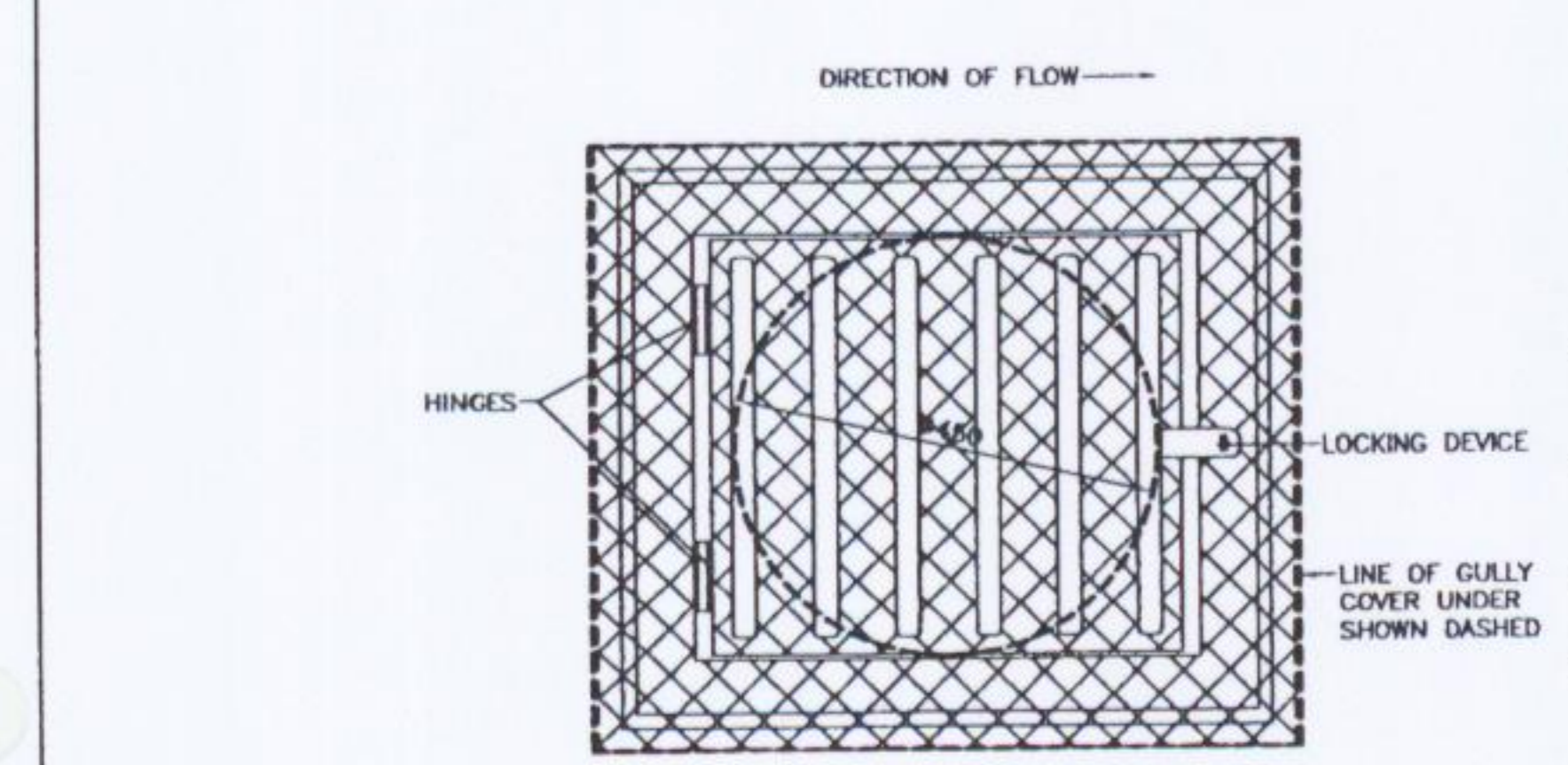


TYPICAL FOOTPATH DETAILS
Scale 1: 10 (A1)



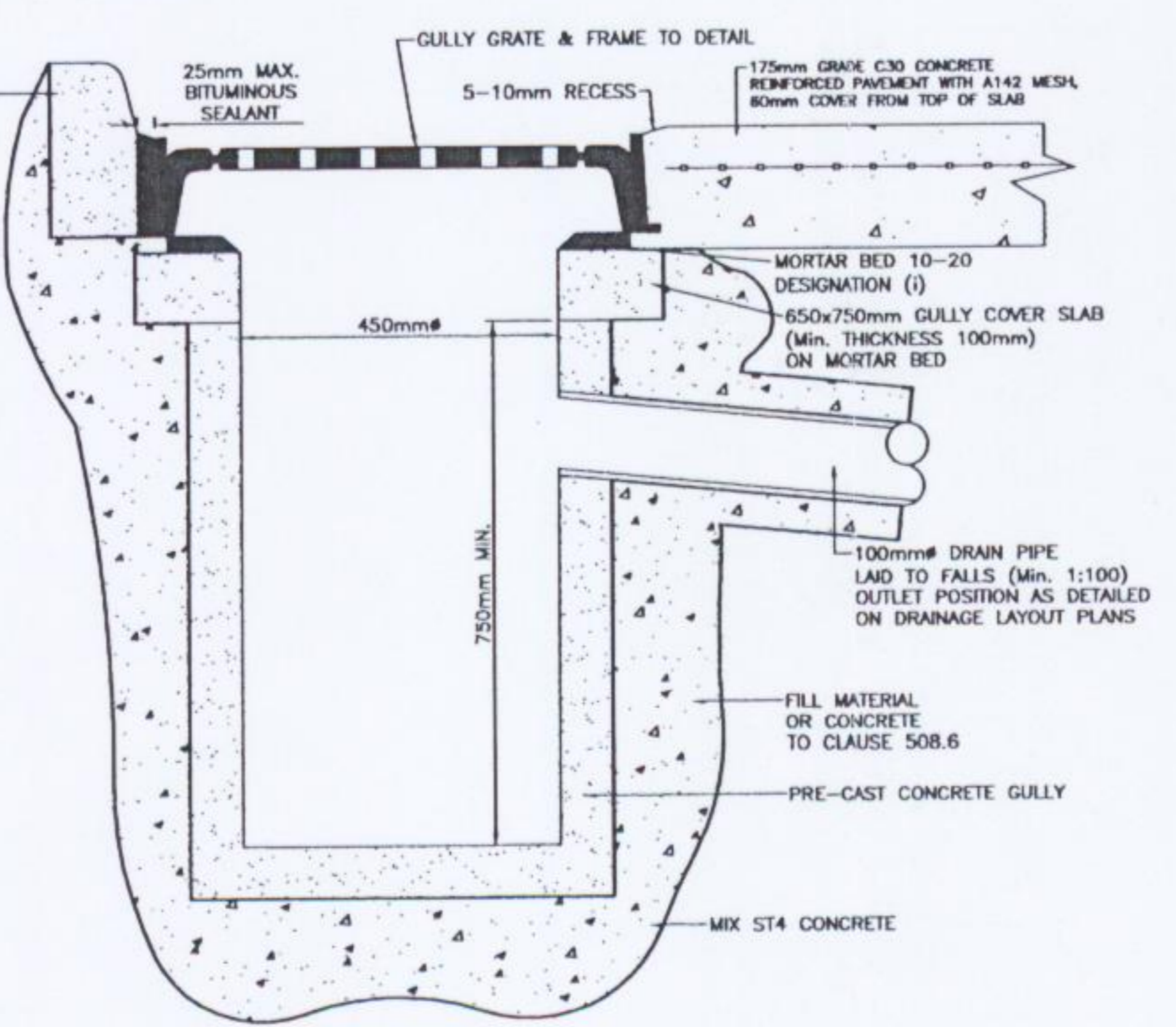
ROAD KERB DETAIL
Scale 1: 10 (A1)

CONCRETE ROAD SPECIFICATION DETAILS
Scale 1: 10 (A1)



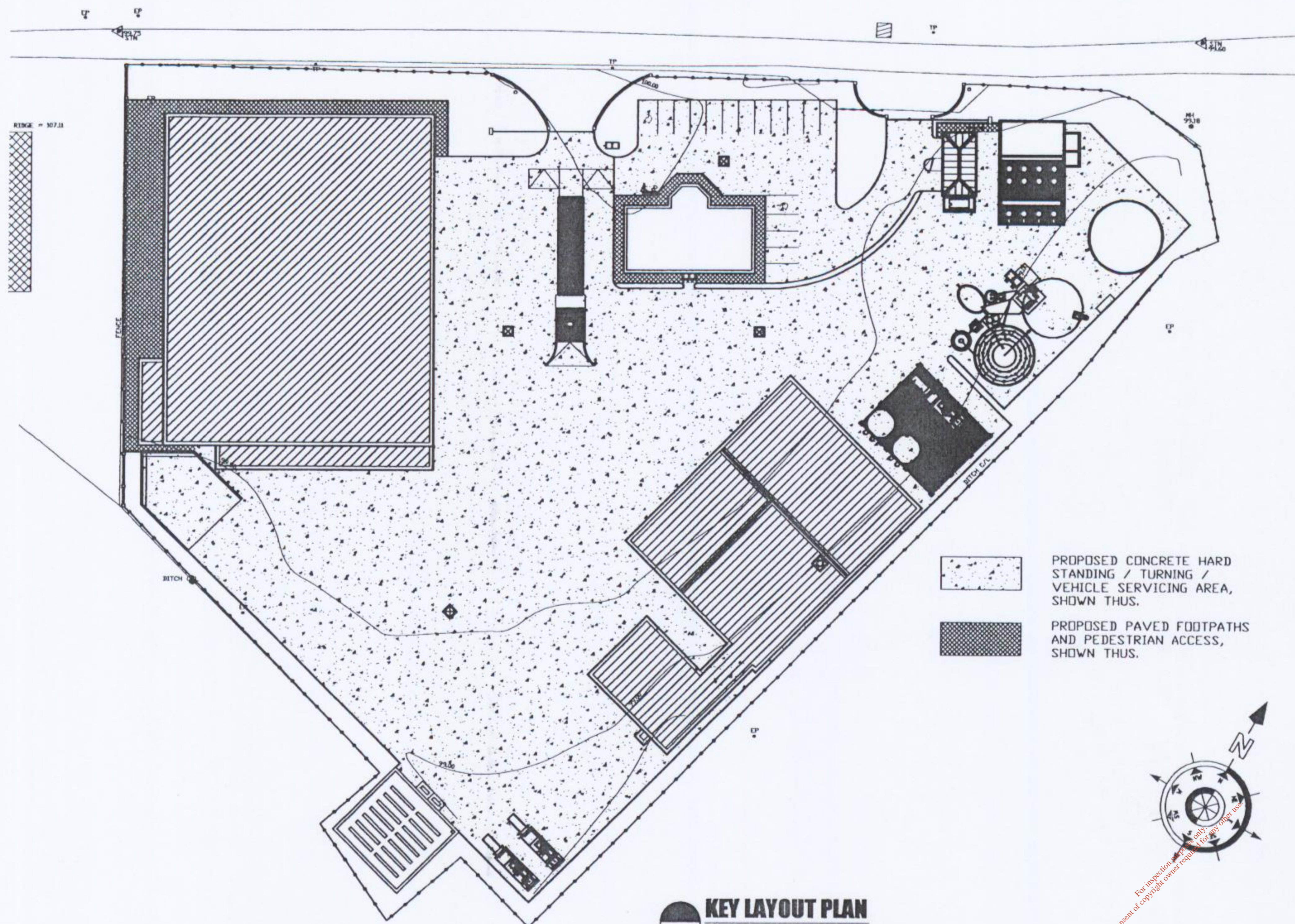
PLAN OF GULLY GRATING
Scale 1: 10 (A1)

- THE MINIMUM DEPTH FROM THE TOP OF THE GRATING TO THE TOP OF THE GULLY OUTLET IS TO BE 750mm WHEN THE CONNECTING PIPE IS UNDER A CARREGWAY OR ON A HARD SHOULDER AND 600mm ELSEWHERE.
- PRECAST CONCRETE GULLIES AND COVER SLABS SHALL BE TO B.S. 5911: Pt. 230.
- WHERE A GULLY HAS A TRAP THE STOPPERS SHALL COMPLY WITH THE REQUIREMENTS OF B.S. 5911: Pt. 2.
- GULLY GRATING TO COMPLY WITH I.S. EN 124.
- GULLY GRATING TO BE PROVIDED WITH A LOCKING DEVICE.



TYPICAL GULLY DETAILS
Scale 1: 10 (A1)

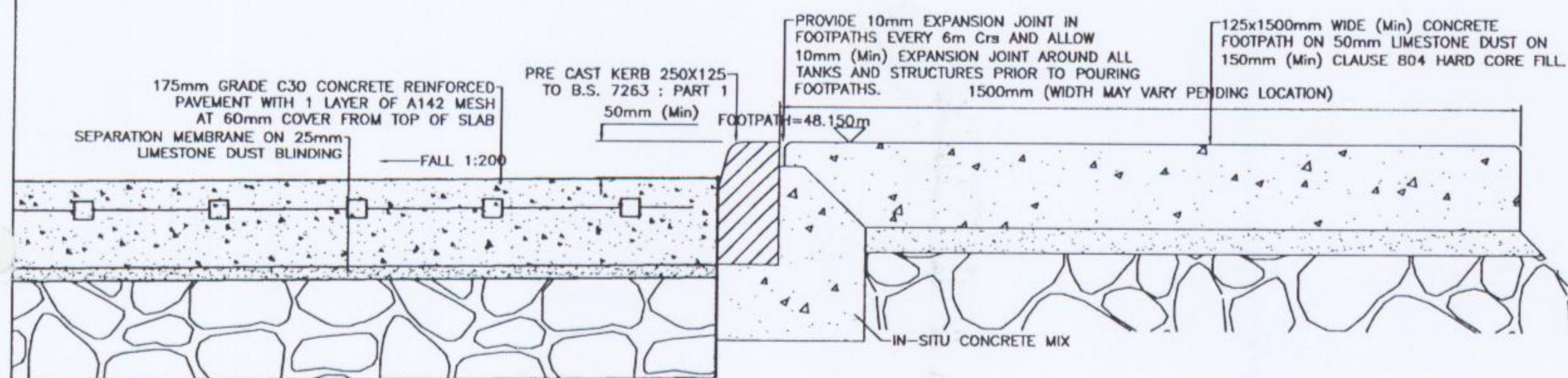
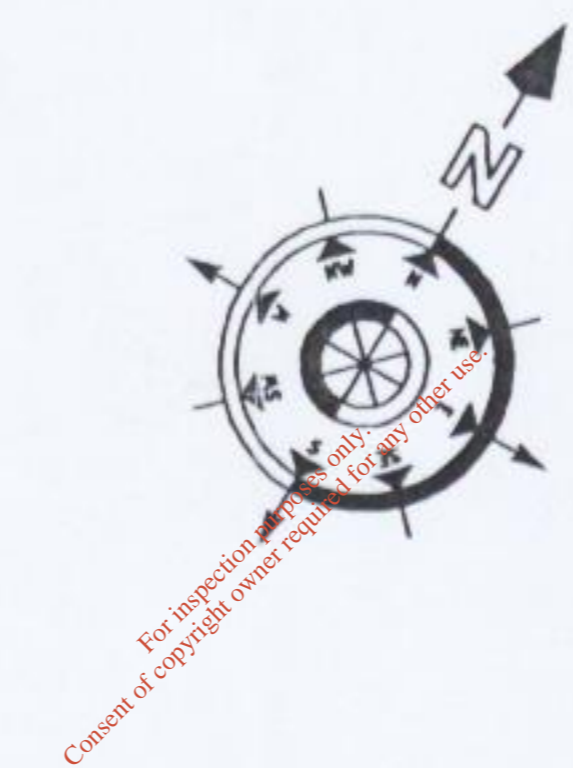
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CLIENT	AVR AVR - ENVIRONMENTAL SOLUTIONS Ltd.	A	18-09-04	ISSUED FOR WASTE LICENCE	CO'S				
APPENDIX	APPENDIX D1 (B)	No.	DATE	REVISION	BY	No.	DATE	REVISION	BY
DRAWING TITLE	DESIGN FOR SITE ROADS	DRAWN	CO'S	CLIENT FILE No.		FINBARR GANNON & CO. LTD. CONSULTING ENGINEERS St. PATRICK'S HOUSE, LOWER GLANMIRE ROAD, CORK. TEL: 021-4588424 FAX: 021-4509104 E-MAIL: office@fgcl.ie			
		DESIGNED	ED	DATE	MAY '04	FGCL FILE No.	04/409		
		APPROVED	FG	SCALE	1500(A1)	CAD FILE NAME	04409-204.dwg		
		CLIENT APPROVAL				DRAWING NUMBER	04409-204	REV.	A



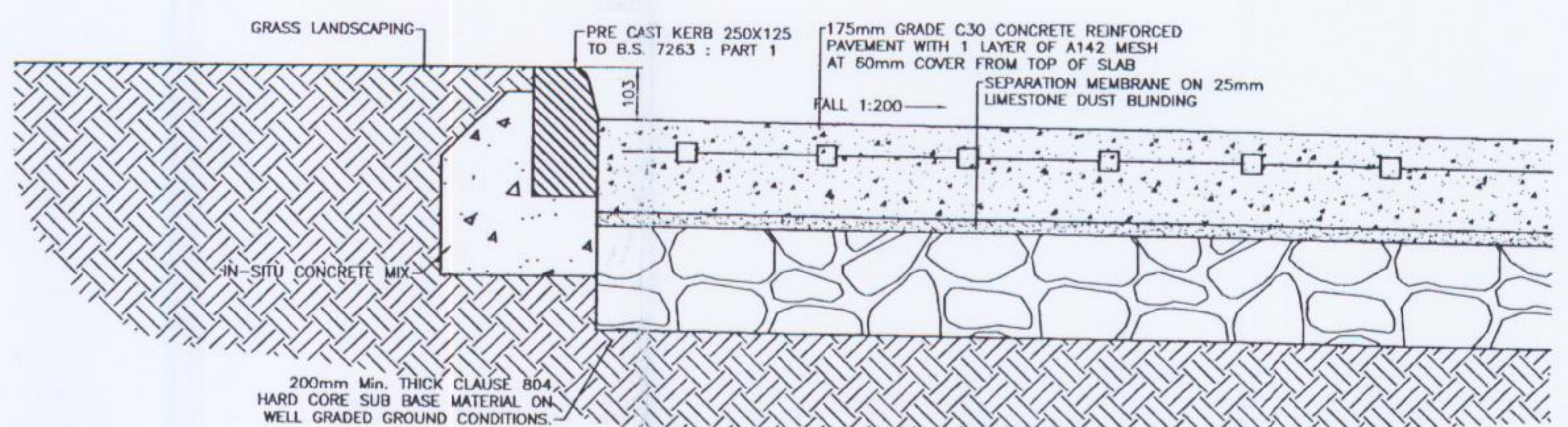
KEY LAYOUT PLAN
Scale 1: 500 (A1)

PROPOSED CONCRETE HARD STANDING / TURNING / VEHICLE SERVICING AREA, SHOWN THUS.

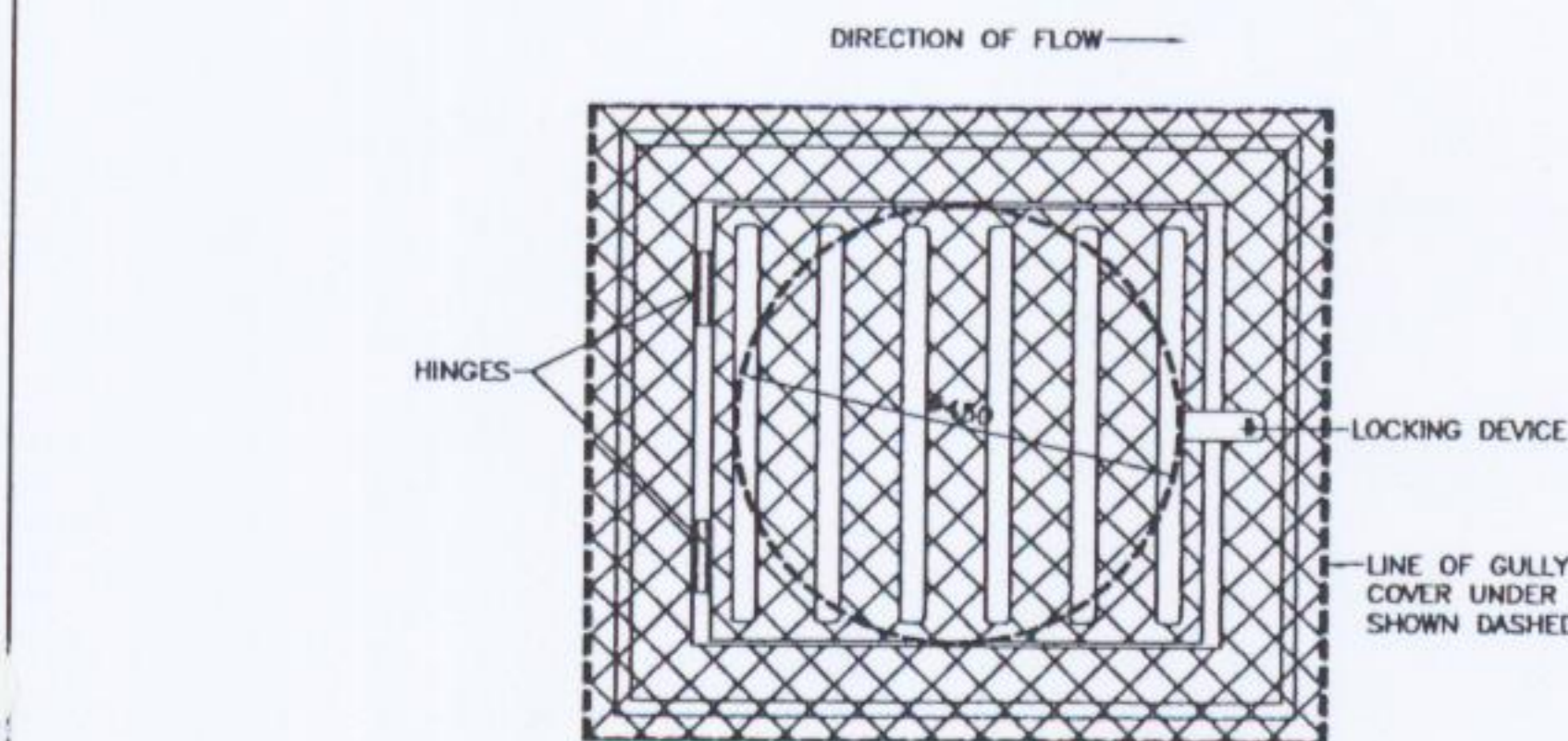
PROPOSED PAVED FOOTPATHS AND PEDESTRIAN ACCESS, SHOWN THUS.



TYPICAL FOOTPATH DETAILS
Scale 1: 10 (A1)

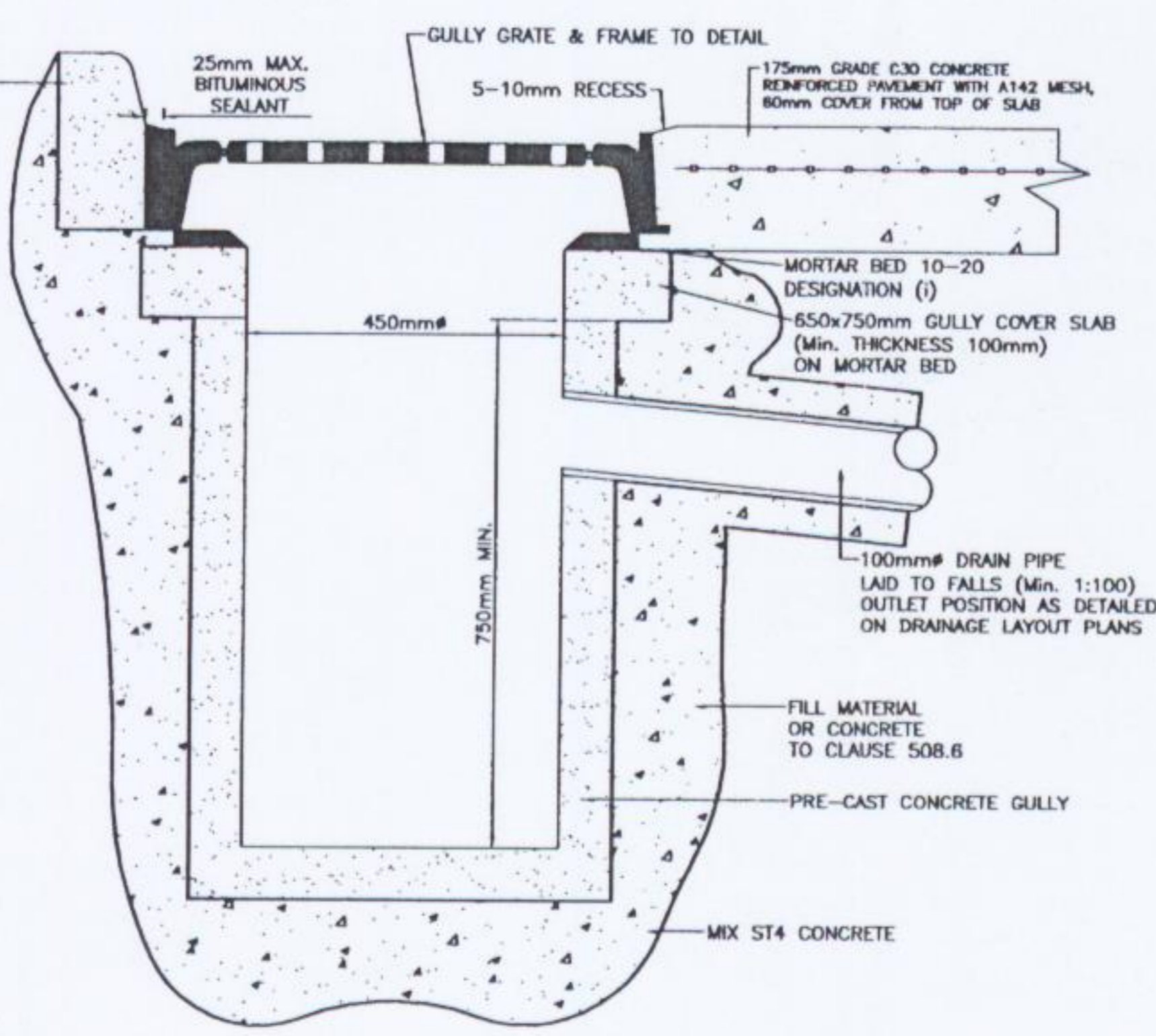


ROAD KERB DETAIL
Scale 1: 10 (A1)

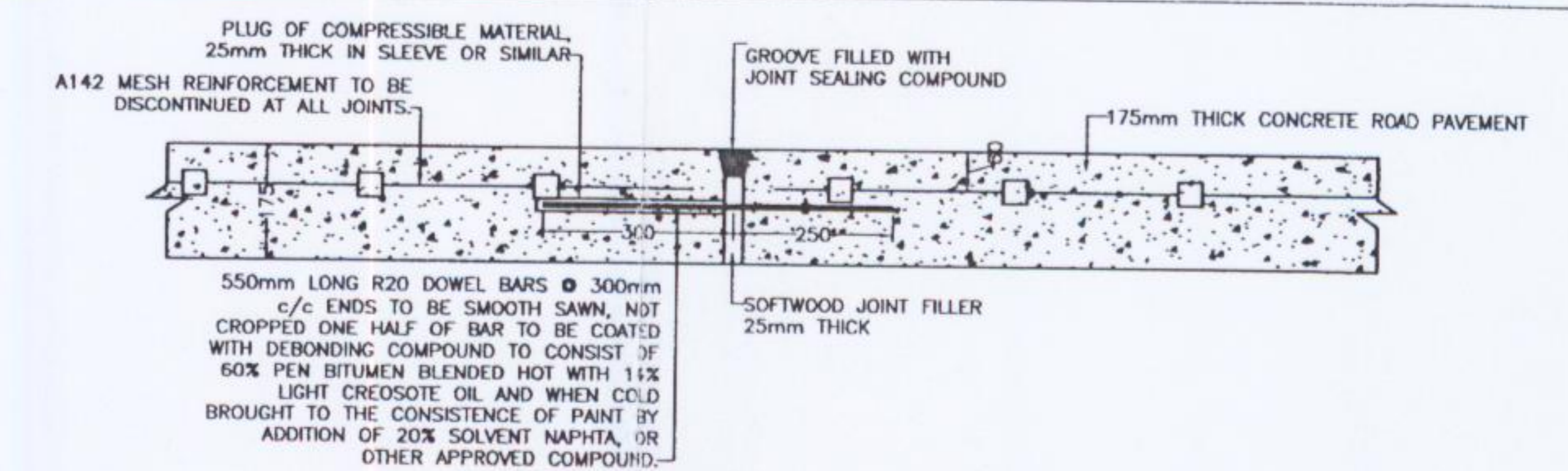


PLAN OF GULLY GRATING
Scale 1: 10 (A1)

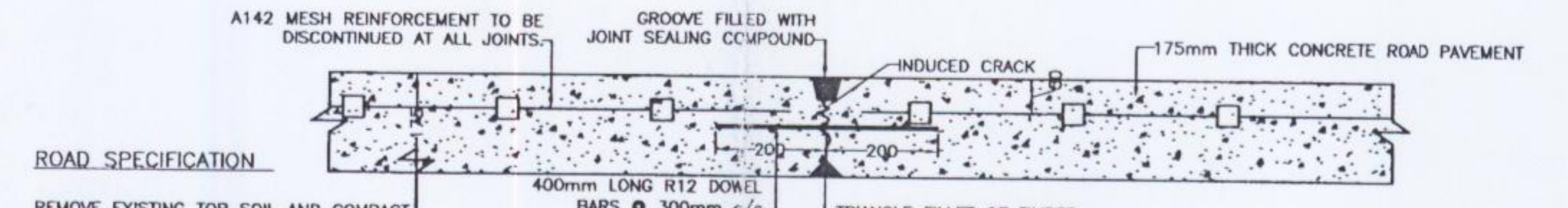
1. THE MINIMUM DEPTH FROM THE TOP OF THE GRATING TO THE TOP OF THE GULLY OUTLET IS TO BE 750mm WHEN THE CONNECTING PIPE IS UNDER A CARRIAGEWAY OR ON A HARD SHOULDER AND 600mm ELSEWHERE.
2. PRECAST CONCRETE GULLIES AND COVER SLABS SHALL BE TO B.S. 5911: PL. 2.30.
3. WHERE A GULLY HAS A TRAP THE STOPPERS SHALL COMPLY WITH THE REQUIREMENTS OF B.S. 5911: PL. 2.
4. GULLY GRATING TO COMPLY WITH I.S. EN 124.
5. GULLY GRATING TO BE PROVIDED WITH A LOCKING DEVICE.



TYPICAL GULLY DETAILS
Scale 1: 10 (A1)



TYPICAL EXPANSION JOINT DETAIL
Scale 1: 10 (A1)



ROAD SPECIFICATION
REMOVE EXISTING TOP SOIL AND COMPACT FORMATION LEVEL FOR:-

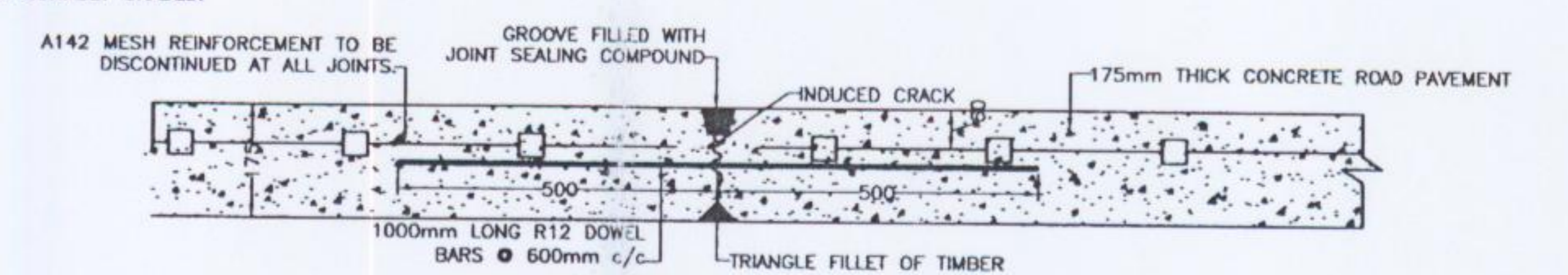
175mm GRADE C30 CONCRETE REINFORCED PAVEMENT WITH A142 MESH, 60mm COVER FROM TOP OF SLAB, WITH CONTRACTION JOINTS AT 6m CENTRES AND EXPANSION JOINTS AT 36m CENTRES MAXIMUM ON.

A SEPARATION MEMBRANE CONSISTING OF POLYTHENE SHEETS OR WATERPROOF PAPER LAPPED 300mm AT JOINTS ON.

25mm LIMESTONE DUST BLINDING ON.

CLAUSE B04 CRUSHED ROCK, MINIMUM THICKNESS 200mm SUITABLY GRADED.

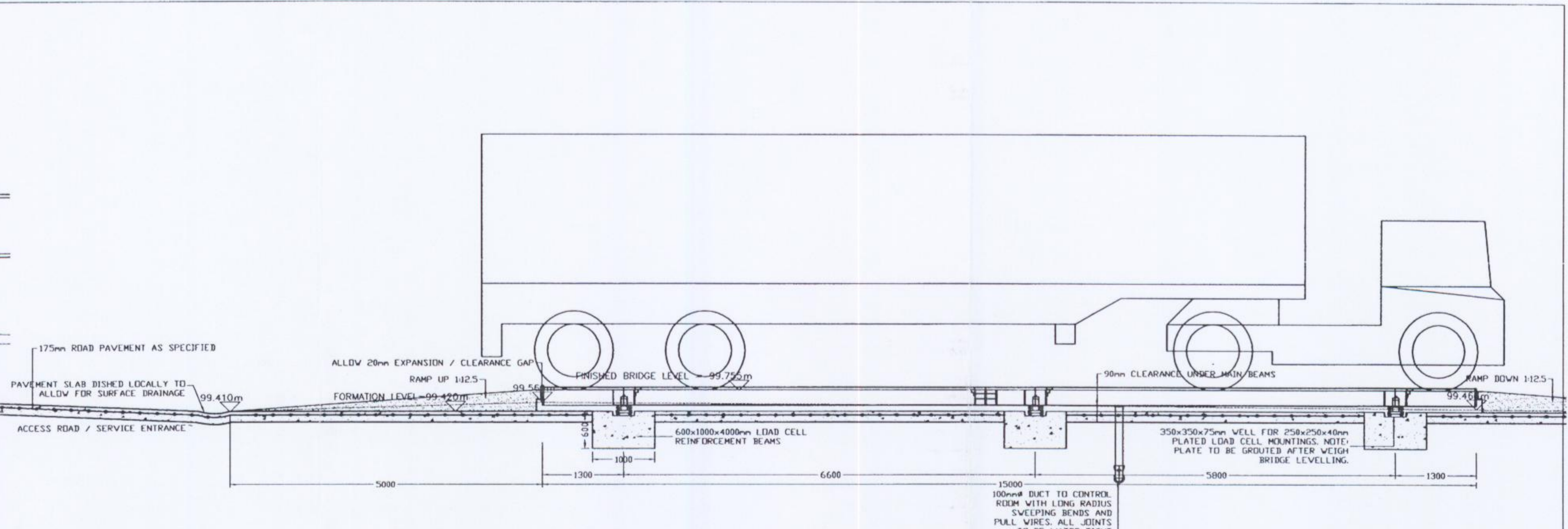
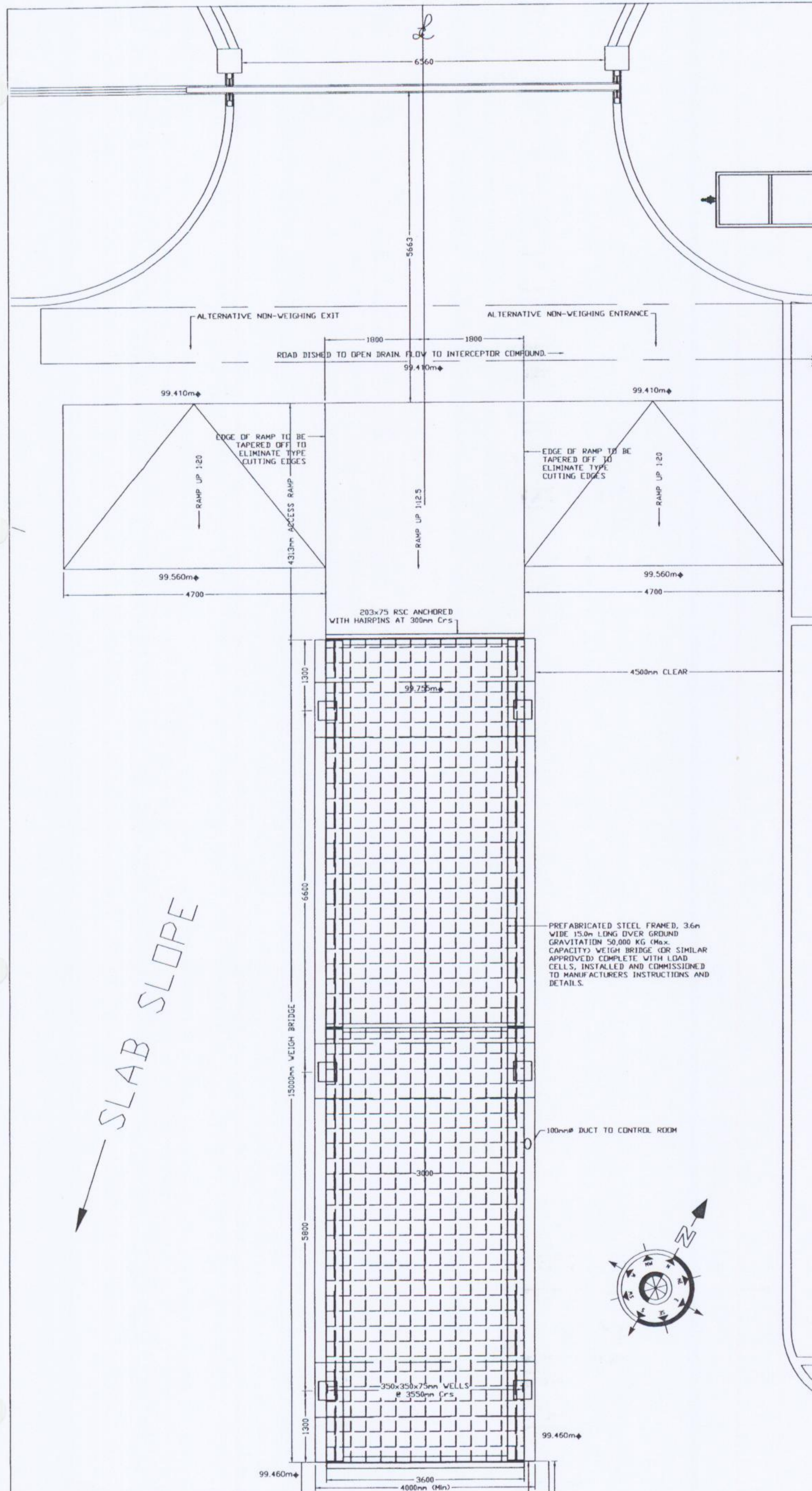
TYPICAL CONTRACTION JOINT DETAIL
Scale 1: 10 (A1)



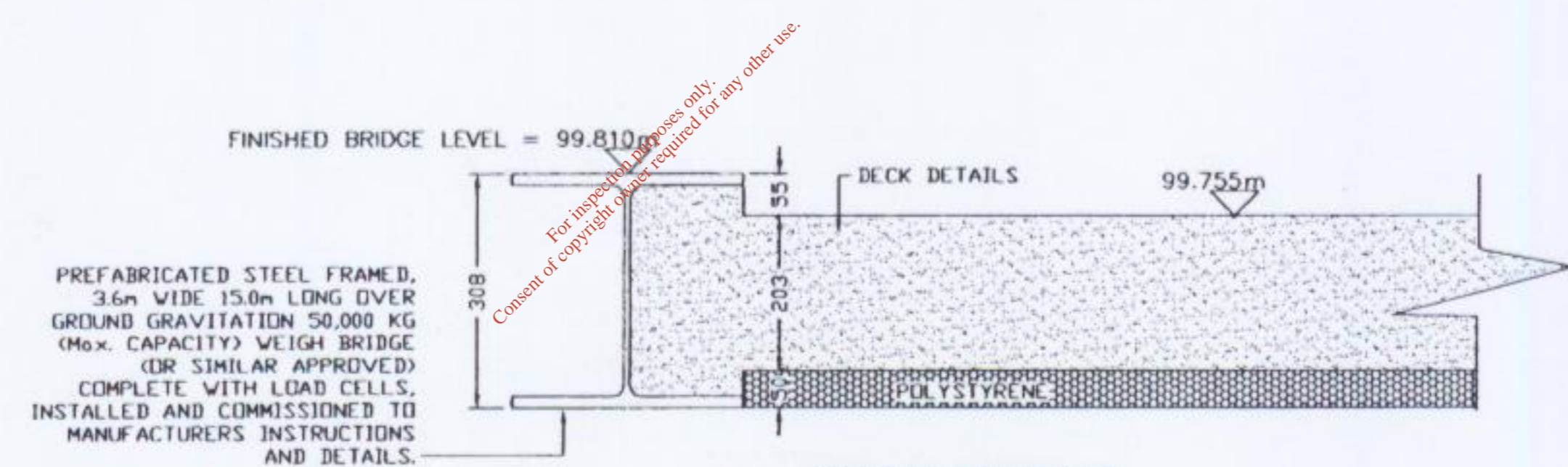
TYPICAL LONGITUDINAL JOINT DETAIL
Scale 1: 10 (A1)

CONCRETE ROAD SPECIFICATION DETAILS
Scale 1: 10 (A1)

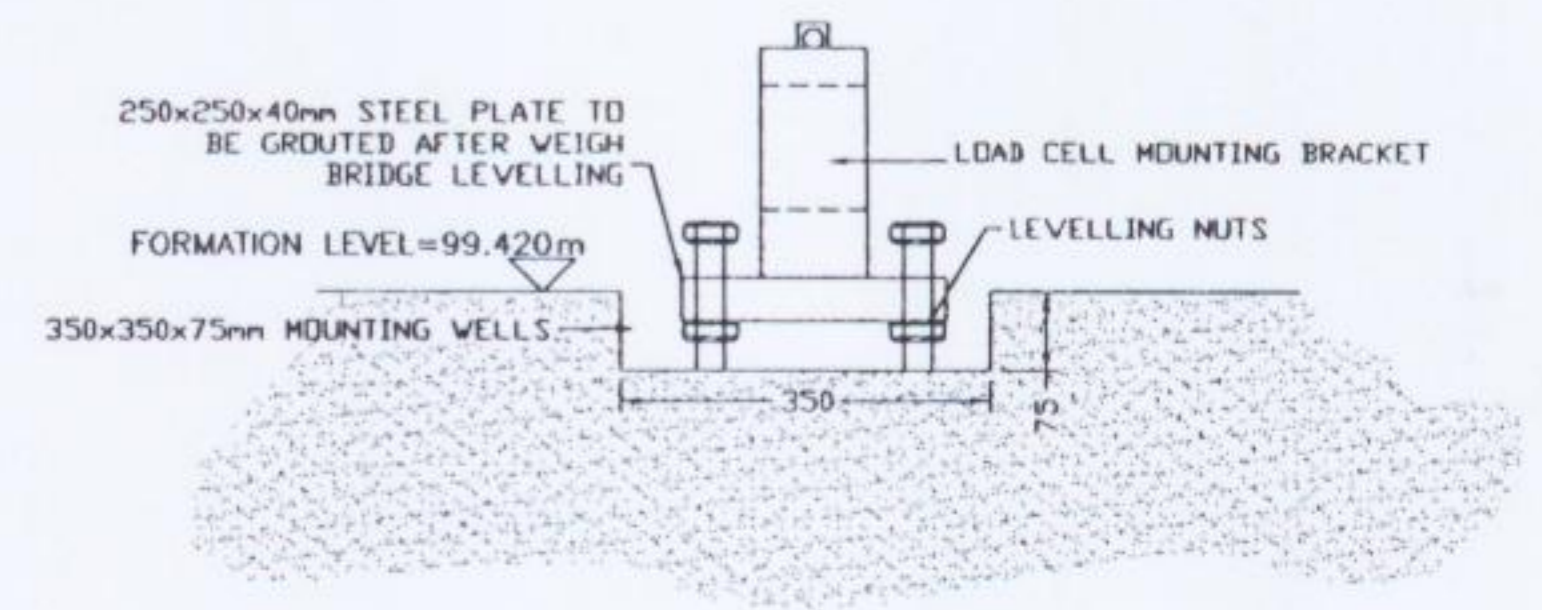
DRAWING STATUS		WASTE LICENCE							
CLIENT		AVR							
		AVR - ENVIRONMENTAL SOLUTIONS Ltd.							
APPENDIX		APPENDIX D1 (C)							
DRAWING TITLE		DESIGN OF HARD STANDING AREAS							
DRAWING STATUS		ISSUED FOR WASTE LICENCE		CO'S					
CLIENT		FINBARR GANNON & CO. LTD.							
		CONSULTING ENGINEERS							
		St. PATRICK'S HOUSE, LOWER GLANMIRE ROAD, COBK.							
		TEL: 021-4508424 FAX: 021-4509104 E-MAIL: o.finn@fgcl.ie							
DRAWN		CO'S	CLIENT FILE No.						
DESIGNED		ED	DATE	MAY '04					
APPROVED		FG	SCALE	1500(A1)					
DRAWING NUMBER		04409-205							
REV.		A							



TYPICAL SECTIONAL ELEVATION OF 50t WEIGH BRIDGE
Scale 1: 50 (A1)



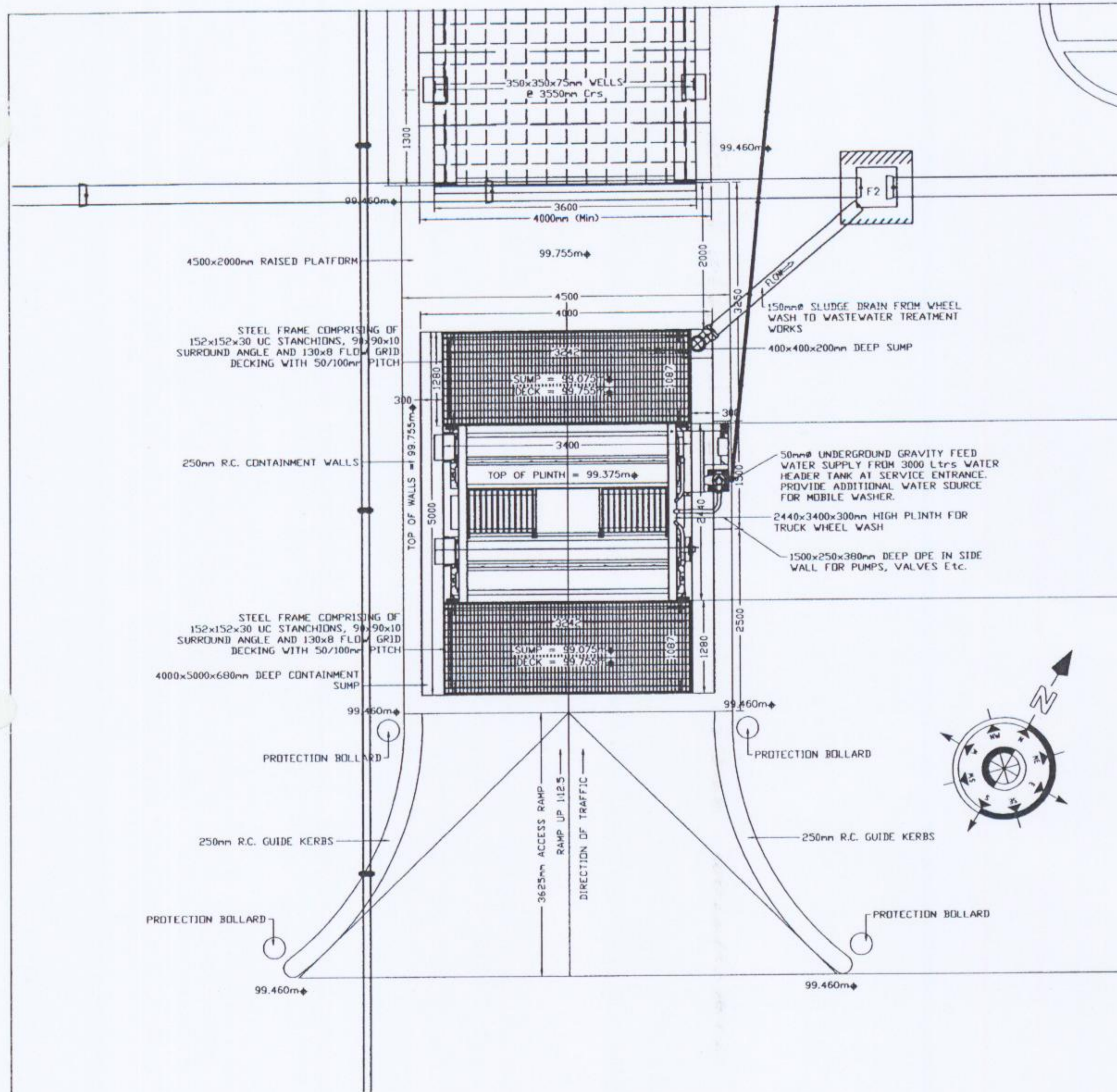
DECK DETAILS
Scale 1: 10 (A1)



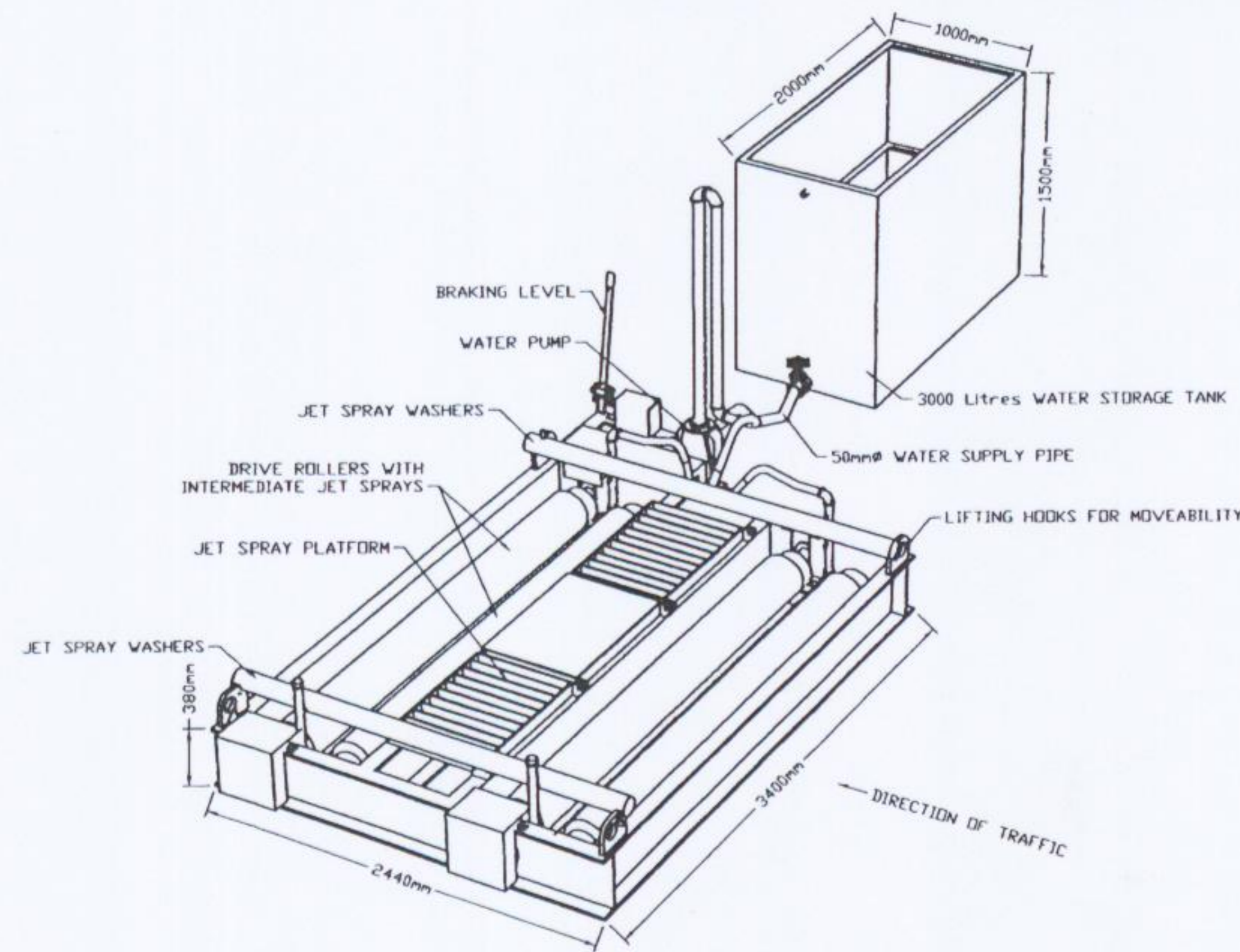
DECK MOUNTING DETAIL
Scale 1: 10 (A1)

LAYOUT PLAN OF 50T WEIGH BRIDGE
Scale 1: 50 (A1)

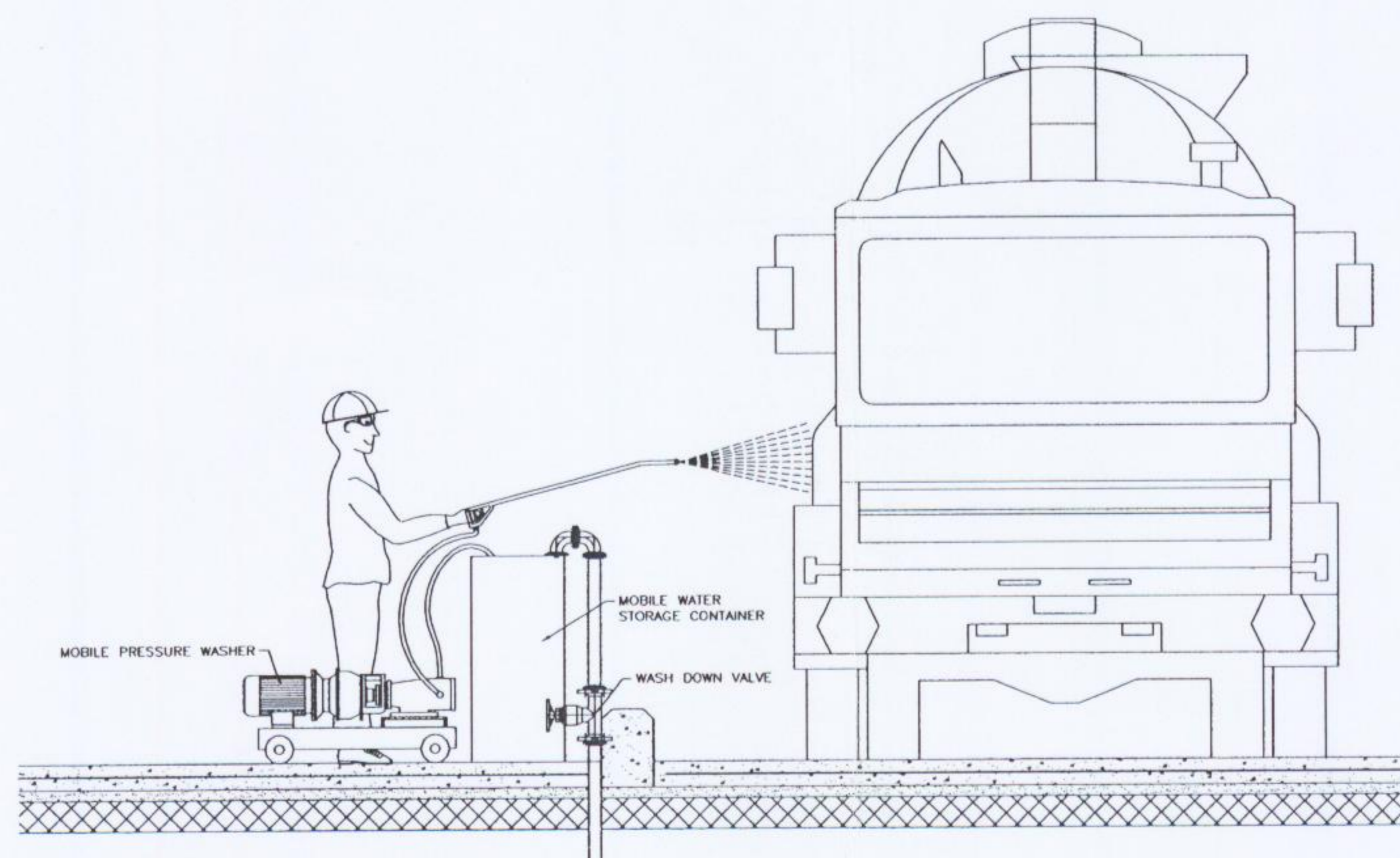
DRAWING STATUS WASTE LICENCE									
CLIENT AVR AVR - ENVIRONMENTAL SOLUTIONS Ltd.									
PROPOSED WASTE RECOVERY/TRANSFER AND SLUDGE DRYING FACILITY AT FOXHOLE, YOUGHAL Co. CORK.		A	10-09-04	ISSUED FOR WASTE LICENCE	CO'S				
APPENDIX APPENDIX D1 (D)		No.	DATE	REVISION	BY	No.	DATE	REVISION	BY
DRAWING TITLE PLANT WEIGH BRIDGE DETAILS		DRAWN	CO'S	CLIENT FILE No.		FINBARR GANNON & CO. LTD. CONSULTING ENGINEERS St. PATRICK'S HOUSE, LOWER CLANMIRE ROAD, CORK. TEL: 021-458424 FAX: 021-4589104 E-MAIL: office@fgcl.ie			
		DESIGNED	ED	DATE	MAY '04	FGCL FILE No.	04/409		
		APPROVED	FG	SCALE	150(A1)	CAD FILE NAME	04409-206.dwg		
		CLIENT APPROVAL				DRAWING NUMBER	04409-206		REV A



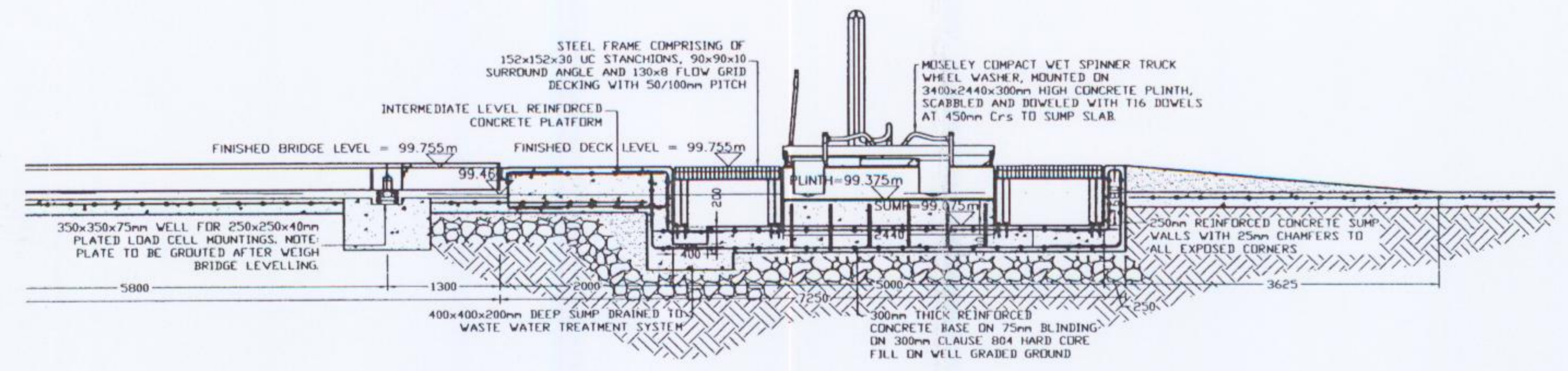
LAYOUT PLAN OF MOSELEY COMPACT WHEEL WASHER
Scale 1: 50 (A1) (OR SIMILAR APPROVED)



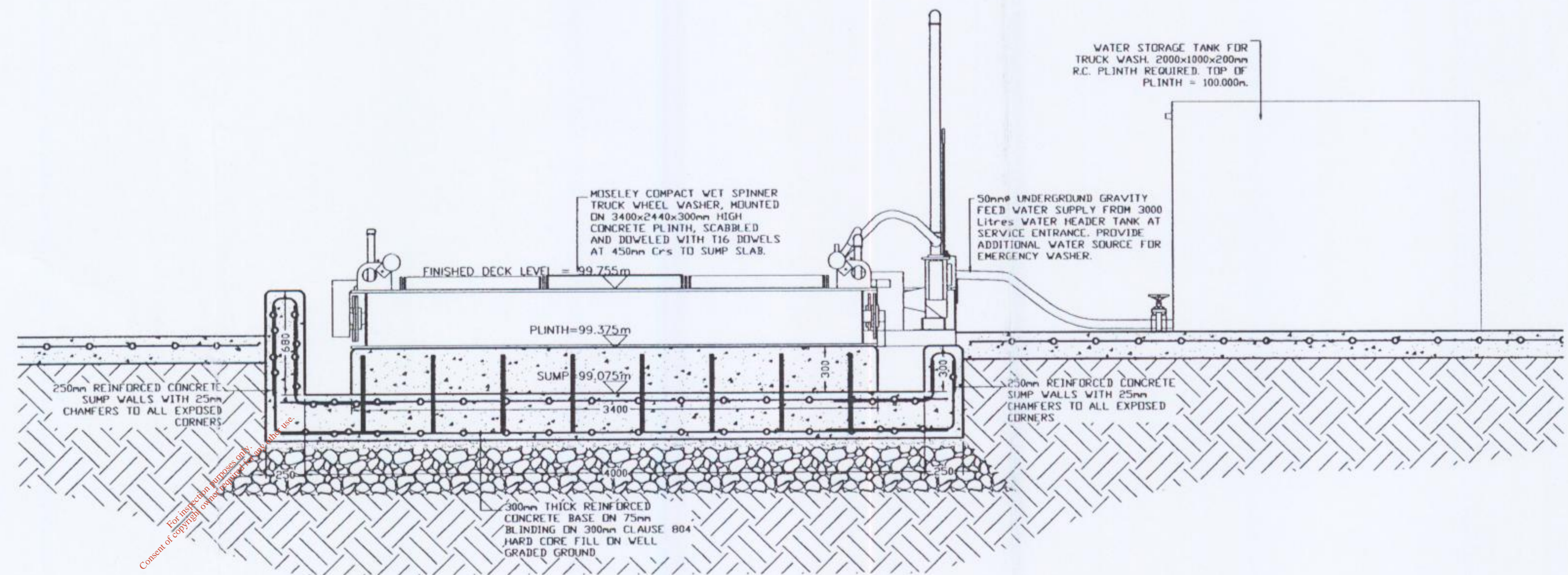
ISOMETRIC VIEW OF MOSELEY COMPACT WHEEL WASHER
Scale 1: N.T.S. (OR SIMILAR APPROVED)



DETAILS OF MOBILE WASHER
Scale 1: 25 (A1)

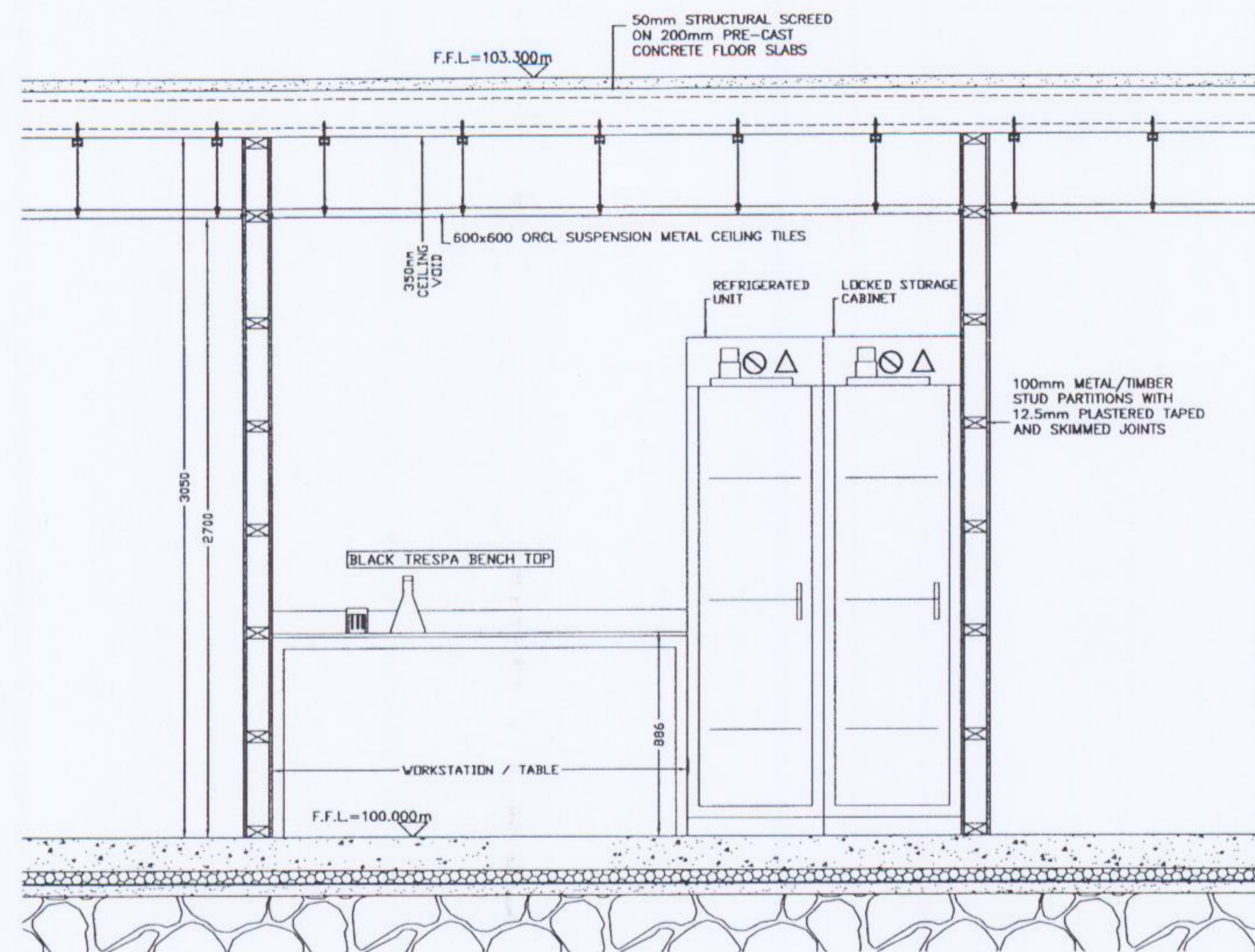


TYPICAL SECTION OF MOSELEY COMPACT WHEEL WASHER
Scale 1: 50 (A1) (OR SIMILAR APPROVED)

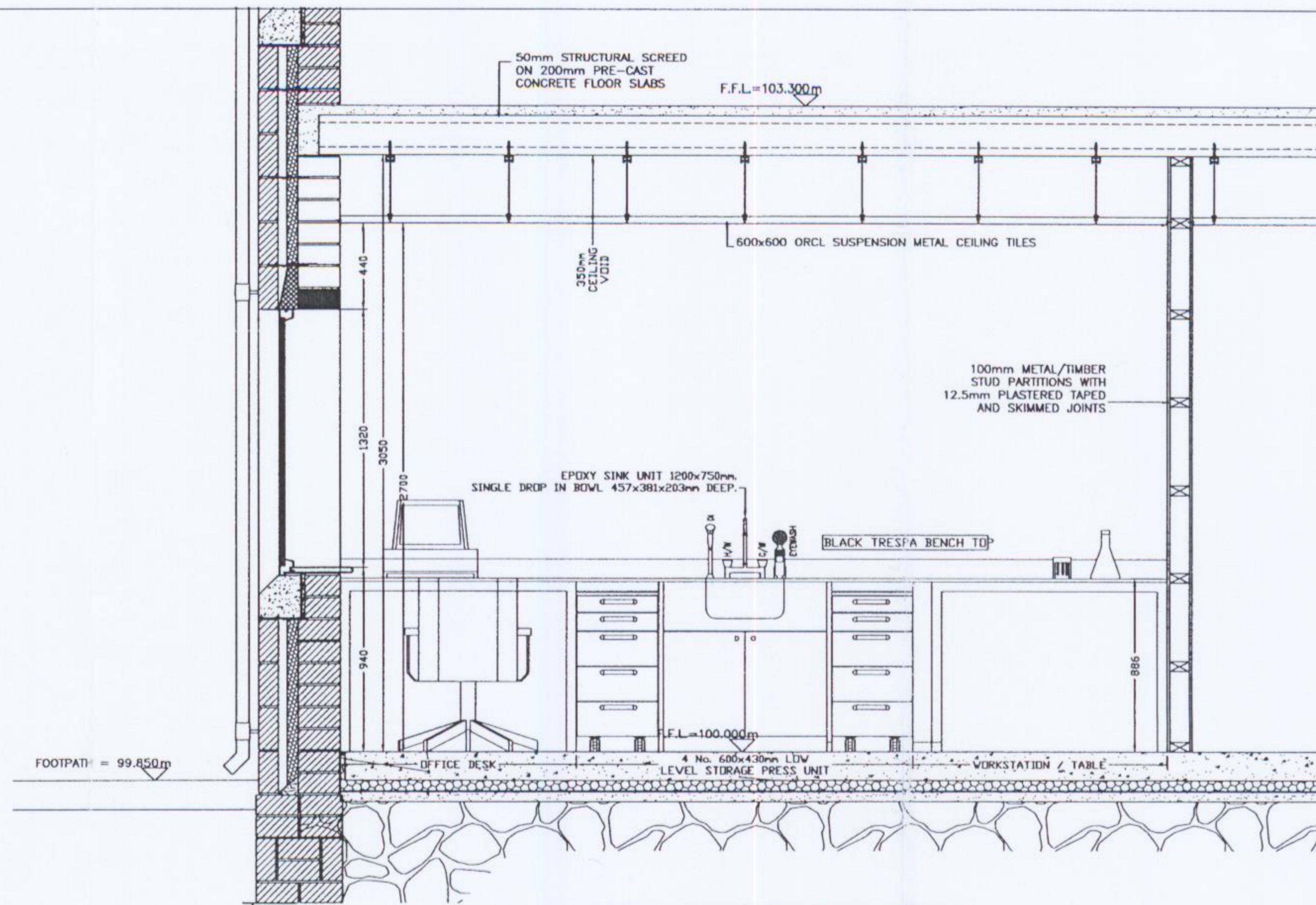


CROSS SECTION OF MOSELEY COMPACT WHEEL WASHER
Scale 1: 25 (A1) (OR SIMILAR APPROVED)

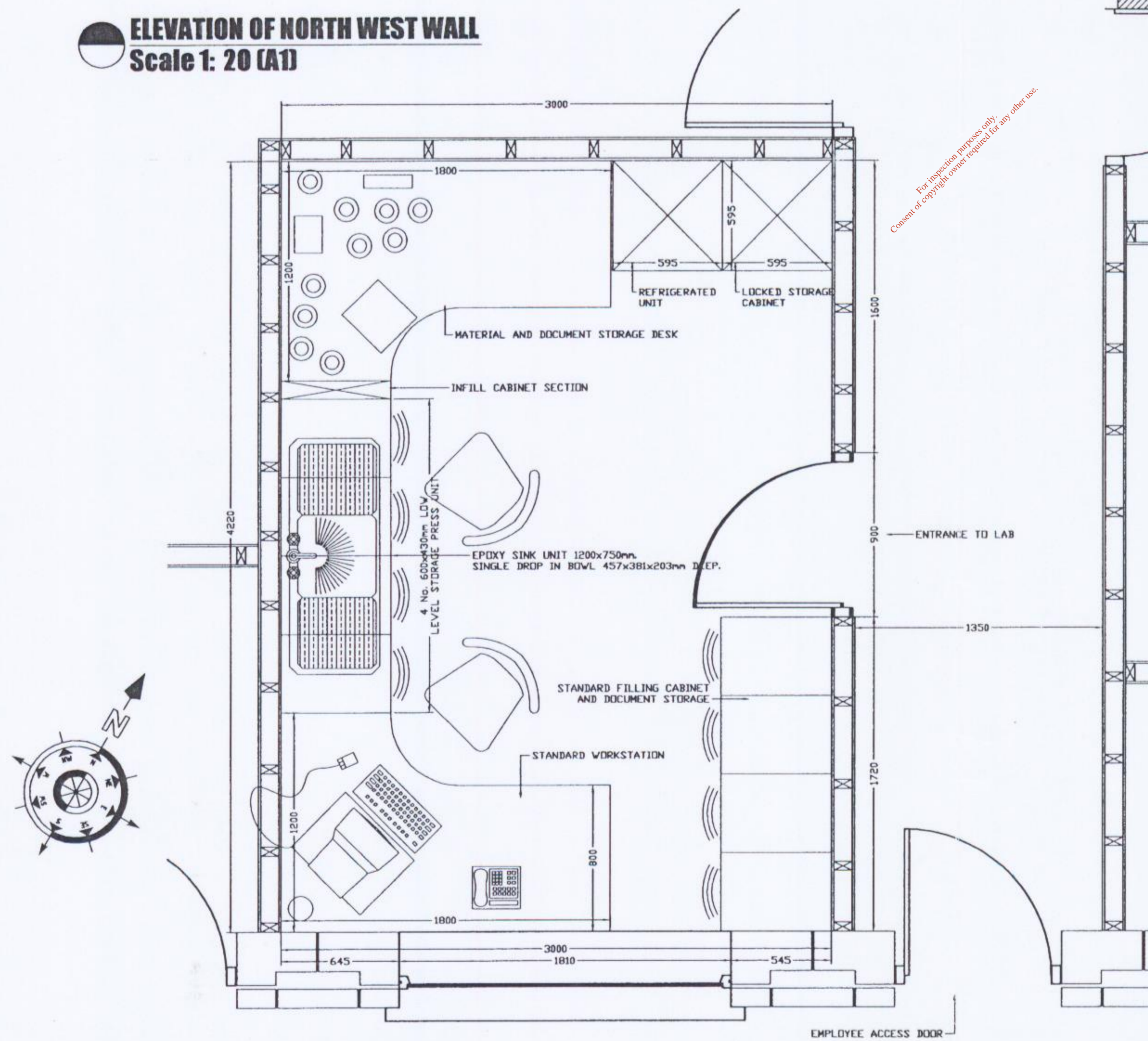
DRAWING STATUS		WASTE LICENCE									
CLIENT		AVR									
		AVR - ENVIRONMENTAL SOLUTIONS Ltd.									
PROPOSED WASTE RECOVERY/TRANSFER AND SLUDGE DRYING FACILITY AT FOXHOLE, YOUGHAL Co. CORK.		No.	DATE	REVISION	BY	No.	DATE	REVISION	BY		
APPENDIX		APPENDIX D1 (E)									
DRAWING TITLE		WHEEL WASH DETAILS									
DRAWING NUMBER		04409-207									
REV.		A									



ELEVATION OF NORTH WEST WALL
Scale 1: 20 (A1)

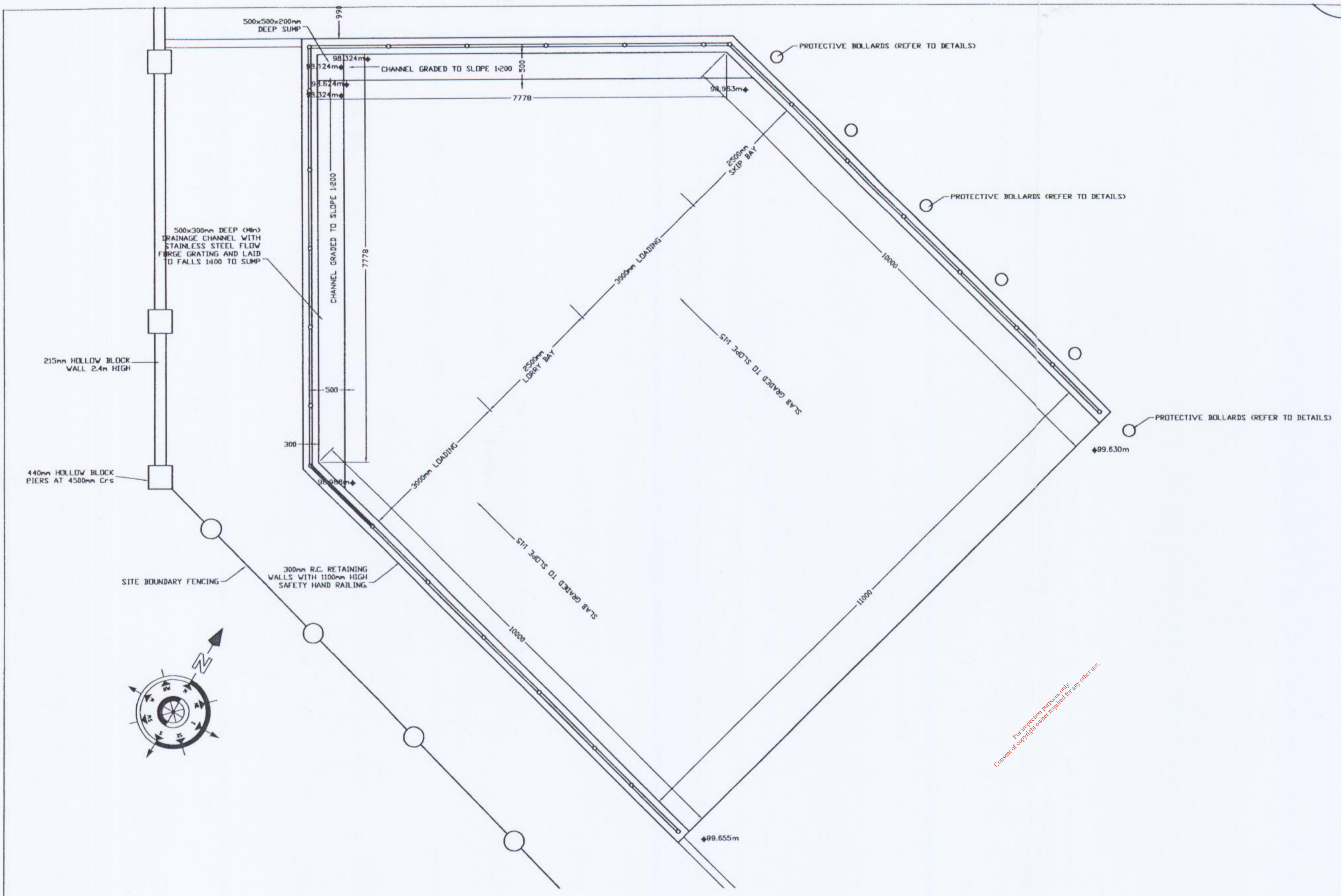


ELEVATION OF SOUTH WEST WALL
Scale 1: 20 (A1)

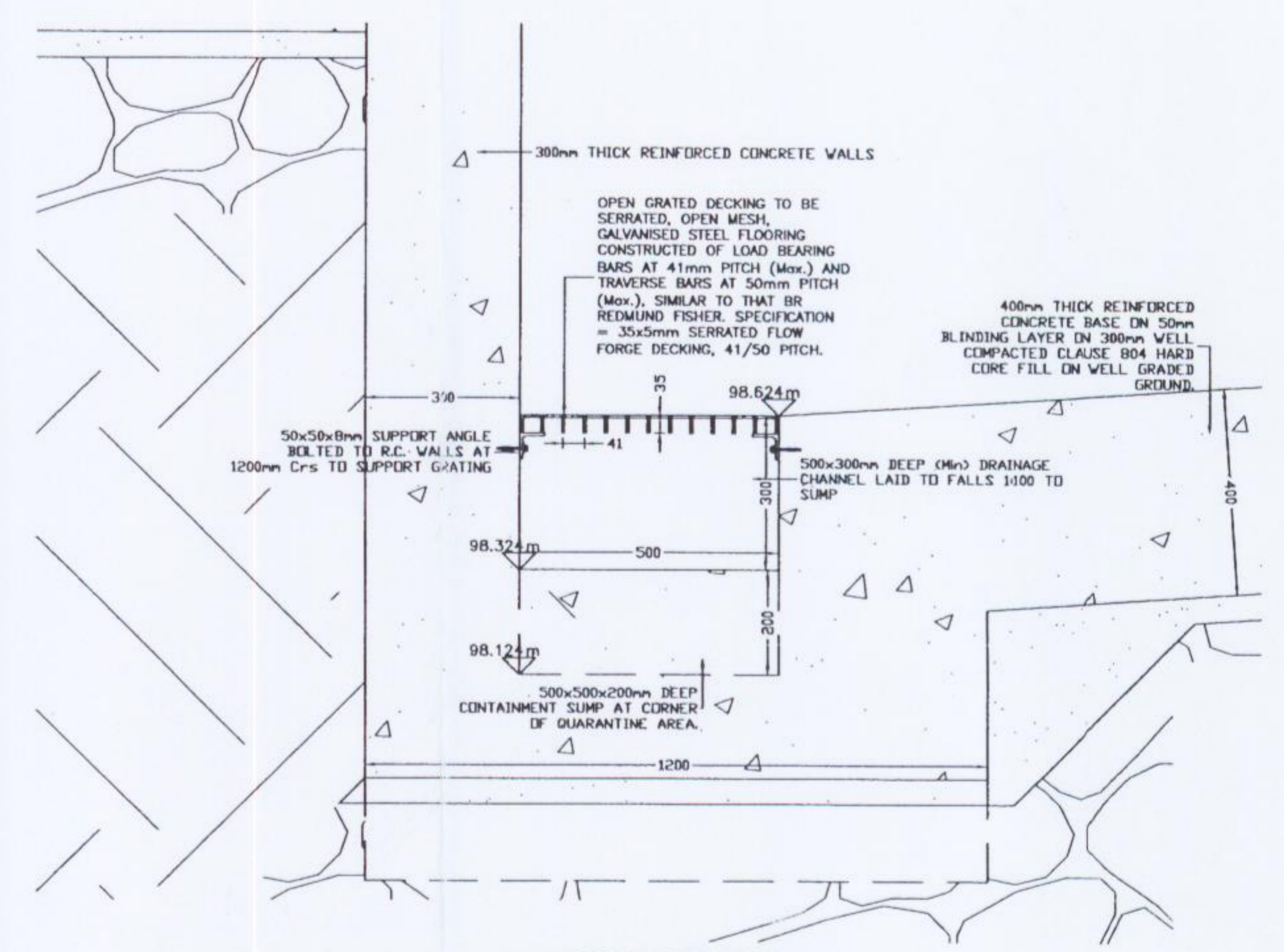


LAYOUT PLAN OF LABORATORY FACILITIES
Scale 1: 20 (A1) (EXTRACT OF ADMINISTRATION BUILDING)

DRAWING STATUS		WASTE LICENCE									
CLIENT		AVR									
		AVR - ENVIRONMENTAL SOLUTIONS Ltd.									
DRAWN		CO'S		CLIENT FILE No.		ISSUED FOR WASTE LICENCE		CO'S			
DESIGNED		ED		DATE		MAY '04					
APPROVED		FG		SCALE		1:20(A1)					
CLIENT APPROVAL											
DRAWING TITLE		LABORATORY FACILITIES									
APPENDIX		APPENDIX D1 (F)									
DRAWING NUMBER		04409-208									
REV.		A									

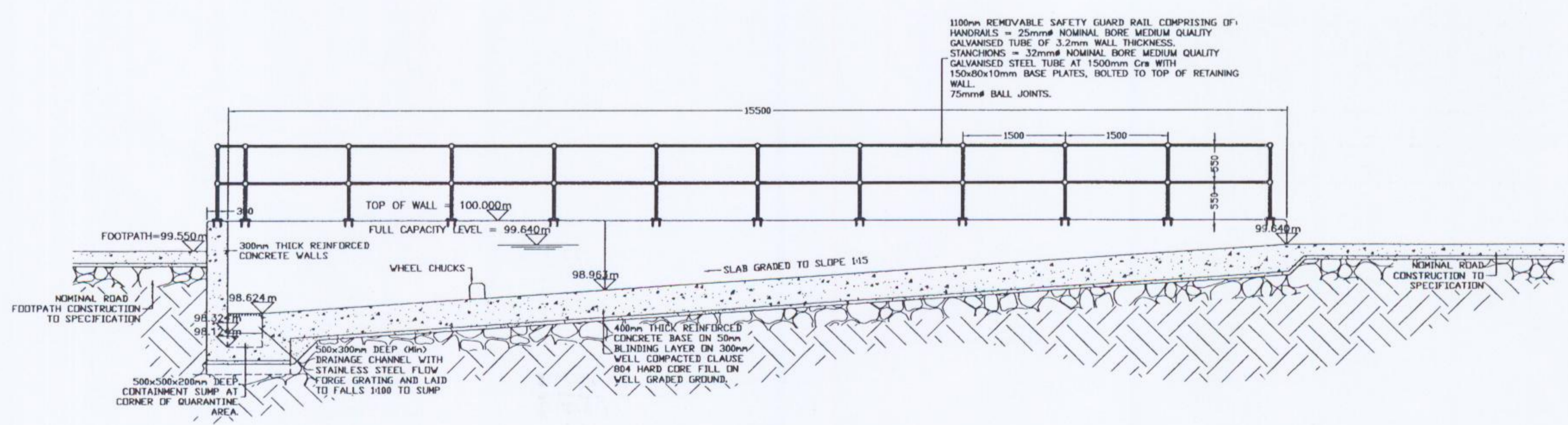


LAYOUT PLAN OF WASTE QUARANTINE AREA
Scale 1: 50 (A1)



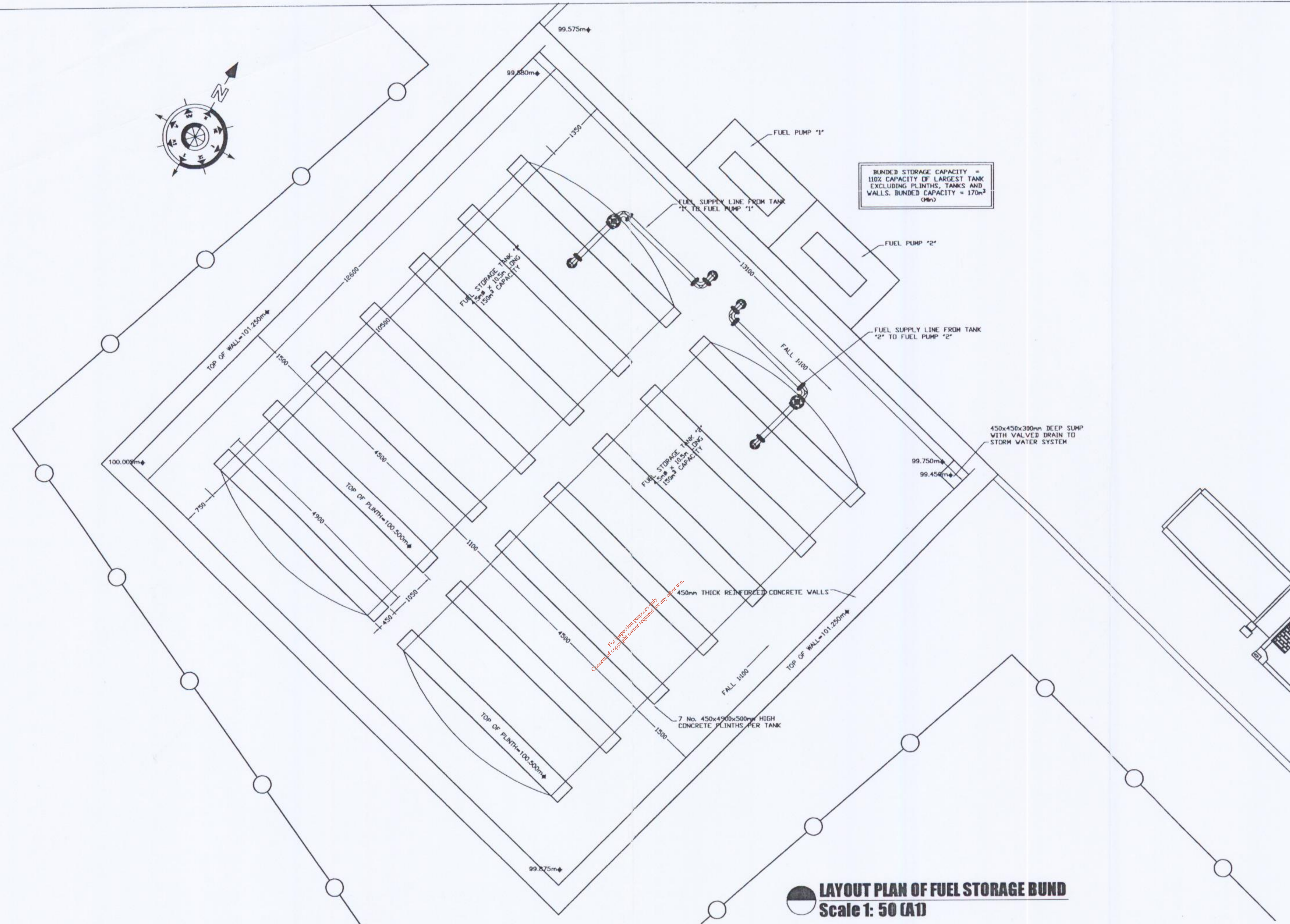
SUMP DETAILS
Scale 1: 10 (A1)

BUNDED STORAGE CAPACITY =
180m³ (Max.). THE CAPACITY
CALCULATIONS ARE BASED ON AN
EMPTY BUNDED AREA WITH FULL
CAPACITY TO AN AVERAGE
HEIGHT OF 99.640m



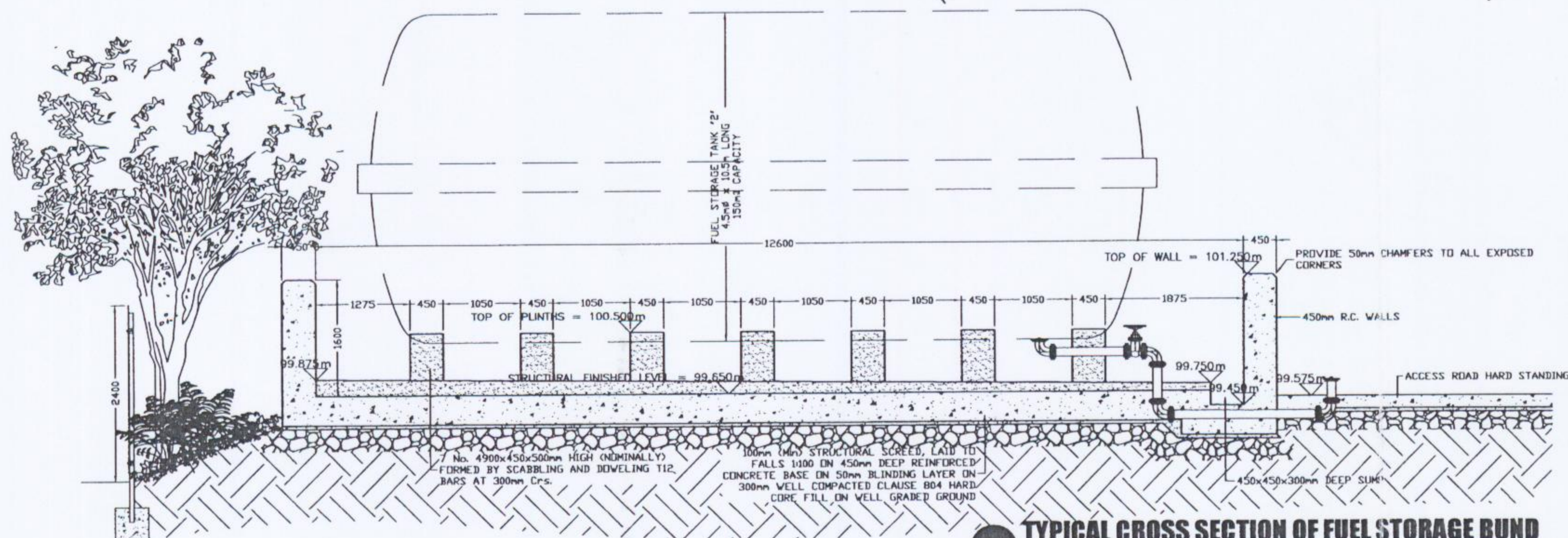
TYPICAL SECTION OF WASTE QUARANTINE AREA
Scale 1: 50 (A1)

DRAWING STATUS		WASTE LICENCE							
CLIENT		AVR							
		AVR - ENVIRONMENTAL SOLUTIONS Ltd.							
PROPOSED WASTE RECOVERY/TRANSFER AND SLUDGE DRYING FACILITY AT FOXHOLE, YOUGHAL Co. CORK.		No.	DATE	REVISION	BY	No.	DATE	REVISION	BY
APPENDIX		APPENDIX D1 (H)							
DRAWING TITLE		WASTE QUARANTINE AREA							
DRAWING NUMBER		04/409-210							
REV.		A							



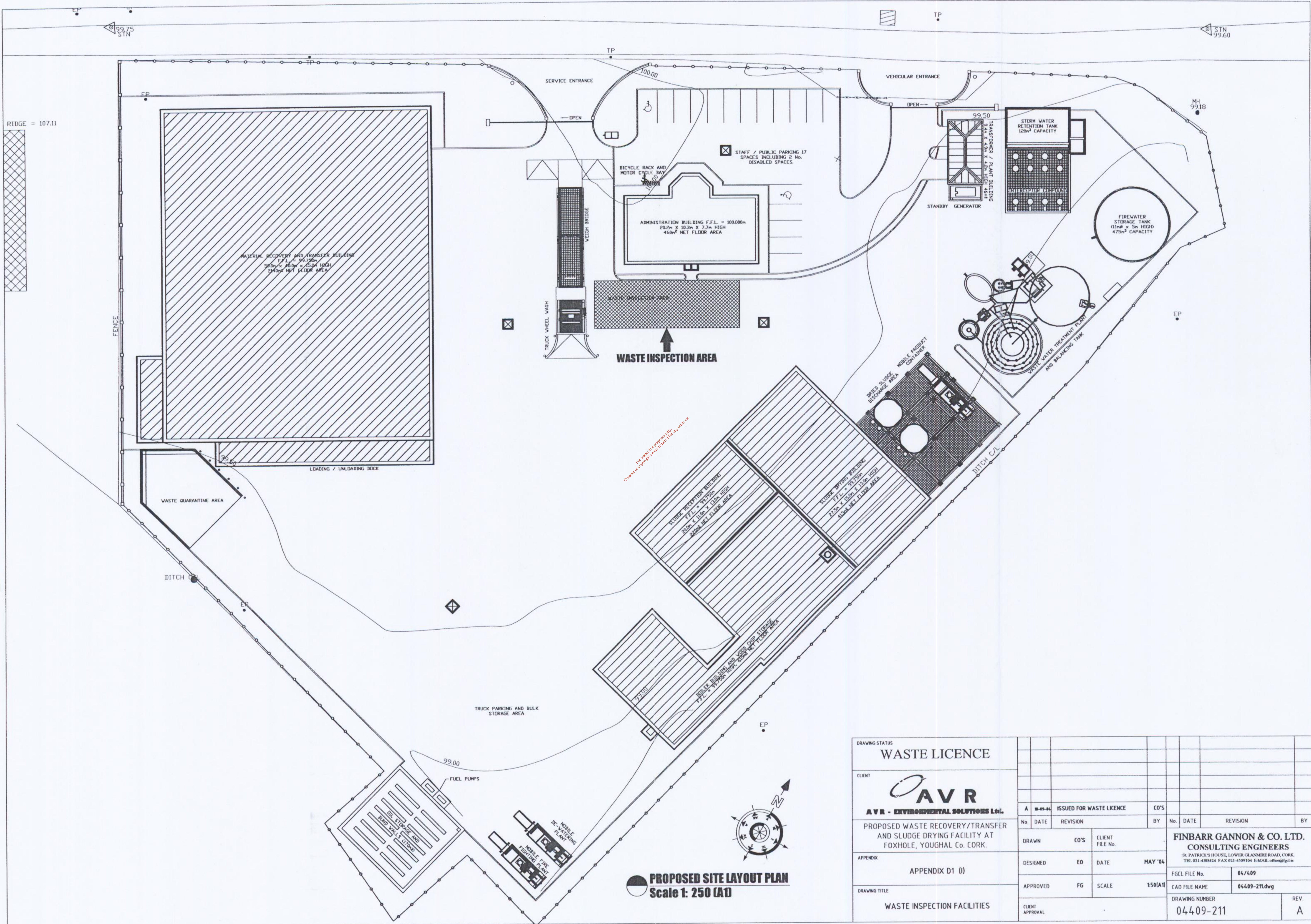
BUNDED STORAGE CAPACITY =
 1102 CAPACITY OF LARGEST TANK
 EXCLUDING PLINTHS, TANKS AND
 WALLS. BUNDED CAPACITY = 170m³
 (96%)

LAYOUT PLAN OF FUEL STORAGE BUND
 Scale 1: 50 (A1)



TYPICAL CROSS SECTION OF FUEL STORAGE BUND
 Scale 1: 50 (A1)

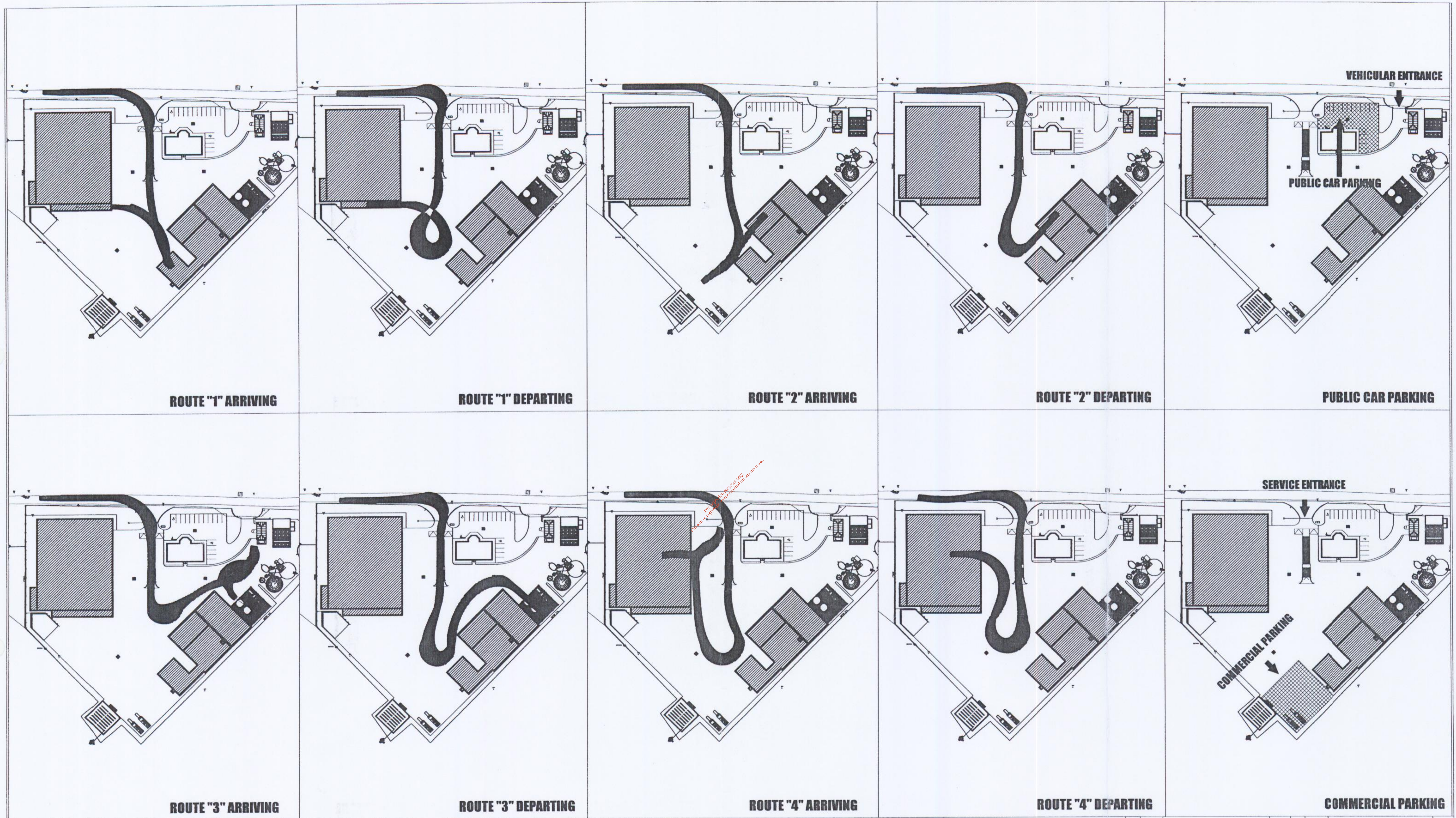
DRAWING STATUS		WASTE LICENCE																			
CLIENT		 AVR - ENVIRONMENTAL SOLUTIONS LTD.																			
APPENDIX		APPENDIX D1 (G)																			
DRAWING TITLE		DESIGN AND LOCATION OF FUEL STORAGE AREAS																			
DRAWING STATUS		ISSUED FOR WASTE LICENCE		CO'S																	
DRAWN		CO'S	CLIENT FILE No.																		
DESIGNED		ED	DATE	MAY '04																	
APPROVED		FG	SCALE	150(A1)																	
CLIENT APPROVAL																					
		DRAWING NUMBER		04409-209																	
		REV.		A																	



For proposed use only
 Consistent with original planning permission at the site.

PROPOSED SITE LAYOUT PLAN
 Scale 1: 250 (A1)

DRAWING STATUS		WASTE LICENCE									
CLIENT		 AVR - ENVIRONMENTAL SOLUTIONS Ltd.									
APPENDIX		APPENDIX D1 (I)									
DRAWING TITLE		WASTE INSPECTION FACILITIES									
DRAWN		CO'S	CLIENT FILE No.	ISSUED FOR WASTE LICENCE		CO'S					
DESIGNED		EO	DATE	REVISION		BY	No.	DATE	REVISION	BY	
APPROVED		FG	SCALE	MAY '04						FINBARR GANNON & CO. LTD. CONSULTING ENGINEERS ST. PATRICK'S HOUSE, LOWER GLANMIRE ROAD, CORK. TEL: 021-498424 FAX: 021-459104 E-MAIL: office@fgcl.ie	
CLIENT APPROVAL				FGCL FILE No.		04/409		CAD FILE NAME		04409-211.dwg	
				DRAWING NUMBER		04409-211		REV.		A	



ROUTE "1" ARRIVING

ROUTE "1" DEPARTING

ROUTE "2" ARRIVING

ROUTE "2" DEPARTING

PUBLIC CAR PARKING

ROUTE "3" ARRIVING

ROUTE "3" DEPARTING

ROUTE "4" ARRIVING

ROUTE "4" DEPARTING

COMMERCIAL PARKING

ROUTE "1" SERVICING LOADING/UNLOADING BAY

LARGE ARTICULATED LORRY TO SIDE / LOADING DOCK.
ROUTE: IN MAIN ENTRANCE, OVER WEIGH BRIDGE AND THROUGH TRUCK WASH, PROCEED TO CORNER OF SLUDGE RECEPTION BUILDING, REVERSE INTO LOADING DOCK BAY, LOAD / UNLOAD, PROCEED TO TURNING AREA, TURN AND ALIGN FOR TRUCK WASH / WEIGH BRIDGE AND EXIT SITE.

ROUTE "2" SERVICING SLUDGE RECEPTION BUILDING

LARGE ARTICULATED LORRY TO SLUDGE RECEPTION BUILDING.
ROUTE: IN MAIN ENTRANCE, OVER WEIGH BRIDGE AND THROUGH TRUCK WASH, PROCEED TO CORNER OF SLUDGE RECEPTION BUILDING, TURN AND ALIGN IN TURNING AREA, REVERSE INTO SLUDGE RECEPTION BUILDING, UNLOAD, PROCEED TO TURNING AREA, TURN AND ALIGN FOR TRUCK WASH / WEIGH BRIDGE AND EXIT SITE.

ROUTE "3" SERVICING BIO-SOLIDS DISCHARGE SILO'S

LARGE ARTICULATED LORRY TO BIO-SOLIDS DISCHARGE SILO'S.
ROUTE: IN MAIN ENTRANCE, OVER WEIGH BRIDGE AND THROUGH TRUCK WASH, PROCEED TO CORNER OF SLUDGE RECEPTION BUILDING, TURN AND ALIGN TOWARDS TRANSFORMER/PLANT BUILDING, REVERSE INTO BIO-SOLIDS DISCHARGE SILO'S, LOAD / UNLOAD, PROCEED TO TURNING AREA, TURN AND ALIGN FOR TRUCK WASH / WEIGH BRIDGE AND EXIT SITE.

ROUTE "4" SERVICING WASTE RECOVERY AND TRANSFER BUILDING

LARGE ARTICULATED LORRY TO WASTE RECOVERY TRANSFER BUILDING.
ROUTE: IN MAIN ENTRANCE, OVER WEIGH BRIDGE AND THROUGH TRUCK WASH, PROCEED TO TURNING AREA, TURN AND ALIGN TOWARDS MAIN ENTRANCE, REVERSE INTO WASTE RECOVERY AND TRANSFER BUILDING, LOAD / UNLOAD, PROCEED TO TURNING AREA, TURN AND ALIGN FOR TRUCK WASH / WEIGH BRIDGE AND EXIT SITE.

NOTES:

THE ABOVE REPRESENTATION FOR TRUCK TURNING CIRCLES AND ACCESS ROUTES IS FOR INFORMATION ONLY AND ARE SUBJECT TO MODIFICATIONS IN REALITY.

THE REPRESENTATION IS BASED ON

LARGE FOUR AXLES ARTICULATED LORRY WITH WIDE SPREAD TRAILER AXLES, 15m LONG, 2.5m WIDE, TWIN REAR AXLE TRAILER WITHOUT TRAILER TURNING FACILITY.
TWIN AXLE TRACTOR UNIT WITH SINGLE FRONT AXLE STEERING, 12 to 15m SWEEP CIRCLE RADIUS

ACCESS ARRANGEMENTS.

SERVICE AND VEHICULAR ENTRANCES SEGREGATED
VEHICULAR ENTRANCE FOR 17 NO. CAR PARKING SPACES INCLUDING 2 NO. WHEEL CHAIR SPACES, MOTOR BIKES AND CYCLE RACK FACILITIES.

SIGNAGE.

SIGNAGE IN ACCORDANCE WITH NATIONAL GUIDELINES AND RECOMMENDATION, SHALL BE ERRECTED INTERNALLY TO MARSHALL VEHICULAR MOVEMENTS.

DRAWING STATUS

WASTE LICENCE

CLIENT



AVR - ENVIRONMENTAL SOLUTIONS LTD.

PROPOSED WASTE RECOVERY/TRANSFER AND SLUDGE DRYING FACILITY AT FOXHOLE, YOUGHAL Co. CORK.

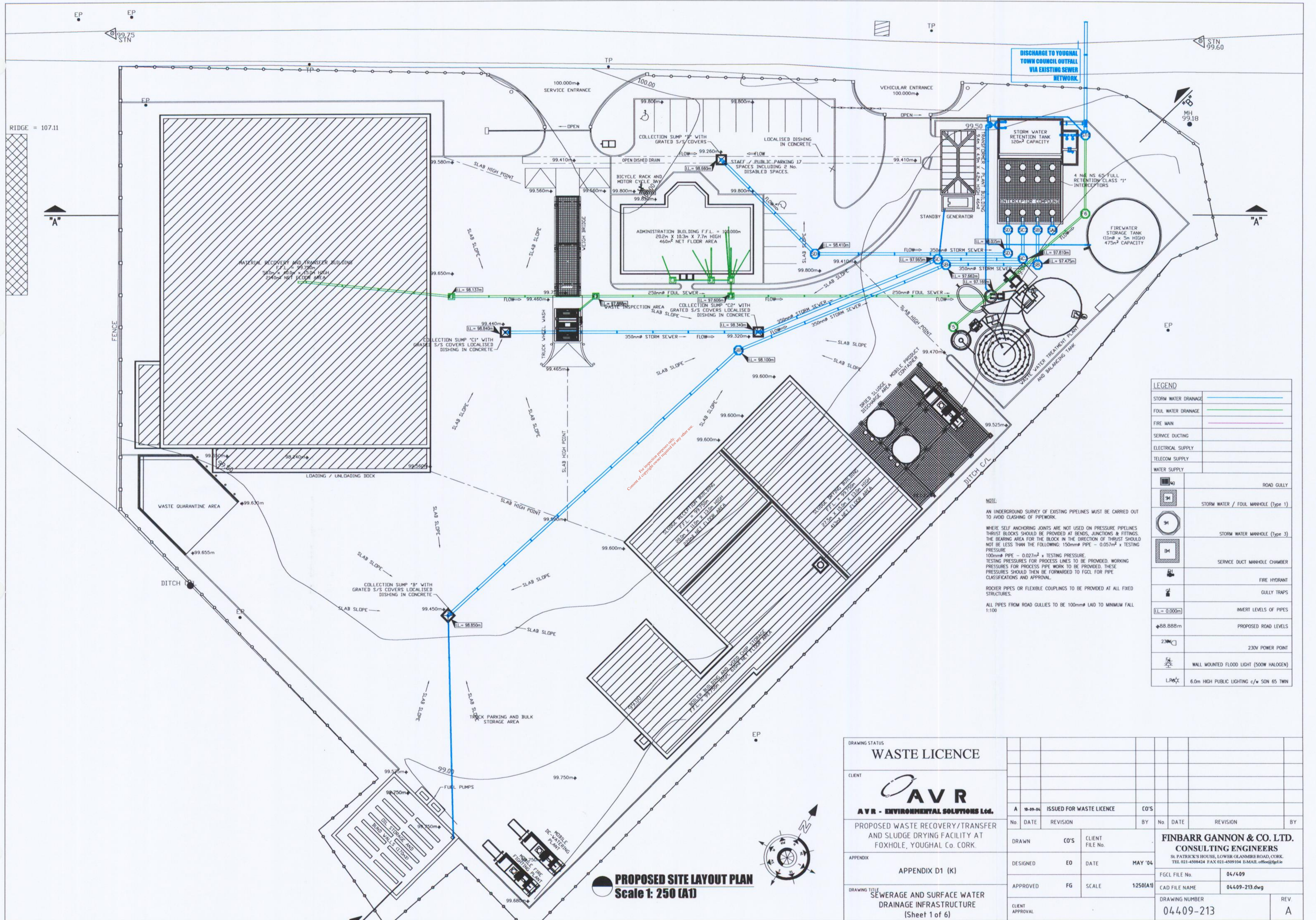
APPENDIX

APPENDIX D1 (J)

DRAWING TITLE

TRAFFIC CONTROL

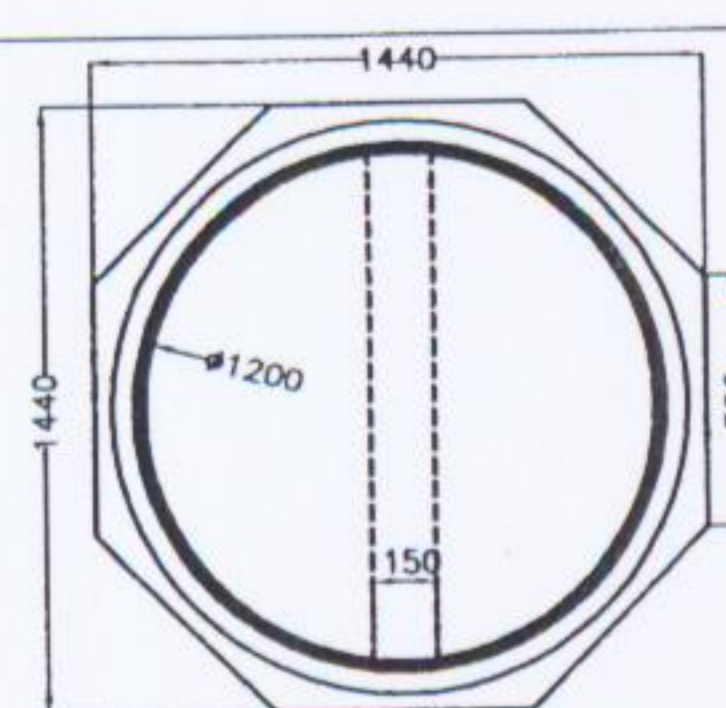
A		18-09-04		ISSUED FOR WASTE LICENCE		CO'S	
No.	DATE	REVISION	BY	No.	DATE	REVISION	BY
DRAWN	CO'S	CLIENT FILE No.		FINBARR GANNON & CO. LTD.			
DESIGNED	ED	DATE	MAY '04	CONSULTING ENGINEERS			
APPROVED	FG	SCALE	N.T.S. (A1)	ST. PATRICK'S HOUSE, LOWER GLANMIRE ROAD, CORK.			
CLIENT APPROVAL				TEL: 021-498424 FAX: 021-4509104 E-MAIL: office@fgcl.ie			
				FGCL FILE No.		04/409	
				CAD FILE NAME		04409-212.dwg	
				DRAWING NUMBER			REV.
				04409-212			A



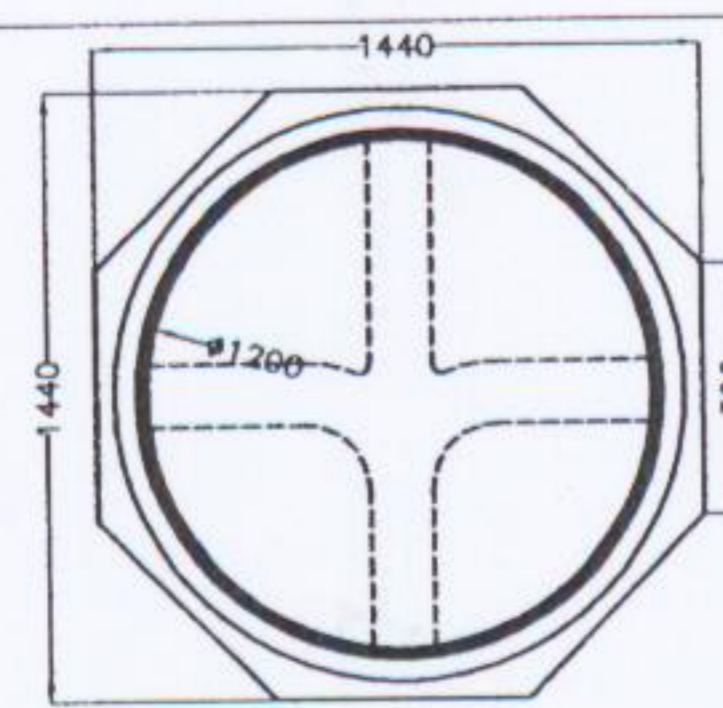
PROPOSED SITE LAYOUT PLAN
Scale 1: 250 (A1)



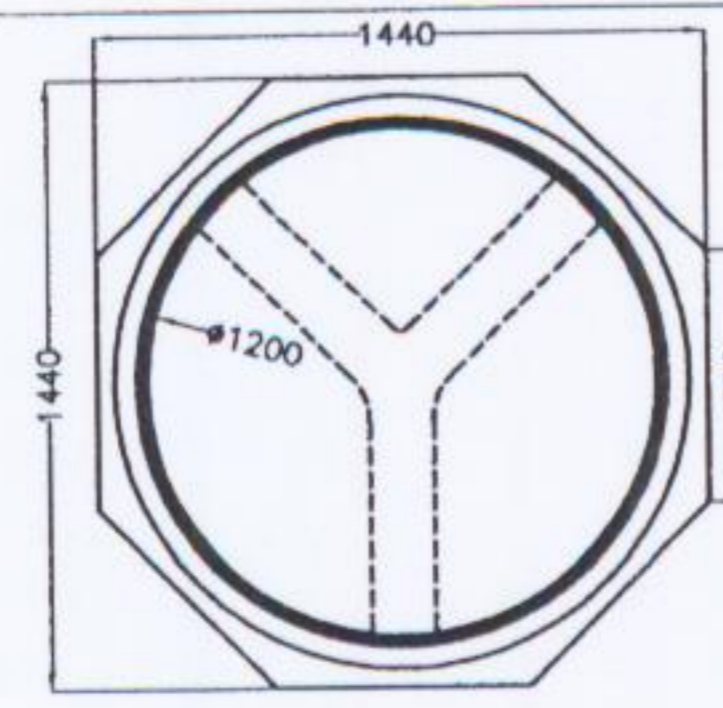
DRAWING STATUS		WASTE LICENCE								
CLIENT		AVR AVR - ENVIRONMENTAL SOLUTIONS LTD.								
APPENDIX		APPENDIX D1 (K)								
DRAWING TITLE		SEWERAGE AND SURFACE WATER DRAINAGE INFRASTRUCTURE (Sheet 1 of 6)								
DRAWING STATUS		A 10-09-04 ISSUED FOR WASTE LICENCE		CO'S						
No.	DATE	REVISION	BY	No.	DATE	REVISION	BY			
DRAWN	CO'S	CLIENT FILE No.		FINBARR GANNON & CO. LTD. CONSULTING ENGINEERS St. Patrick's House, Lower Glanmire Road, Cork. TEL. 021-4508424 FAX 021-4509104 E-MAIL: office@fgcl.ie						
DESIGNED	EO	DATE	MAY '04	FGCL FILE No.	04/409					
APPROVED	FG	SCALE	1:250(A1)	CAD FILE NAME	04409-213.dwg					
CLIENT APPROVAL				DRAWING NUMBER	04409-213				REV	A



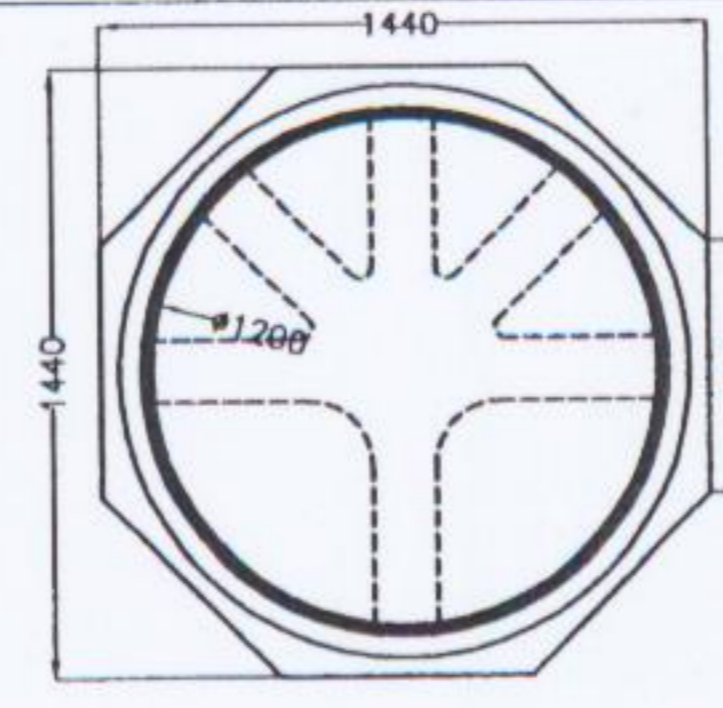
TYPE 2a (Plan)
Scale 1: N.T.S.
SUITABLE FOR PIPE # 150, 225, 300 & 375



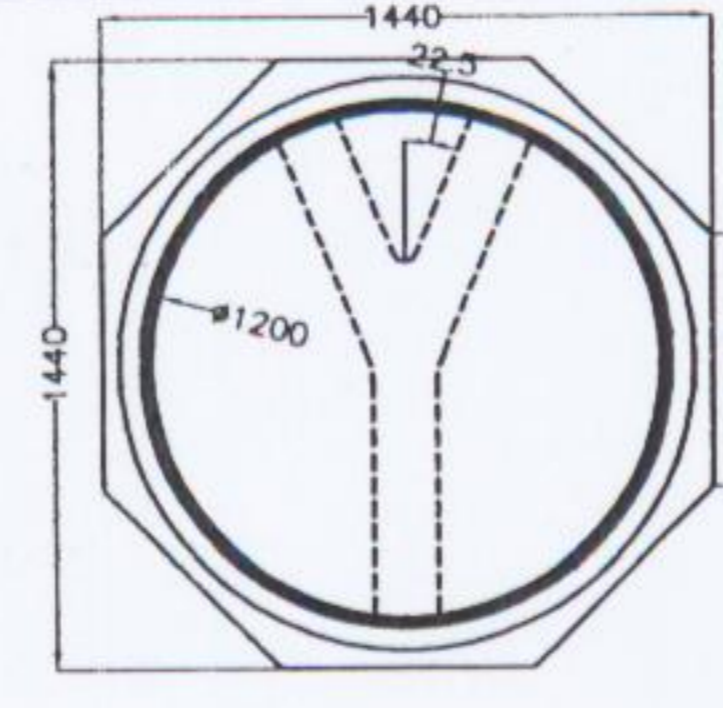
TYPE 2b (Plan)
Scale 1: N.T.S.
SUITABLE FOR PIPE # 150, 225, 300 & 375



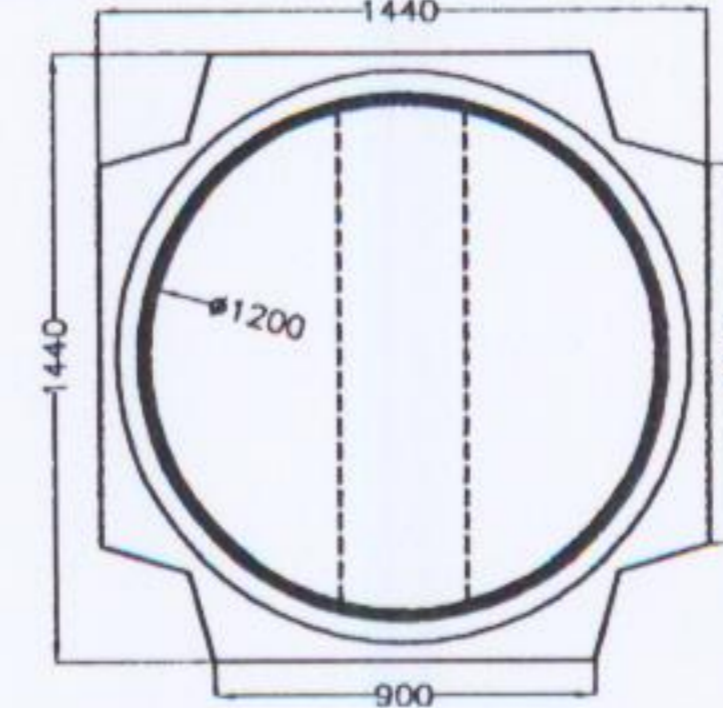
TYPE 2c (Plan)
Scale 1: N.T.S.
SUITABLE FOR PIPE # 150, 225, 300 & 375



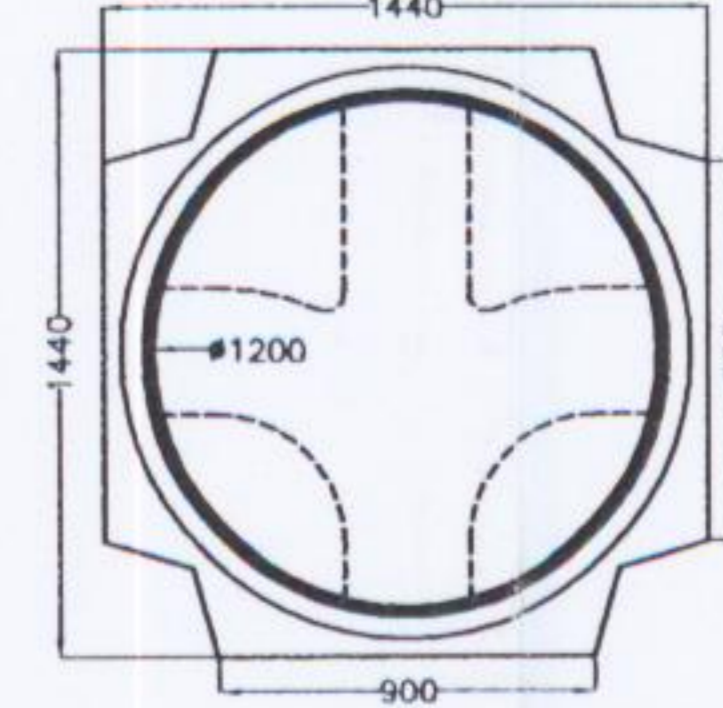
TYPE 2d (Plan)
Scale 1: N.T.S.
SUITABLE FOR PIPE # 150, 225



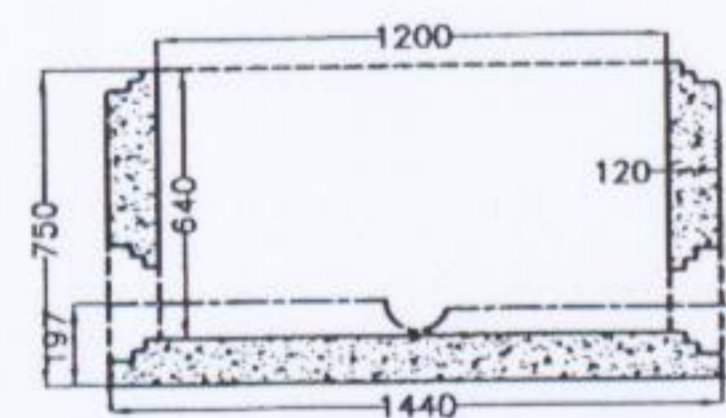
TYPE 2e (Plan)
Scale 1: N.T.S.
SUITABLE FOR PIPE # 225



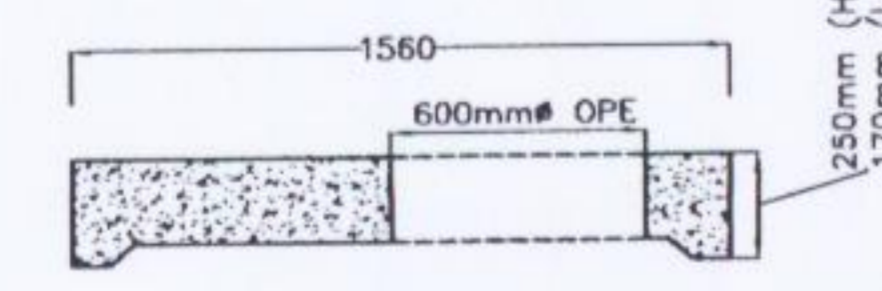
TYPE 2f (Plan)
Scale 1: N.T.S.
SUITABLE FOR PIPE # 450, 500



TYPE 2g (Plan)
Scale 1: N.T.S.
SUITABLE FOR PIPE # 450, 500

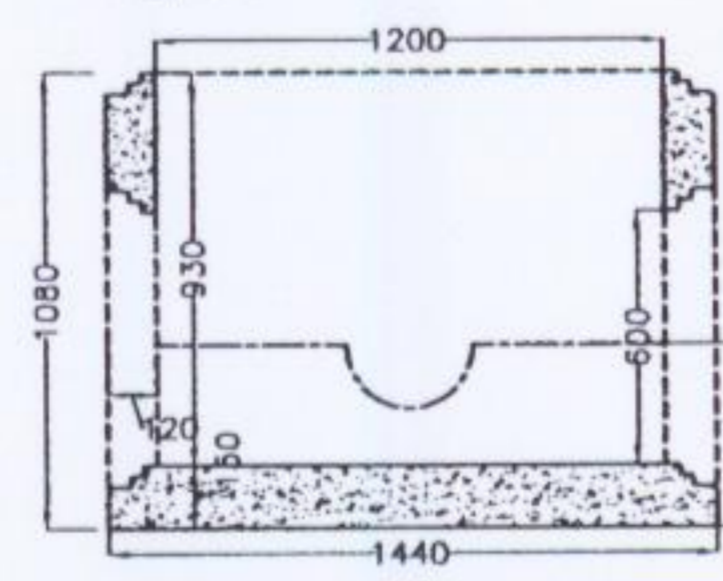


BASE SECTION
Scale 1: N.T.S.
SUITABLE FOR MANHOLE TYPES 2a, 2b, 2c, 2d, 2e

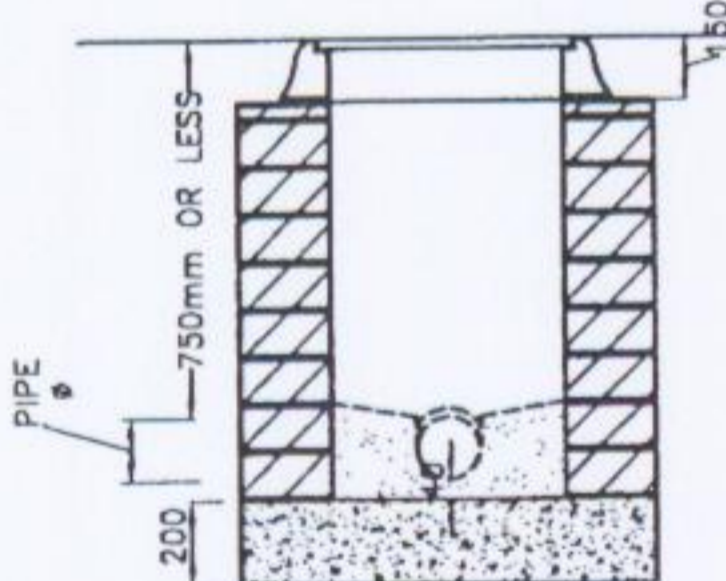


COVER SECTION
Scale 1: N.T.S.
SUITABLE FOR ALL MANHOLE TYPES

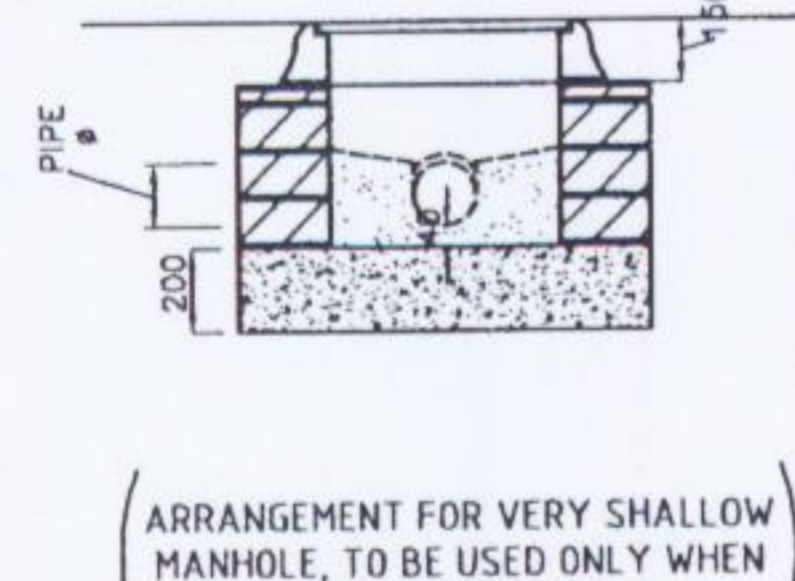
CHAMBER RINGS AVAILABLE FOR HEIGHTS 0.3m, 0.6m OR 0.9m ALONG WITH RUBBER GASKET RINGS



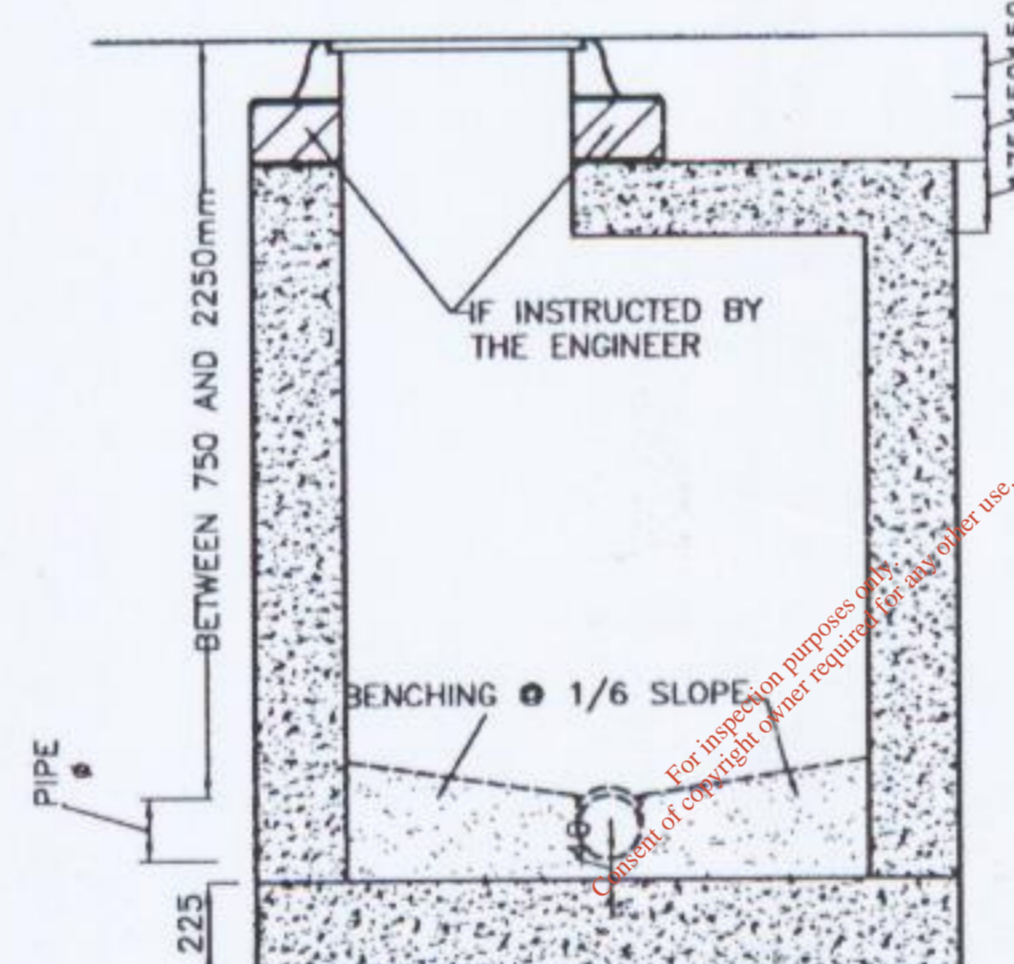
BASE SECTION
Scale 1: N.T.S.
SUITABLE FOR MANHOLE TYPES 2f, 2g



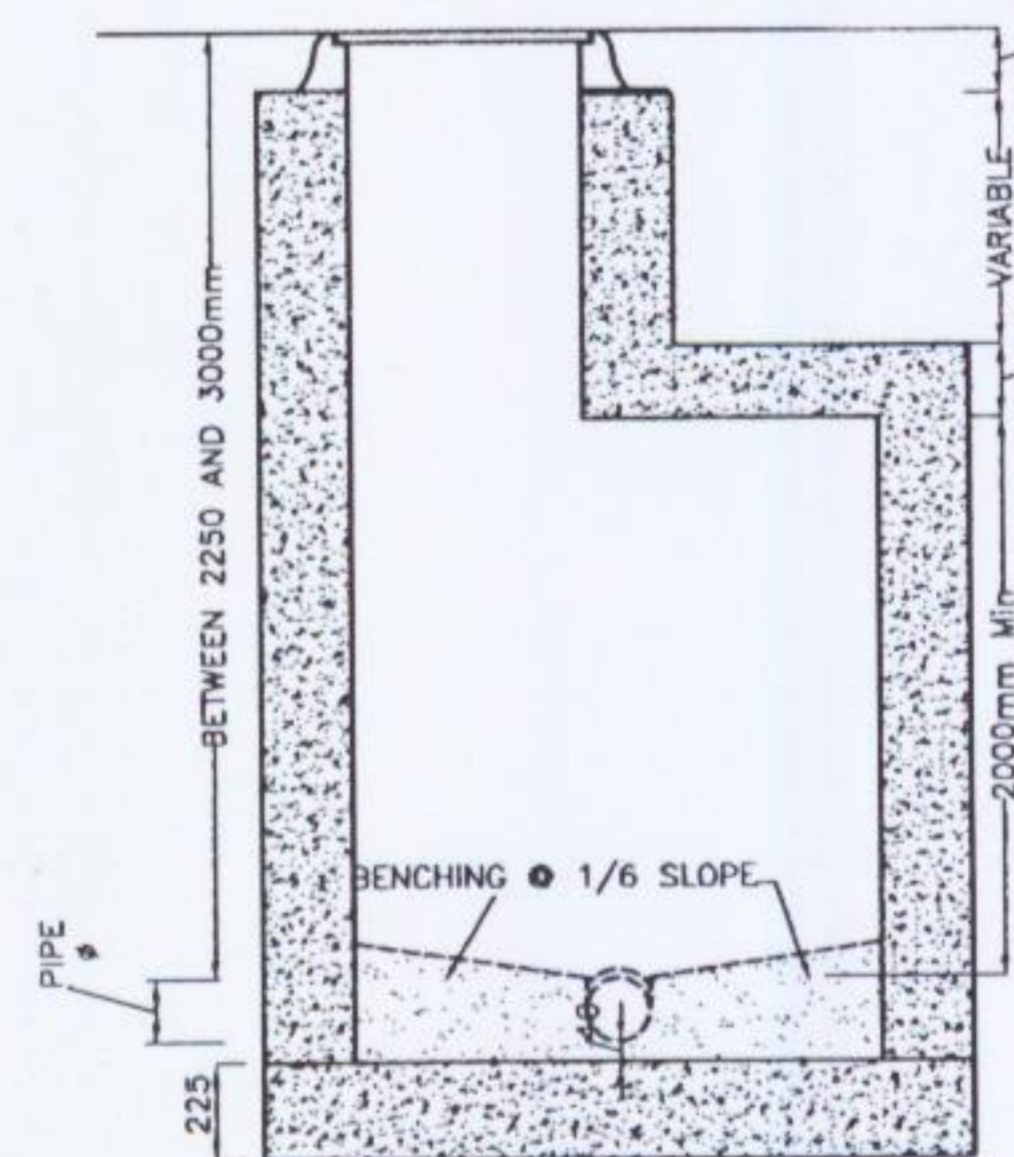
TYPE 1a (Sectional)
Scale 1: N.T.S.



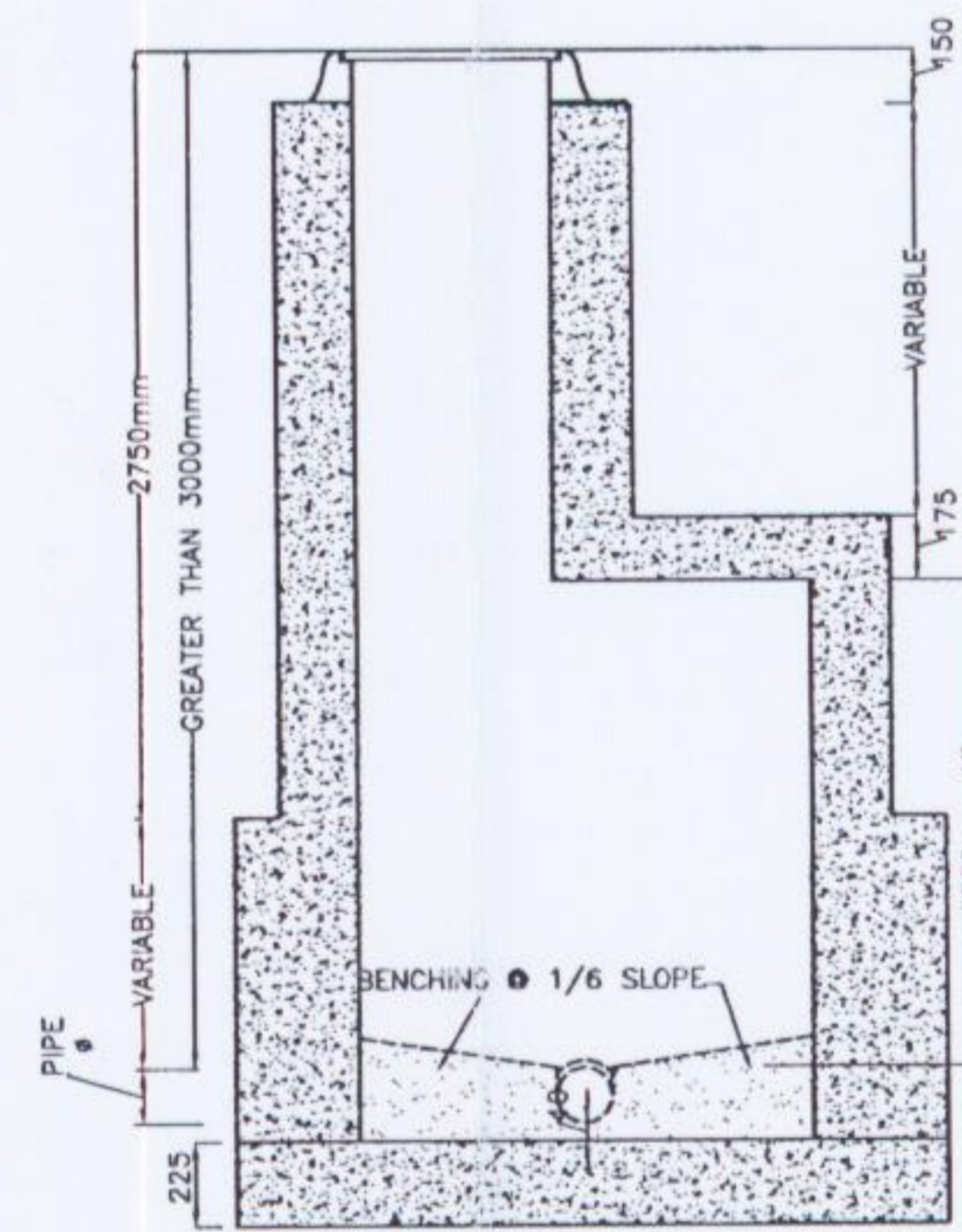
TYPE 1b (Sectional)
Scale 1: N.T.S.
ARRANGEMENT FOR VERY SHALLOW MANHOLE, TO BE USED ONLY WHEN ADVISED BY ENGINEER



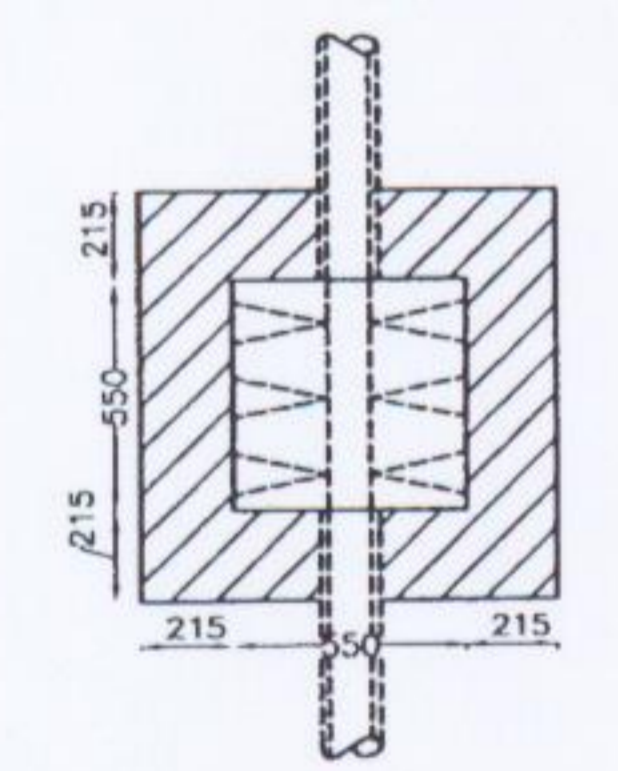
TYPE 1c (Sectional)
Scale 1: N.T.S.



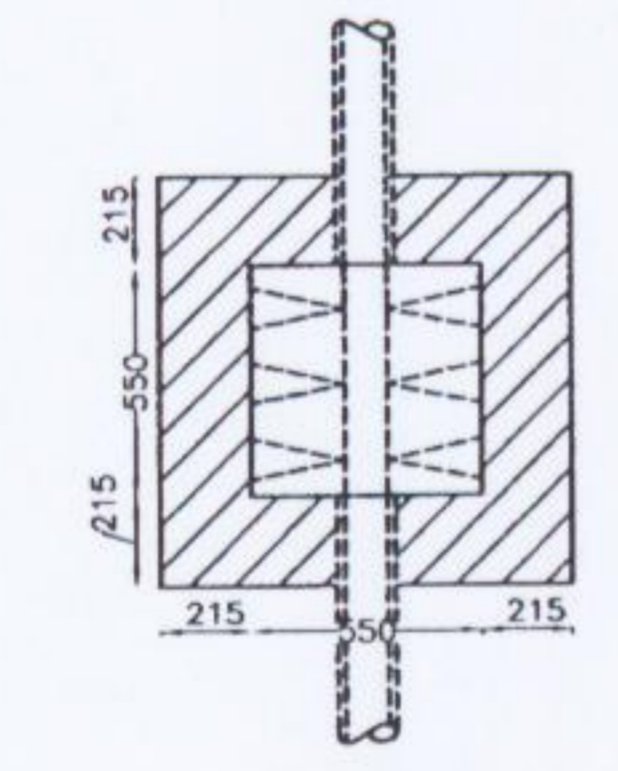
TYPE 1d (Sectional)
Scale 1: N.T.S.



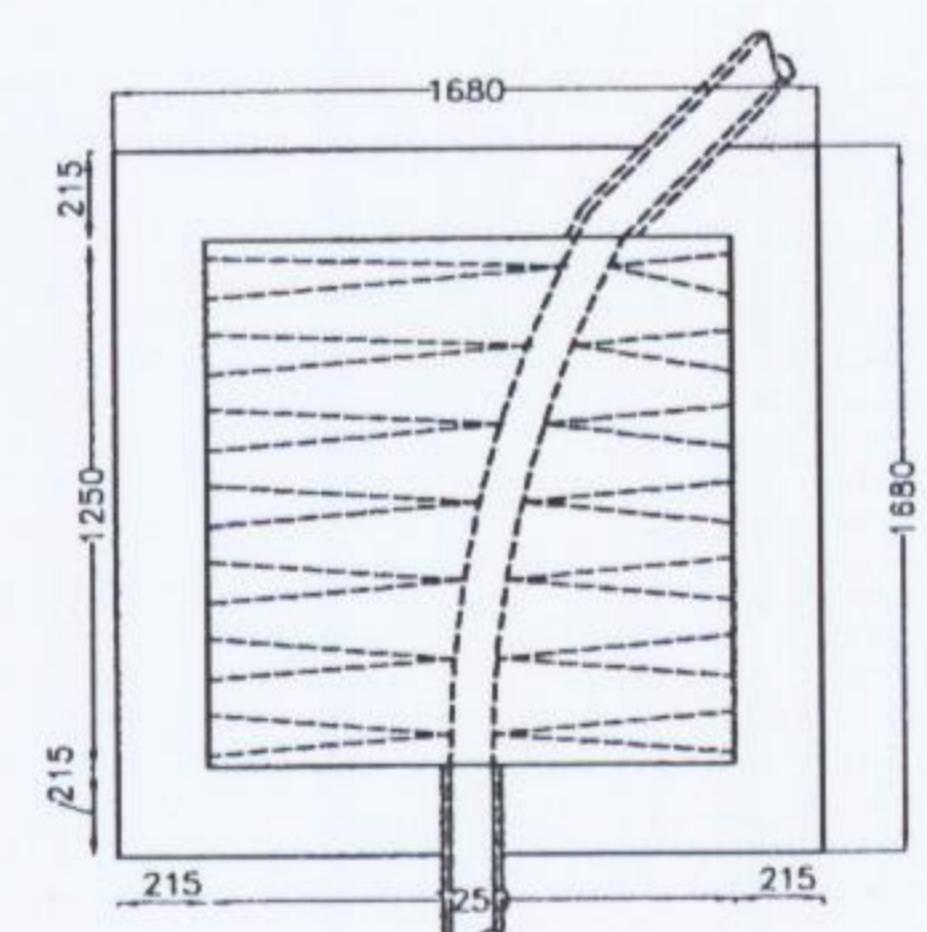
TYPE 1e (Sectional)
Scale 1: N.T.S.



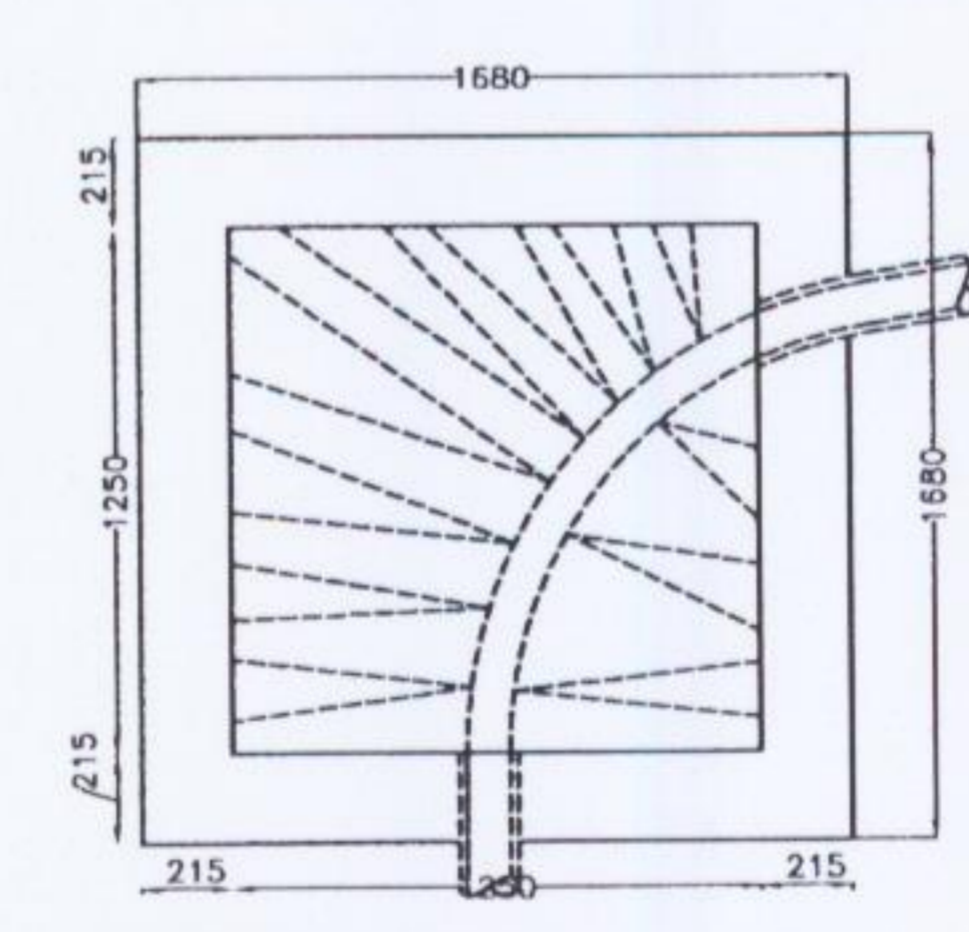
TYPE 1a (Plan)
Scale 1: N.T.S.



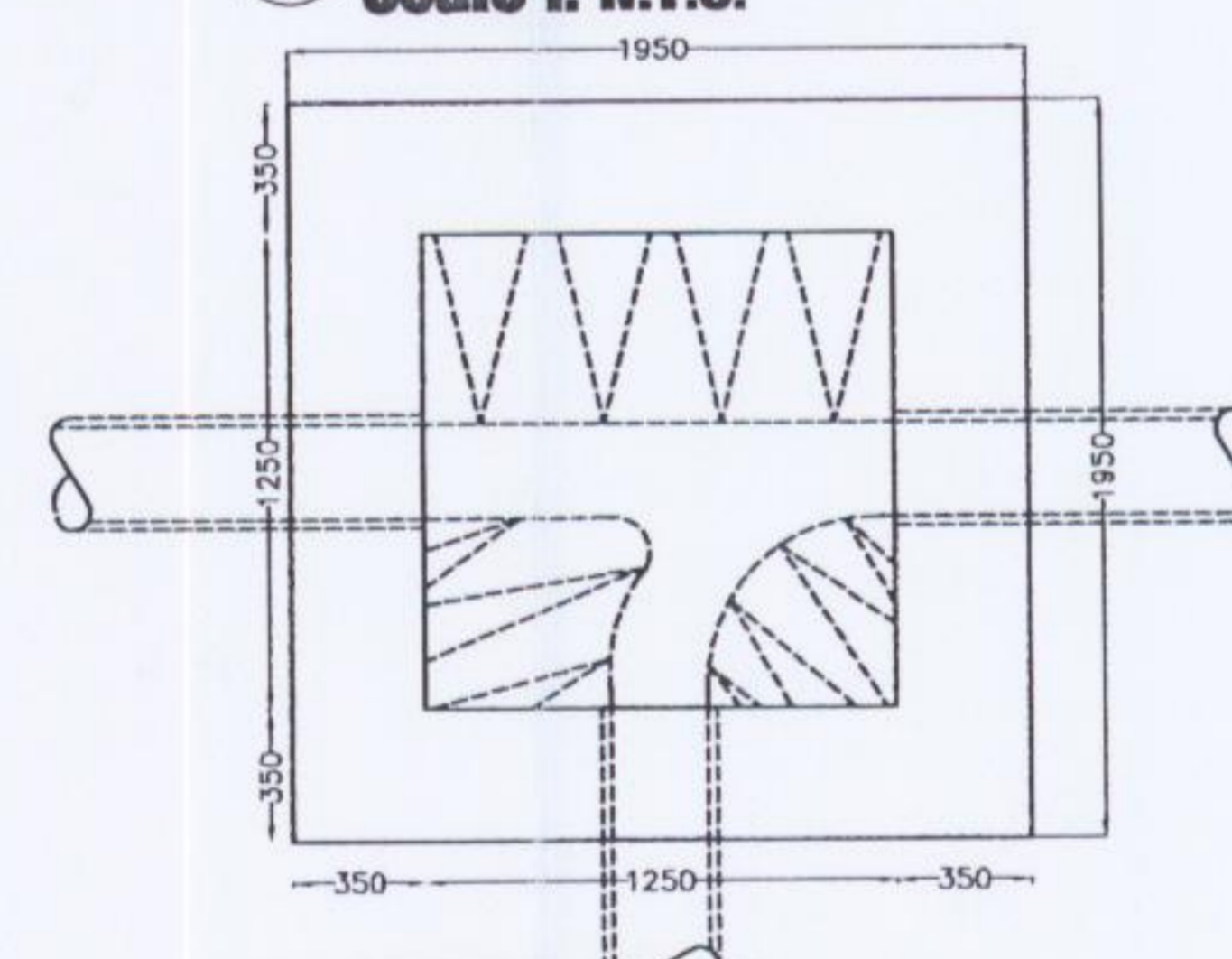
TYPE 1b (Plan)
Scale 1: N.T.S.



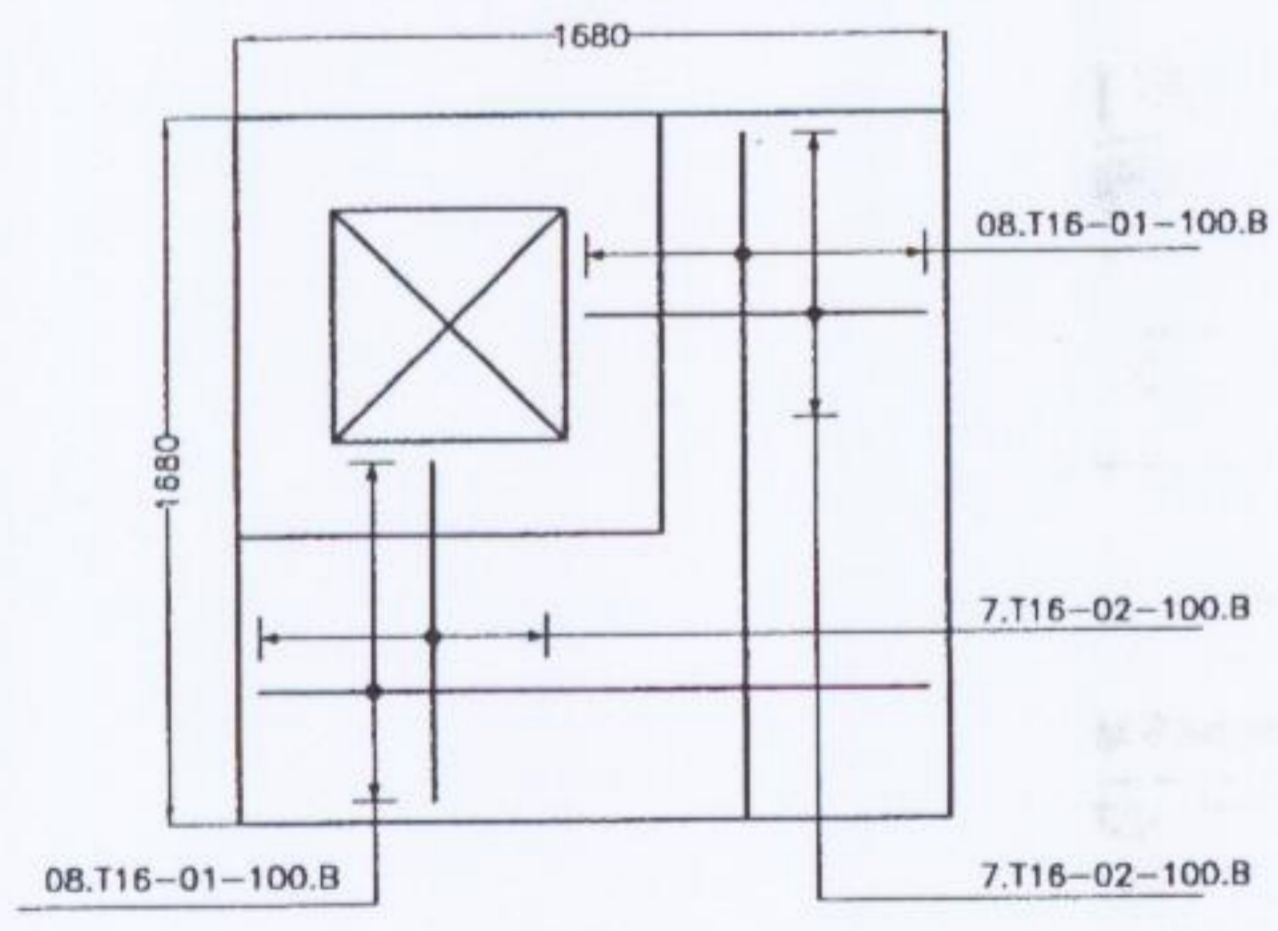
TYPE 1c (Plan)
Scale 1: N.T.S.



TYPE 1d (Plan)
Scale 1: N.T.S.



TYPE 1e (Plan)
Scale 1: N.T.S.

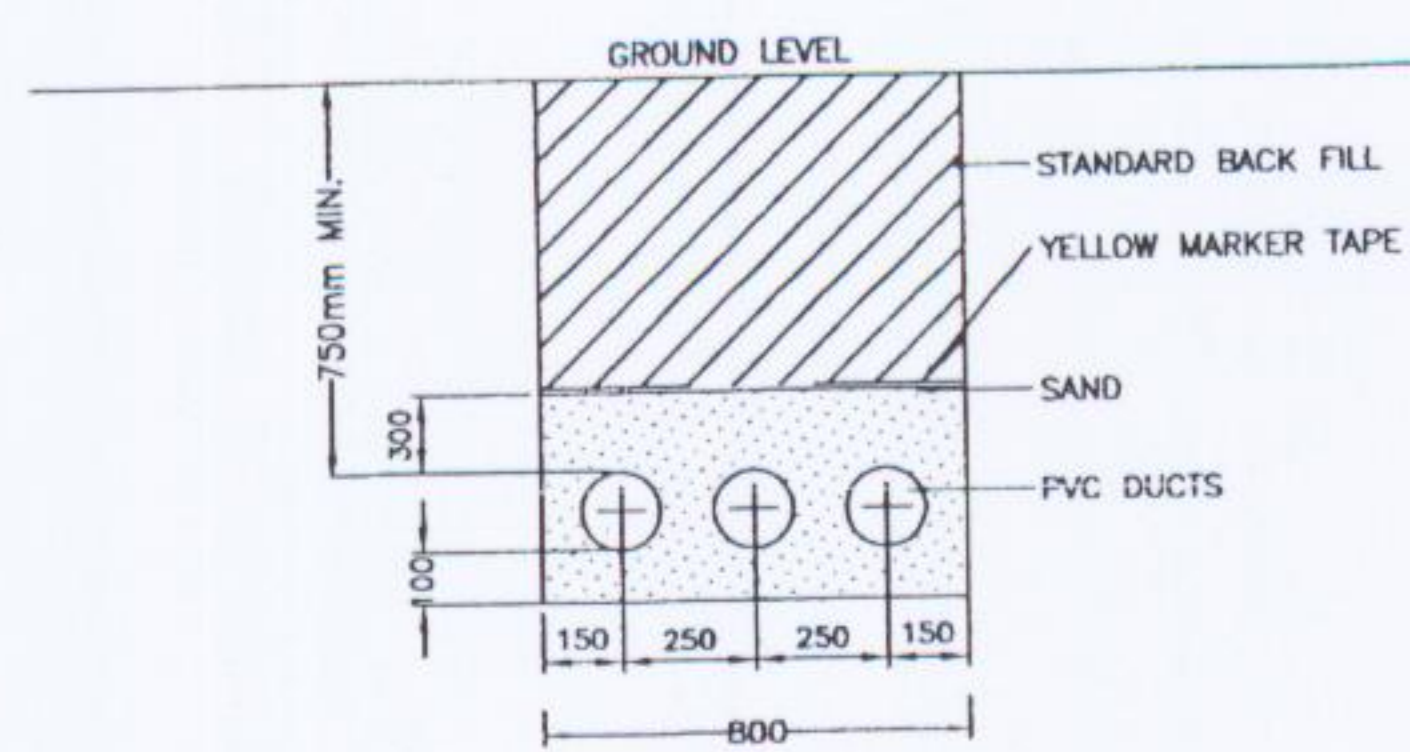


ROOF RE-BAR DETAILS
Scale 1: N.T.S.

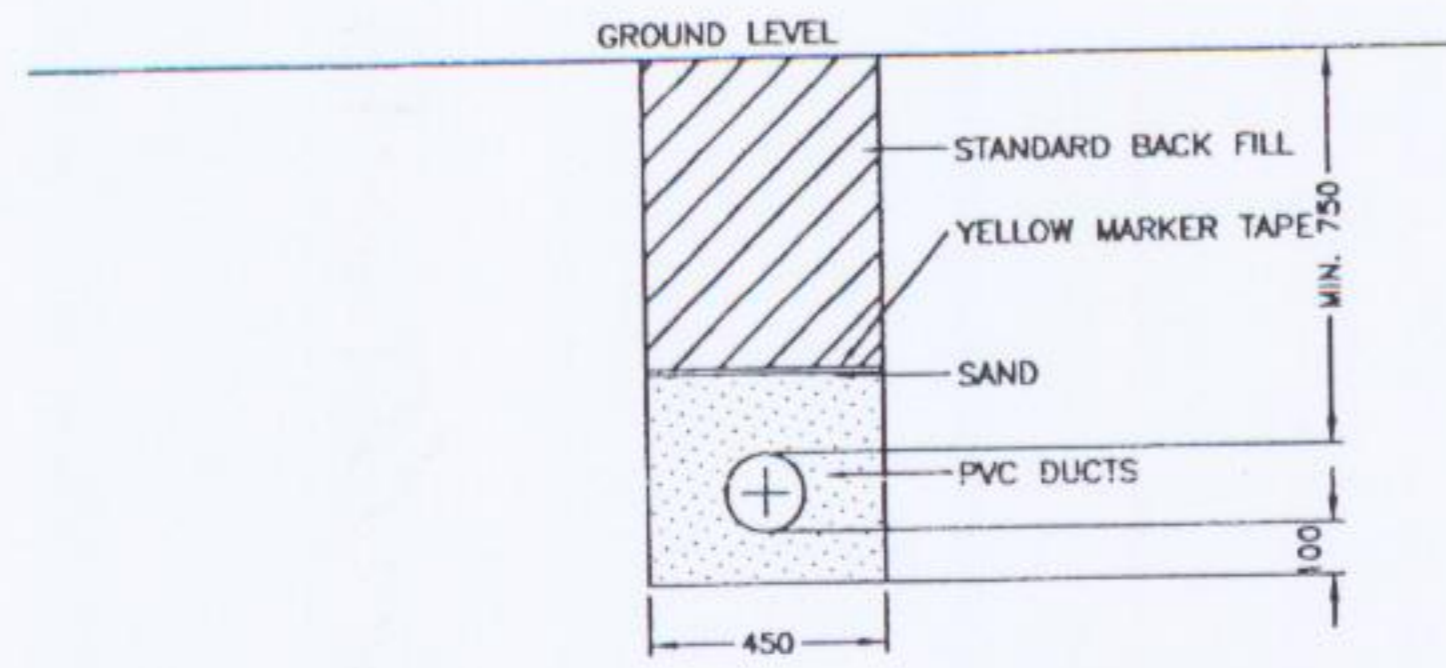
REINFORCEMENT SCHEDULE					
MEMBER	BAR MARK	TYPE & SIZE	NUMBER OF BARS	SHAPE CODE	LENGTH m.m.
ROOF FOR MANHOLE	01	T16	16	20	1625
	02	T16	14	20	900

DRAWING STATUS		WASTE LICENCE							
CLIENT		AVR							
		AVR - ENVIRONMENTAL SOLUTIONS Ltd.							
		PROPOSED WASTE RECOVERY/TRANSFER AND SLUDGE DRYING FACILITY AT FOXHOLE, YOUGHAL Co. CORK.							
APPENDIX		APPENDIX D1 (K)							
DRAWING TITLE		SEWERAGE AND SURFACE WATER DRAINAGE INFRASTRUCTURE (Sheet 2 of 6)							
CLIENT APPROVAL									
A		18-09-04		ISSUED FOR WASTE LICENCE		CO'S			
No.	DATE	REVISION	BY	No.	DATE	REVISION	BY		
DRAWN		CO'S		CLIENT FILE No.		FINBARR GANNON & CO. LTD. CONSULTING ENGINEERS			
DESIGNED		EO		DATE		MAY '04			
APPROVED		FG		SCALE		N.T.S. (A1)			
				FGCL FILE No.		04/409			
				CAD FILE NAME		04409-214.dwg			
				DRAWING NUMBER		04409-214			
				REV.		A			

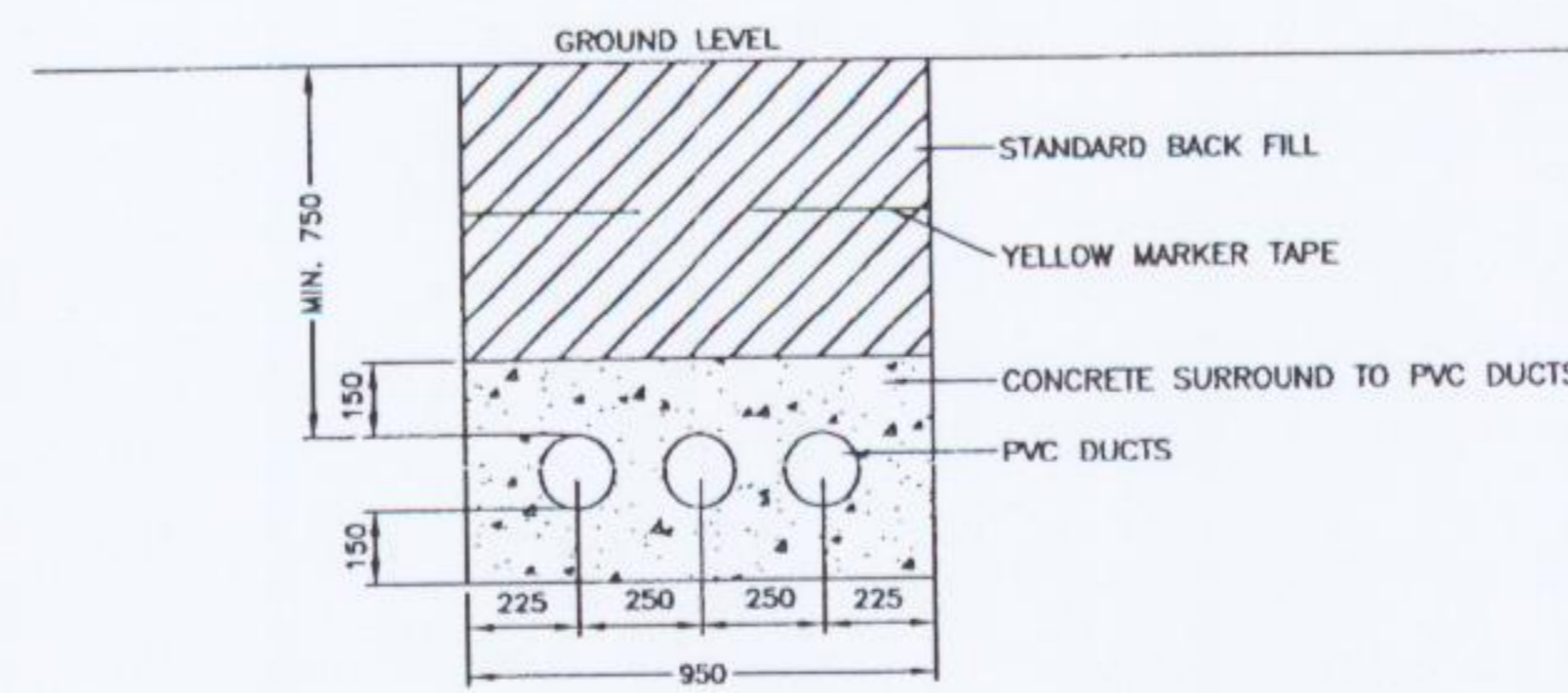
NOTES
DO NOT SCALE, IF IN DOUBT - ASK !
INVERT LEVEL OF OUTLET PIPE TO BE SET 30mm BELOW INVERT LEVEL OF INLET PIPE.
MANHOLES TYPES 3 REFER TO PRE-CAST CONCRETE MANHOLES FROM JOHN A. WOODS (Similar may be used)
CAST IRON MANHOLE STEPS TO BE SET INTO WALLS AT 450mm c/c HORIZONTALLY AND VERTICALLY.
CHAMBER RINGS ARE AVAILABLE IN 2 DIAMETER SIZES 1000mm OR 1200mm AND CAN BE 300mm, 600mm OR 900mm HIGH.
PRE-CAST CONCRETE MANHOLES BASES TO BE SET IN 75mm LEAN MIX CONCRETE C20/20.
MANHOLE TYPES 1 TO BE CONSTRUCTED IN SOLID BLOCK WORK OR IN-SITU CONCRETE.
CONCRETE CLASS 30N CONCRETE FOR CAST-IN-SITU CONCRETE ROOF SLABS.
BLOCK WORK MANHOLES SHALL BE SCUDED AND RENDERED IN TWO COATS INTERNALLY.
MANHOLES TO BE CONSTRUCTED OF SOLID BLOCK WORK OR IN-SITU CONCRETE.
THE MINIMUM WALL THICKNESS SHALL BE 215mm TO DEPTHS OF 2750mm AND 350mm TO DEPTHS OVER 2750mm.
BLOCK WORK MANHOLES SHALL BE SCUDED AND RENDERED IN TWO COATS INTERNALLY.



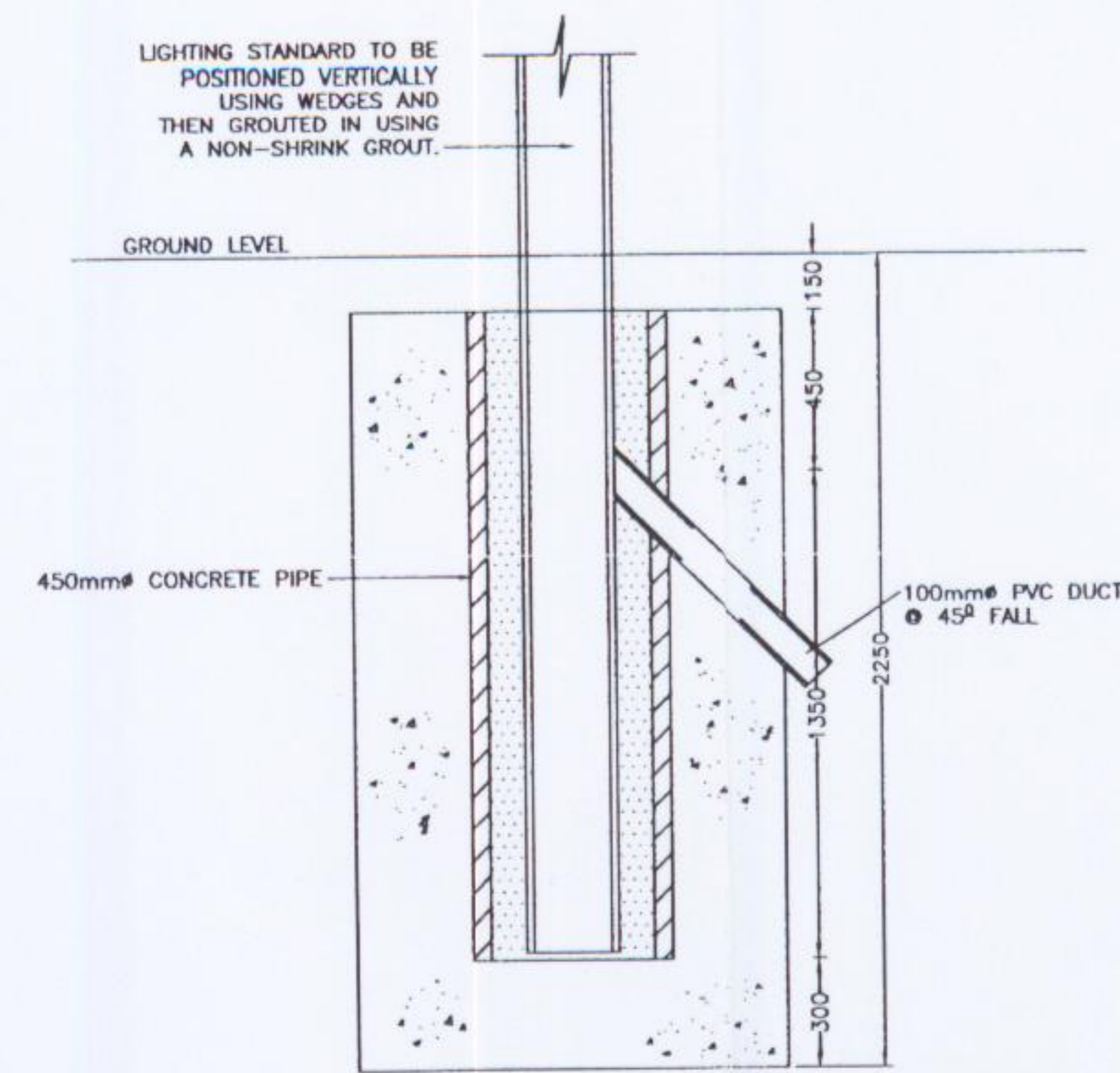
CABLE TRENCH (3 Ducts)
Scale 1: 20 (A1)



CABLE TRENCH (1 Ducts)
Scale 1: 20 (A1)



CABLE TRENCH (Under Roads)
Scale 1: 20 (A1)



SECTION OF LIGHTING STANDARD
Scale 1: 20 (A1)

BC - OUTSIDE DIAMETER OF PIPE

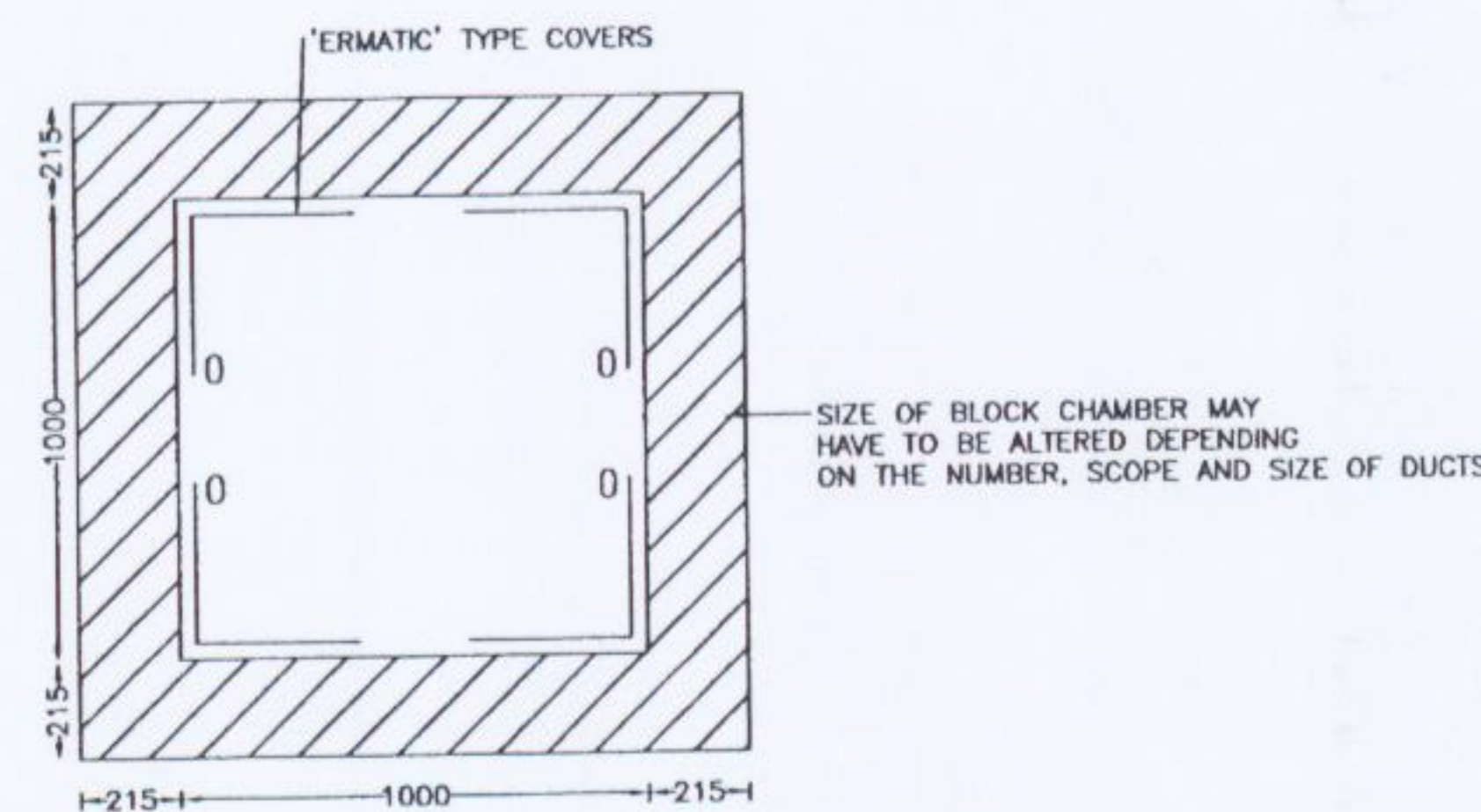
A-BACKFILL
REPLACE LAYERS EXCAVATED AND COMPACT IN 300mm LAYERS TO A DENSITY NOT LESS THAN IN THE ADJACENT GROUND.

B-BACKFILL
SELECTED MATERIAL FROM TRENCH EXCAVATION WITH GRADING AND SULPHATE CONTENT WITHIN LIMITS CALLED FOR IN THE SPECIFICATION COMPACTED IN 150mm LAYERS.

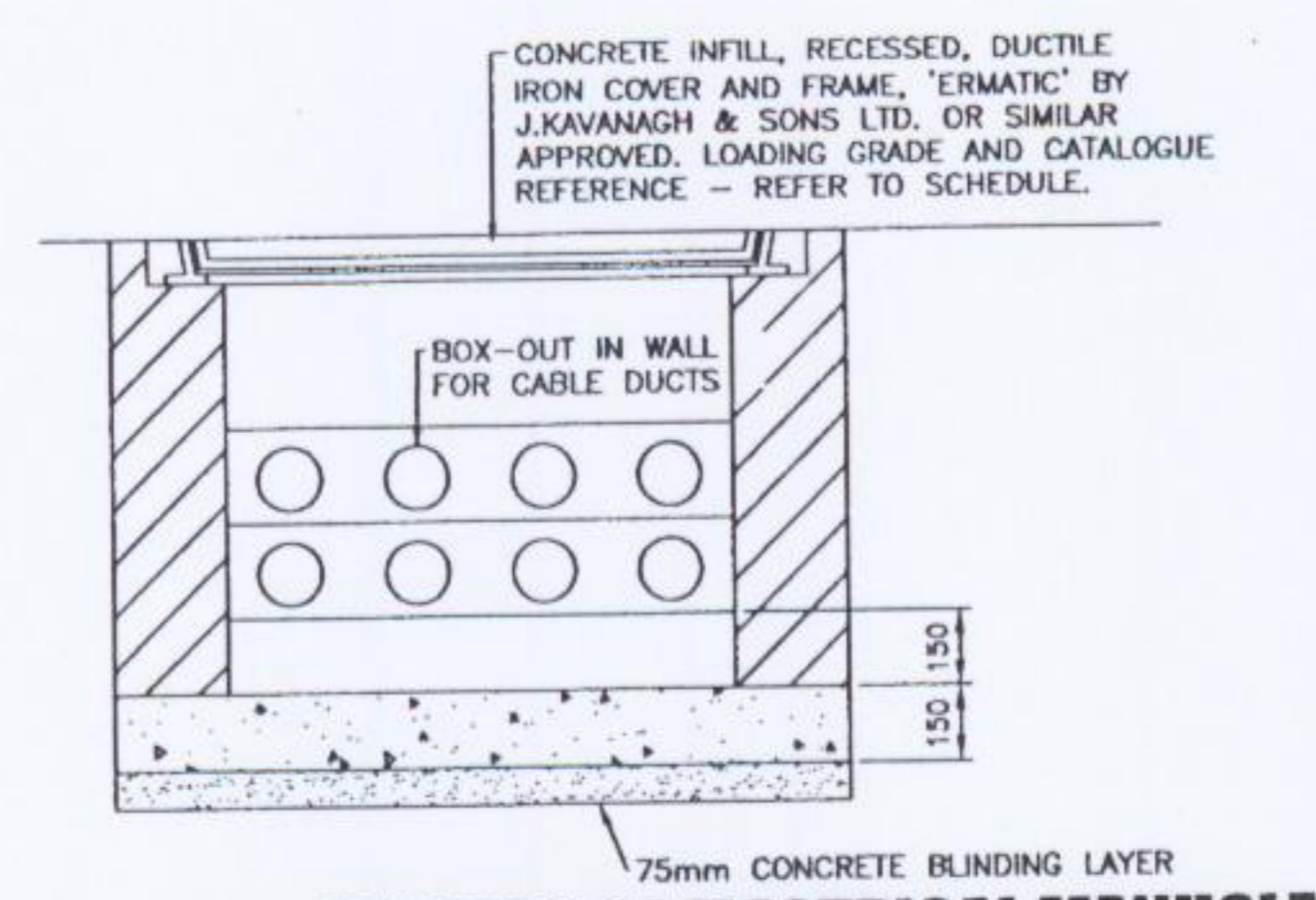
C-PIPE BEDDING
GRANULAR MATERIAL WITH GRADING AND COMPACTION FRACTION VALUE AND SULPHATE CONTENT WITHIN LIMITS CALLED FOR IN SPEC, WELL TAMPED BY HAND IN 75mm LAYERS TO TOP OF PIPE AND LIGHTLY COMPACTED BY HAND IN 150mm LAYERS ABOVE TOP OF PIPE.

CONCRETE
20N20 CONCRETE, 28 DAYS CUBE STRENGTH - 20 N/mm²

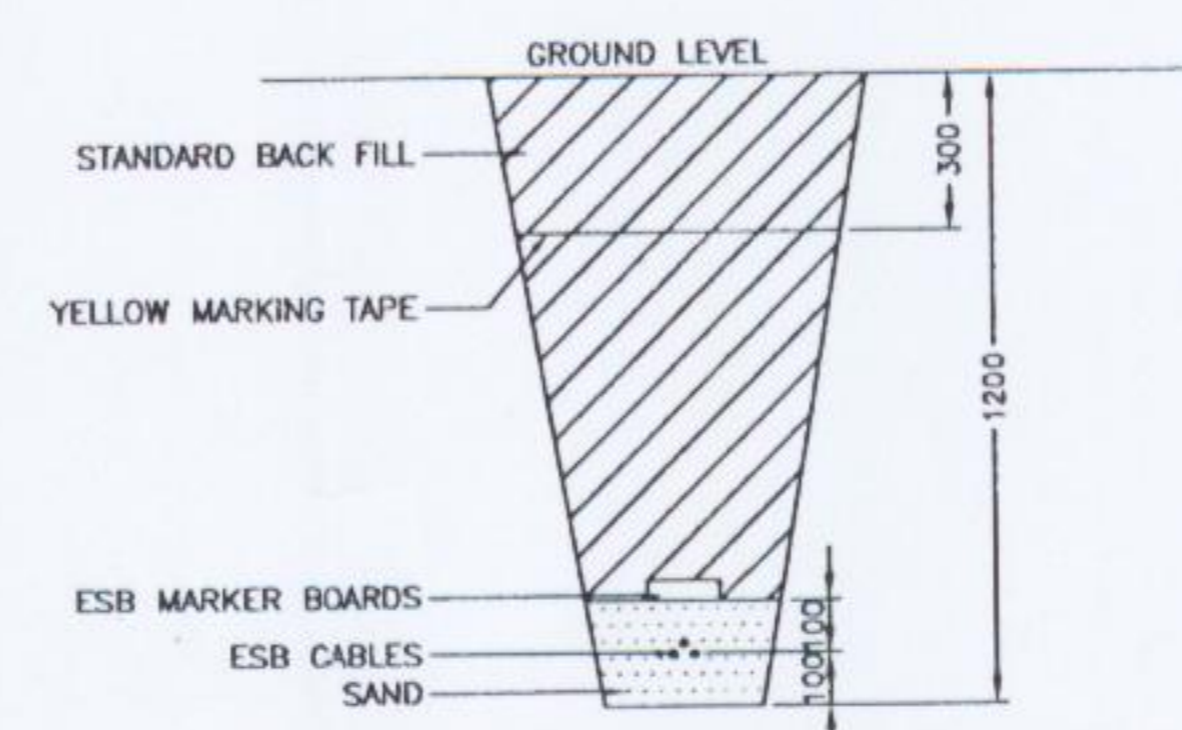
PIPE PROTECTION
PIPES UNDER ROADS (EXCEPT CONC. ROADS) WITH LESS THAN 1200mm COVER, SHALL HAVE CONCRETE ENCASEMENT.
PIPES WITH LESS THAN 900mm COVER IN NON-VEHICULAR AREAS SHALL BE WRAPPED IN 2mm THK. ROOFING FELT BEFORE ENCASEMENT.



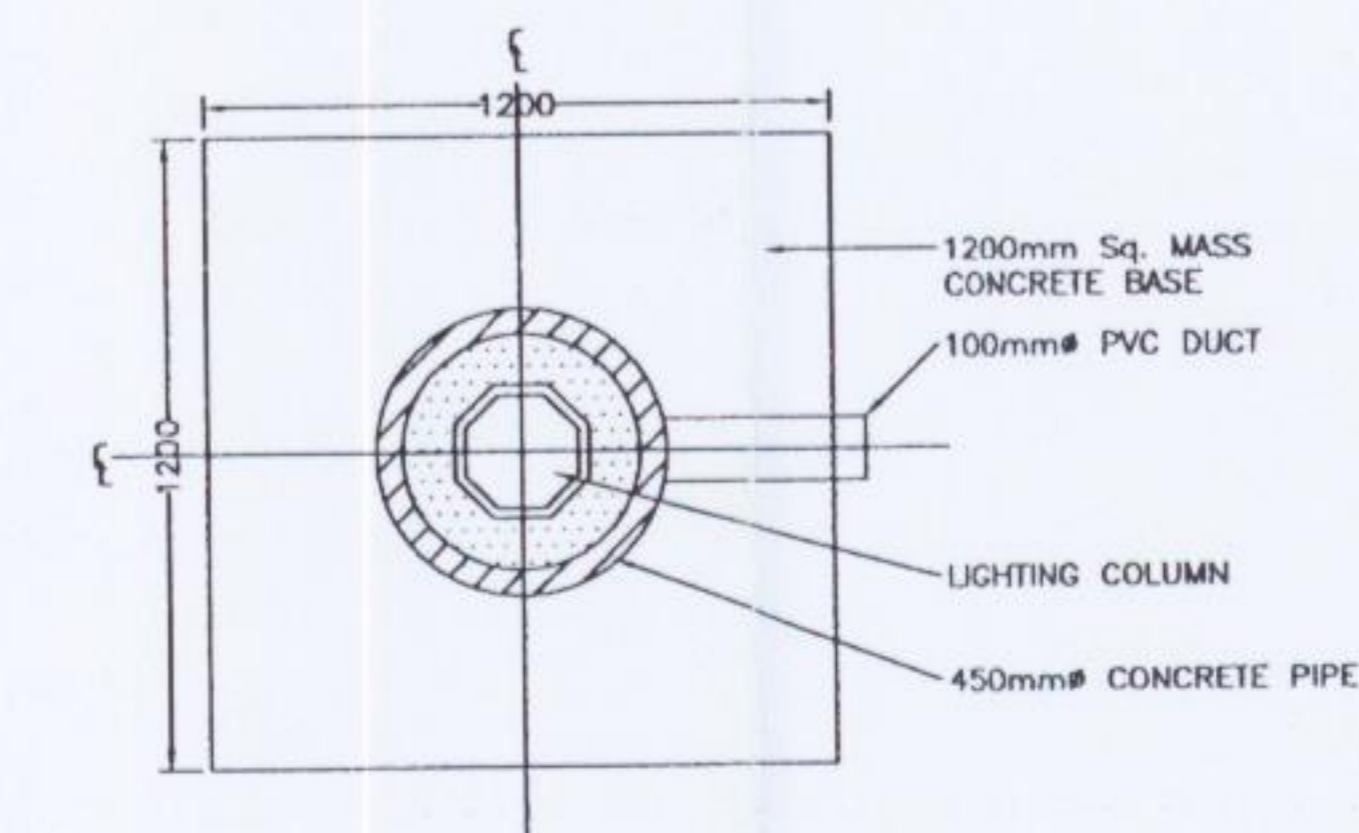
PLAN OF ELECTRICAL MANHOLE
Scale 1: 20 (A1)



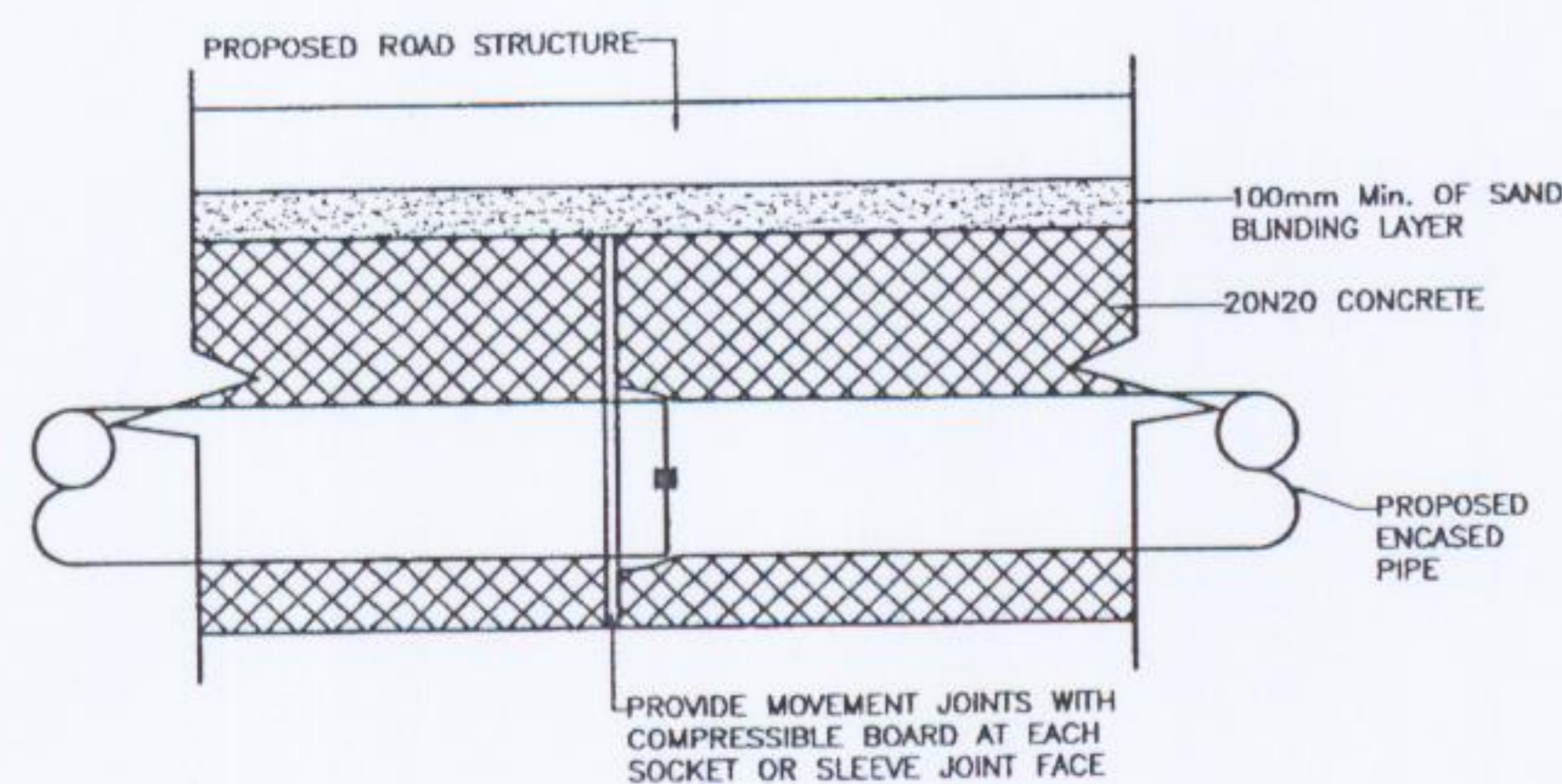
SECTION OF ELECTRICAL MANHOLE
Scale 1: 20 (A1)



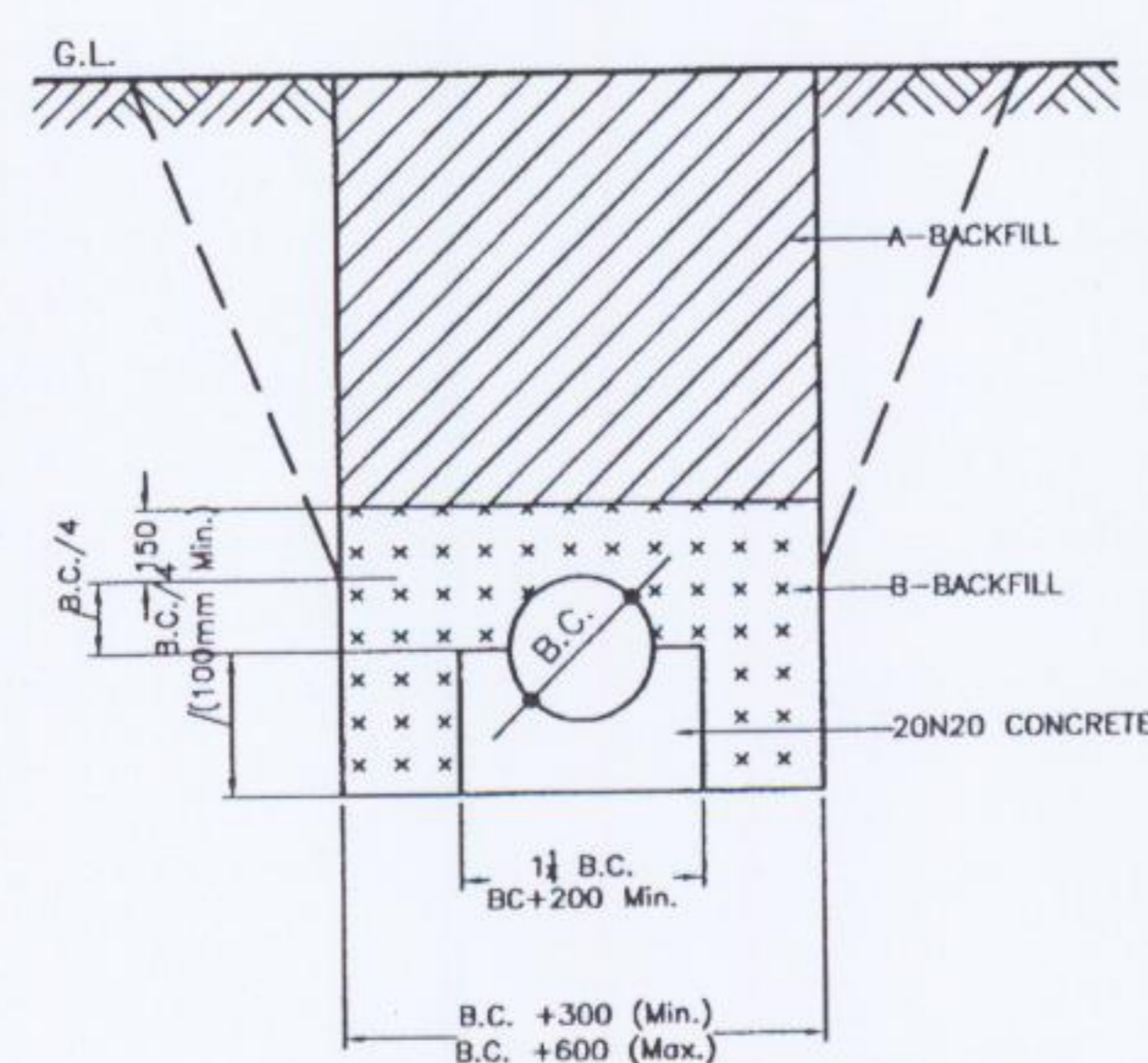
BURIED ESB CABLE TRENCH
Scale 1: 20 (A1)



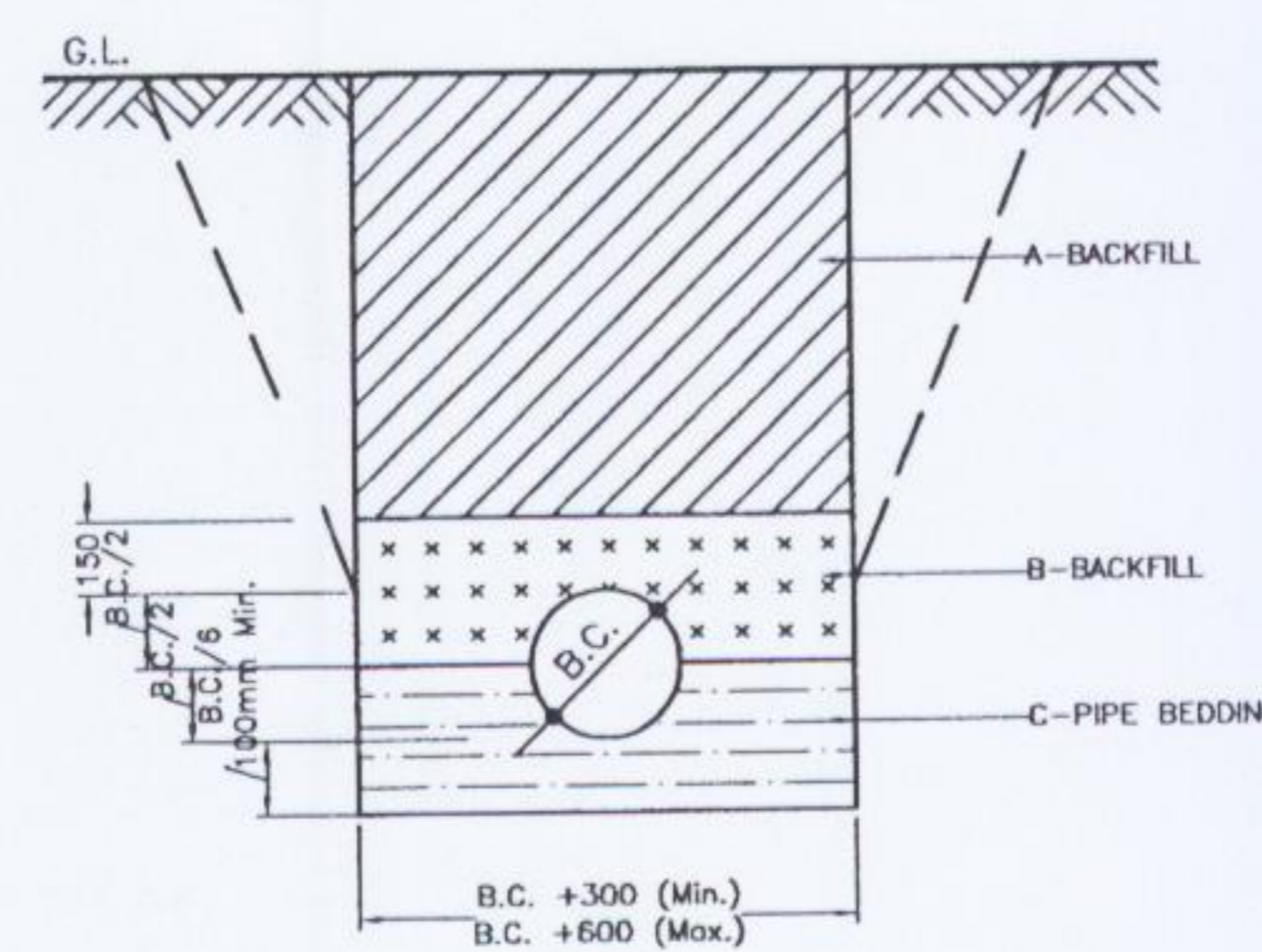
PLAN OF LIGHTING STANDARD
Scale 1: 20 (A1)



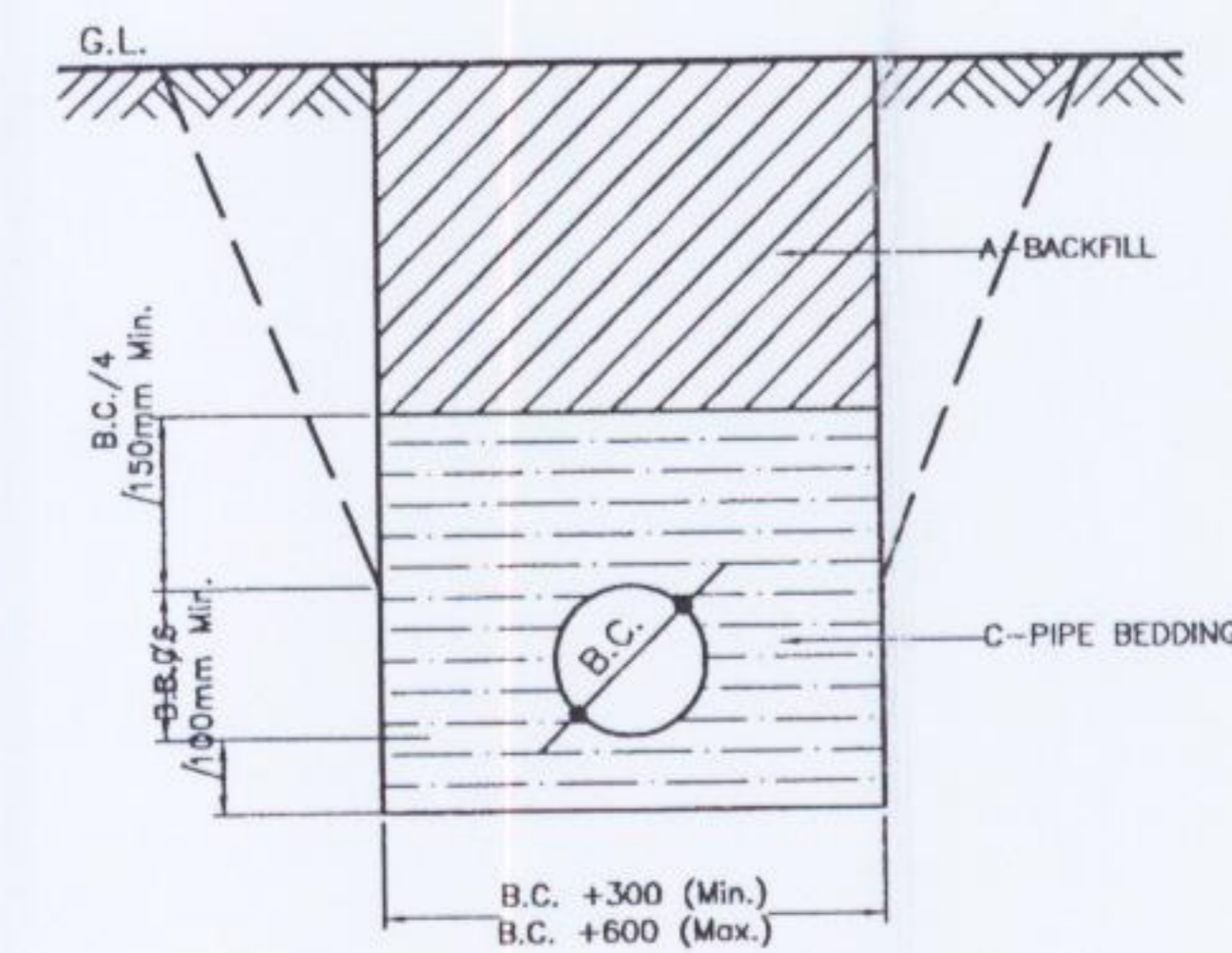
CONCRETE ENCASEMENT DETAIL
Scale 1: N.T.S. (ELEVATION)



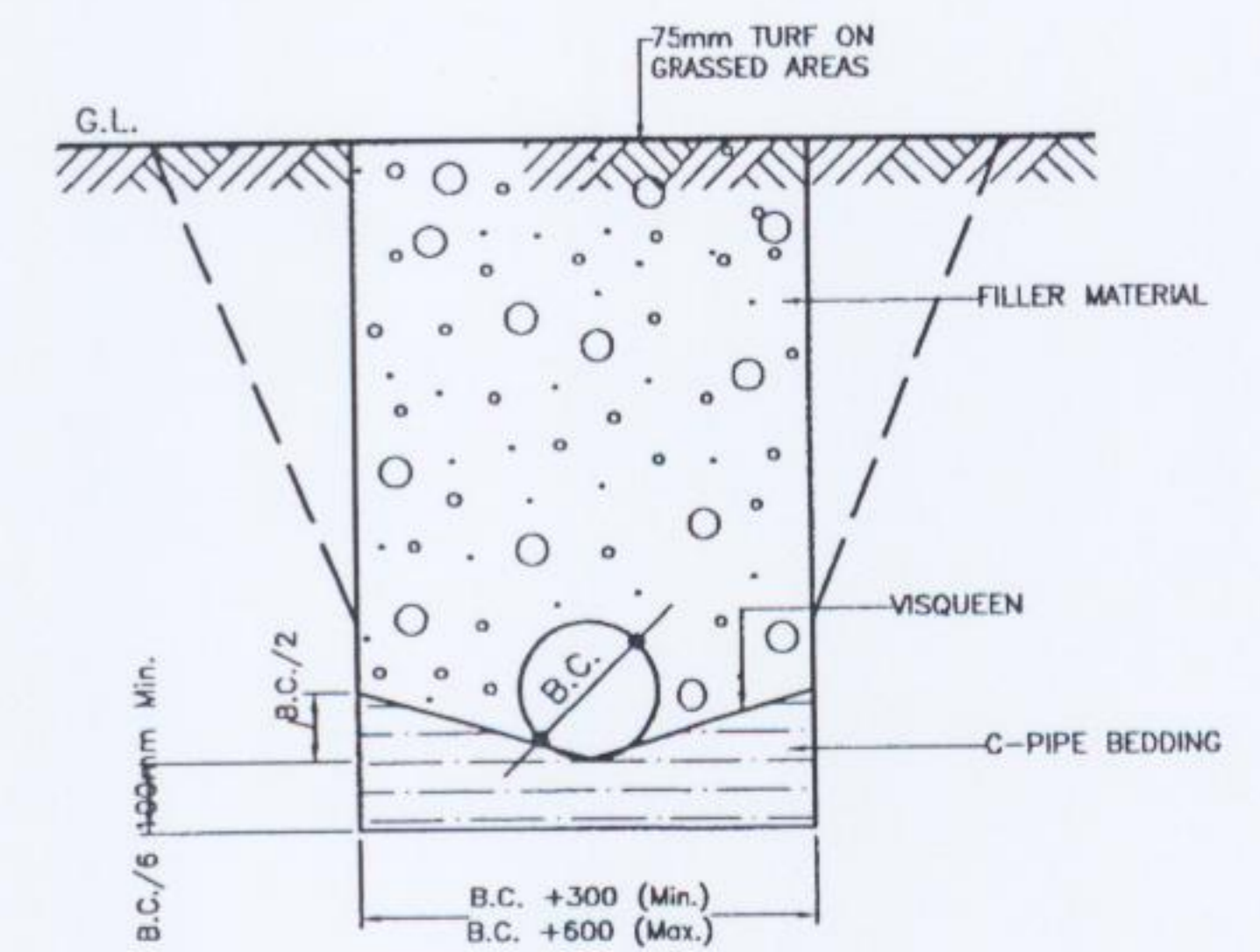
CLASS "A" BEDDING DETAILS
Scale 1: N.T.S.



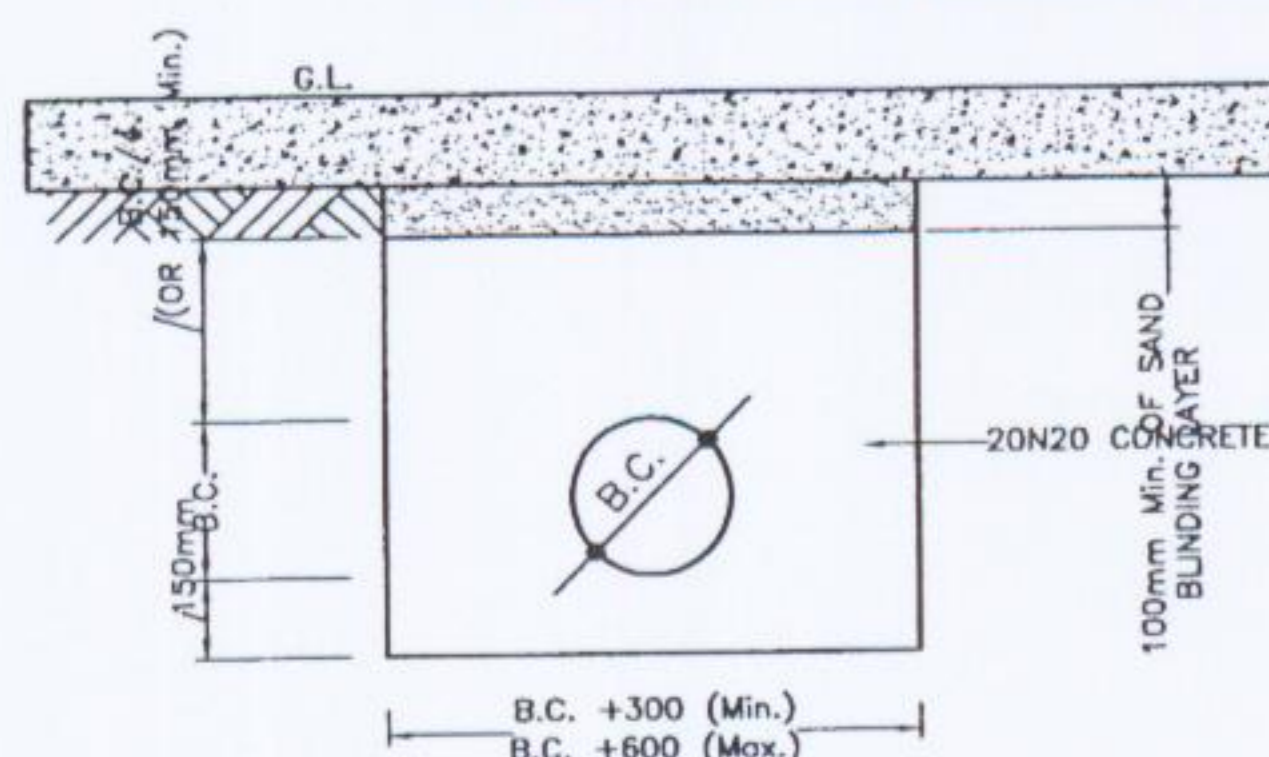
CLASS "B" BEDDING DETAILS
Scale 1: N.T.S.



FLEXIBLE PIPE BEDDING DETAILS
Scale 1: N.T.S.



FRENCH DRAIN DETAILS
Scale 1: N.T.S.



CONCRETE ENCASEMENT DETAIL
Scale 1: N.T.S. (SECTIONAL)

DRAWING STATUS		WASTE LICENCE							
CLIENT	AVR								
AVR - ENVIRONMENTAL SOLUTIONS LTD.									
PROPOSED WASTE RECOVERY/TRANSFER AND SLUDGE DRYING FACILITY AT FOXHOLE, YOUGHAL Co. CORK.									
APPENDIX	APPENDIX D1 (K)								
DRAWING TITLE	SEWERAGE AND SURFACE WATER DRAINAGE INFRASTRUCTURE (Sheet 3 of 6)								
DRAWING STATUS	ISSUED FOR WASTE LICENCE	CO'S							
CLIENT	AVR	FILE No.		DATE		REVISION		BY	
DESIGNED	EO	DATE	MAY '04	REVISION		BY		REVISION	
APPROVED	FG	SCALE	1:20(A1)	FILE No.		DATE		REVISION	
CLIENT APPROVAL		FILE No.	04/409	DATE		REVISION		BY	
		CAD FILE NAME	04409-215.dwg	FILE No.		DATE		REVISION	
		DRAWING NUMBER	04409-215	FILE No.		DATE		REVISION	
		REV.	A	FILE No.		DATE		REVISION	