

1. This drawing is to be re architectural and engineer 2 Levels indicated in block are generally 190mm abov 3. Roads footpaths and p the highway to be adopted Highways Act 1980 shall c highway specification. 4. Sewers to be adopted u Industries Act 1991 shall c Authorities Association "Se and Combined Addendum 5. All pipes to be used in a clayware to BS EN 295 or S bedding unless otherwis requirement for pipes to be be as follows: 150mm dia - Class 187 - r 225mm dia - Class 120 - n 300mm dia - Class 120 - n Larger than 300mm dia - H cover to pipes is less than vehicular access areas the concrete slab protection, fl maintained by using comp not exceeding 5m. All existing drainage inv locations are to be checked commencement of any pro difference between actual immediately. 7. Positions of existing ser apparatus adjacent to or c be checked by the Contrac THIS DRAWING IS TO BE WITH ALL RELEVANT DE OTHER INFORMATION CLIENT TO CHECK ALL POSI EXISTING SERVICES PRIOR OF WORKS ON SITE AND RE IMMEDIATELY FOR DIVERSIO A SCREEN AND SUMP IS TO OUTGOING PIPE TO THE LAS MANHOLES BEFORE ENTERI IN ACCORDANCE WITH SEW THE SCREEN SHALL ONLY E CONSTRUCTION WORKS HA

GENERAL NOTES

LEVEL OF EXISTING ROAD A PROPOSED SITE ROAD MUS

ALL EXISTING SEWER LEVEL VERIFIED PRIOR TO ANY COM

> CONTRACTOR IS TO CO-ORDINATES SUPI INTENDED POSITION THIS DRAWING AND REPORTED IMMEDIA

POLISHED STONE VALUES, AG AGGREGATE ABRASION VALU VALUES OF ALL SURFACE CO BE CHECKED WITH HIGHWAY WITH ALL CODES OF PRACTIC AND LAYING OF MATERIALS

CONCRETE SURROUND (ADOPTABLE MANHOLES V UNSTABLE GROUND AND FINAL DECISION ON SURF || TO BE MADE BETWEEN D AND DEVELOPER

		<u> </u>					 <u>Notes</u> This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
			laterial	s For Ado	ptable Sew	ers	2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.
read in conjunction with relevant ring drawings.		Pli	PES 150mm	a - 300mm DIA	:-		
cks are finished floor levels which we ground level. parking bays which form part of					R PIPES ARE TO E WITH FLEXIBLE	E EXTRA	
d under Section 38 of the comply with the relevant council		RE	ELEVANT RE		S MUST COMPLY S OF BS EN 295-1:		PUBLIC DRAINAGE
under Section 104 of the Water comply with the Water ewers for Adoption 6th Edition			PES > 300m		es only).		FOUL WATER Manhole Pipe line
". adoptable sewers shall be either concrete to BS 5911 with Class		11			ATER PIPES ARE NCRETE PIPES A		Direction Arrow Rising Main — — — — — — —
e stated. The minimum e used in adoptable sewers is to		wi	TH FLEXIBL	E JOINTS SHA	ALL COMPLY WITH BS 5911-1:2002.		SURFACE WATER
nin crushing strength 28kN/m nin crushing strength 28kN/m nin crushing strength 36kN/m							Manhole Pipe line Direction Arrow
ligh Strength Concrete. Where 1200mm under carriageway or ey shall have 150mm Grade C20 exibility of joints being		Severn Tr	ent Wat	ter Manho	ole Require	nents For Sewers	
ressible fibreboard at intervals						& Diversions	Gully Gully G Highway Drain / G Gully Connection
d by the Contractor prior to the posed drainage work. Any and drawn details is to reported		General require					* Demarcation chambers to be constructed as per
vices/stautory undertakers ossing proposed sewers is to		Copies of delive job progresses.	•	•	adoptable manhole construction details depending on chamber depth. A 450Ø Inspection chamber		
tor prior to starting work.		Channels and B	enching				can be used providing lateral only serves one plot.
		channels. All be				ave swept bends and nic concrete <i>trowelled to a</i>	
READ IN CONJUNC SIGN DRAWINGS AN	11	smooth finish.	bolos				
		Ironwork In Man		3m deep we rec	uire double encap	sulated step rungs unless	
TIONS, SIZES, LEVEL	SOF	otherwise appro	ved. If the o	chamber is ove	r 3m deep we requ	ire <i>hot dipped galvanised</i> d back of shaft. Depth is	
TO THE COMMENCE PORT ANY DISCREP INS TO BE ARRANGE	MENT ANCIES	measured from between cover I Brickwork			•	The maximum distance	
BE FITTED OVER TH		Min 2 max 4 cou				ngineering bricks or concrete	
T NEW SURFACE AN NG THE EXISTING S	ND FOUL	spacing rings ne resisting cemen				all brickwork. Sulphate	
ERS FOR ADOPTION BE REMOVED ONCE VE BEEN COMPLETE	ON SITE	Cover and Fram					
		DN400 shall be	used at all lo	ocations. On sp	oine roads must be	ess otherwise approved. 150mm deep. On residential	
T POINT OF TIE IN WI T BE CHECKED BEFC		11	polyester res	sin bedding mo		s for manhole covers should where covers are sited in	
5		'Infill' type cover	0				
S TO BE CHECKED A		In block paved a SfA6 p.25)	areas 150mr	n deep frames	must be used (in a	ccordance with cl 2.8.6	
NSTRUCTION WORKS	5	Laterals					
PLIED ARE AS THE AS INDICATED ON ANY DISCREPANCIES TELY GGREGATE SIZES, JES AND PENETRAT DURSE MATERIALS M AUTHORITY AND CO CE PRIOR TO ORDEF DISC PRIOR TO ORDEF	ION UST DMPLY	ALL ADOPTA SEWERS FOR TRENT WATE	Vehicles. BLE DRAIN R ADOPTIO ER REQUIR APPLIC	AGE MUST CO N 6TH EDITIO EMENTS ATION CATION TO SE D FOR THE RE	OMPLY WITH N AND SEVERN VERN TRENT WAT USE OF ANY EXIS	ING	
HIGH WATER TABLE OUND REQUIREMEN RAINAGE AUTHORIT	NTS				UBLIC SEWERAGE F A NEW CONNEC		
		SURFACE	WATER DR/	AINAGE ARRAN	D FOR THE FOUL A		F Amended to suit LCC comments 25/03/2 SEH
		SHOULD E		TED BY THE CO	DNTRACTOR.		E New layout added 06/03/2 015 TG 015 D Proposed ramp location altered to tie into 16/02/2 SEH
							existing develoment 015 C New site layout overlaid 09/02/2 015 015
Minimum dimer	nsions fo	r access fittin	as and ir	nspection o	chambers		B Gully locations amended 16/01/2 015 SEH 015 A F21 Invert level altered 13/01/2 015 SEH AG
			<u> </u>	•	Cover sizes		Rev Description Date Initial Checked For guidance only. Do not scale off this drawing 1:20 - 0 200mm 400mm 600mm 800mm 1000 1200 1400 1600 1800 2000
Time	onth to in t	Interna	ا ا	Length x width	ا سمانیمی ا		,
frc	pepth to invert om cover level (m)	Length x width (mm x mm)	Circular (mm)	(mm x mm)	Circular (mm)		1:100-0 1 m 2m 3m 4m 5m 6m 7m 8m 9m 10m 1:50 - 0 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m 1:50 - 0 1m 2m 3m 4m 5m 1:5 - 0 100mm 200mm 300mm 400mm 500mm
frc Rodding eye Access fitting	m cover level (m)	Length x width		•			
Rodding eye frc Access fitting small 150 diam 150 x 100	om cover level	Length x width (mm x mm)		•	(mm) Same size as		
Rodding eye from Access fitting small 150 diam 150 x 100 e large 225 x 100 Inspection chamber shallow shallow	0.6 or less, except where situated in a chamber 0.6 or less	Length x width (mm x mm) As drain but min 100 150 x 100 225 x 100 225 x 100	(mm) 150 225 190 ²	(mm x mm) 150 x 100 ¹ 225 x 100 ¹	(mm) Same size as pipework ¹ 150 225 190 ¹		
Rodding eye from Access fitting small 150 diam 150 x 100 e large 225 x 100 Inspection chamber shallow shallow	0.6 or less, except where situated in a chamber	Length x width (mm x mm) As drain but min 100 150 x 100 225 x 100	(mm) 150 225	(mm x mm) 150 x 100 ¹	(mm) Same size as pipework ¹ 150 225		
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Rodding eye from Access fitting small 150 diam 150 x 100 large 225 x 100 Inspection chamber shallow deep deep Notes: 150mm. 1) The clear opening may be redu 2) Drains up to 150mm. 3) A larger clear opening cover m	om cover level (m) 0.6 or less, except where situated in a chamber 0.6 or less 1.2 or less > 1.2 uced by 20mm in con	Length x width (mm x mm) As drain but min 100 150 x 100 225 x 100 225 x 100 450 x 450 450 x 450 450 x 450	(mm) 150 225 190 ² 450 450 450	(mm x mm) 150 x 100 ¹ 225 x 100 ¹ Min 430 x 430 max 300 x 300 ³ frame	(mm) Same size as pipework ¹ 150 225 190 ¹ 430 Access restricted to max 350 ³		tiso - 0 tim tim 200 mm 300 mm 400 mm 500 mm 15 - 0 tim
Rodding eye from Access fitting 150 diam small 150 x 100 e large 225 x 100 s Inspection chamber shallow s lovep 0 s Notes: 1) The clear opening may be reduced s a) A larger clear opening cover m a	0.6 or less, except where situated in a chamber 0.6 or less 1.2 or less > 1.2 uced by 20mm in con nay be used in con Size of largo	Length x width (mm x mm) As drain but min 100 150 x 100 225 x 100 225 x 100 450 x 450 450 x 450 rder to provide proper support unction with a restricted access rmanholes est Min internal	(mm) 150 225 190 ² 450 450 450	(mm x mm) 150 x 100 ¹ 225 x 100 ¹ Min 430 x 430 max 300 x 300 ³ frame ricted for health and sat	(mm) Same size as pipework ¹ 150 225 190 ¹ 430 Access restricted to max 350 ³		tiso - 0 time time time time time time time time
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Rodding eye from Access fitting 150 diam small 150 x 100 e large 225 x 100 s Inspection chamber shallow e deep deep s Notes: 1) The clear opening may be reduced to 150mm. e 3) A larger clear opening cover m manhole f Type f f Manhole 1.5m deep to soffit f > 1.5m deep to soffit soffit of pipe soffit of pipe Notes: 1) Larger sizes may be required 2) May be reduced to 675 by 675 3) Not applicable due to working 4) Minimum height of chamber in	bm cover level (m) 0.6 or less, except where situated in a chamber 0.6 or less 1.2 or less 1.2 or less > 1.2 uced by 20mm in con may be used in con Size of large pipe (DN) ≤ 150 225 300 > 300 ≤ 225 300 > 300 ≤ 225 300 > 300 ≤ 450 ≤ 150 25 300 > 300 ≤ 150 25 300 > 300 > 300 ≤ 150 25 300 > 300 ≤ 150 25 300 375- $450> 450\leq 150> 100= 1000= 100= 10000= 10000= 10000= 100000= 1000000000000000000000000000000000000$	Length x width (mm x mm) As drain but min 100 150 x 100 225 x 100 225 x 100 450 x 450 450 x 450 atso x 450 rder to provide proper support unction with a restricted access r manholes est Min internal dimensions1 Rectangular length and width 750 x 6757 1200 x 675 1200 x 750 1800 x (DN+450) 1200 x 1000 1200 x 1075 1350 x 1225 1800 x (DN+775) 1050 x 800 900 x 800	(mm) 150 225 190 ² 450 450 450 a for the cover and ss. The size is restr Circular diameter 1000 ⁷ 1200 1200 The larger of or (DN+45 1200 1200 The larger of or (DN+77 1050 120	(mm x mm) 150 x 100 ¹ 225 x 100 ¹ Min 430 x 430 max 300 x 300 ³ frame ricted for health and sat Min cle opening s Rectang r length and 1200 x 6 1800 50 675 x 67 1800 50 675 x 67 675 x 6	(mm) Same size as pipework ¹ 150 225 190 ¹ 430 Access restricted to max 350 ³ rety reasons to deter entry.		Image: Status Drawn By PM/Checked by Title Engineering Layout
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			laterial	s For Ado	ptable Sew	vers		appointment wi appointment. R by its client and 2. If received elect	th its client and is subject to PS accepts no liability for an l only for the purposes for wh	nce with the scope of RPS's he terms and conditions of that y use of this document other than ich it was prepared and provided. esponsibility to print to correct ed.
e read in conjunction with releva eering drawings.	int			n - 300mm DIA	-					
locks are finished floor levels wh bove ground level.	hich				R PIPES ARE TO	BE EXTRA				
nd parking bays which form part of oted under Section 38 of the all comply with the relevant counc			ECHANICAL	JOINTS. PIPE	WITH FLEXIBLE S MUST COMPLY			PL	JBLIC DRA	NAGE
ed under Section 104 of the Wate	er			EQUIREMENTS urface water pip	S OF BS EN 295-1: bes only).	1991 AND		FOUL WAT		
"Sewers for Adoption 6th Edition um". in adoptable sewers shall be eith			PES > 300m					Pipe line Direction A		
or concrete to BS 5911 with Cla wise stated. The minimum o be used in adoptable sewers is	ass	ST WI	RENGTH C	ONCRETE. CO	ATER PIPES ARE NCRETE PIPES A ALL COMPLY WITI	ND FITTINGS		Rising Mair		
7 - min crushing strength 28kN/m) - min crushing strength 28kN/m) - min crushing strength 36kN/m					BS 5911-1:2002.			Manhole Pipe line Direction A		
a - High Strength Concrete. Wher nan 1200mm under carriageway they shall have 150mm Grade C n, flexibility of joints being mpressible fibreboard at interva	or C20					ments For Sew & Diversions	ers	Gully	DRAINAGE	G
e invert levels, diameters and cked by the Contractor prior to th proposed drainage work. Any	ne	General require		Luition -	Adoptions			Highway D Gully Conn		
ual and drawn details is to report g services/stautory undertakers or crossing proposed sewers is t		Copies of delivery notes for concrete and pipe bedding will be required intermittently as the job progresses. All other component units must be kite-marked.							nanhole constructi r depth. A 450Ø Ir	e constructed as per on details depending spection chamber
tractor prior to starting work.		Channels and B		s 150mm. 225r	nm. 300mm must	have swept bends and		can be use	d providing lateral	only serves one plot.
BE READ IN CONJUN	11	11				hic concrete <i>trowelled to</i>	a			
DESIGN DRAWINGS	AND	11	s less than 3	•	•	sulated step rungs unles	11			
SITIONS, SIZES, LE		mild steel ladde	rs. There m	nust be 900mm	between ladder a	uire <i>hot dipped galvanise</i> nd back of shaft. Depth i g. The maximum distanc	is 📗			
R TO THE COMMEN REPORT ANY DISCR SIONS TO BE ARRAN	EPANCIES	between cover I				,				
O BE FITTED OVER		11				engineering bricks or cor all brickwork. Sulphate	ncrete			
RING THE EXISTING	SEWERS	Cover and Fram	t must be u							
Y BE REMOVED ON HAVE BEEN COMPLI	11	Cover slab oper	ning, cover a			less otherwise approved. 150mm deep. On resid	11			
AT POINT OF TIE IN JST BE CHECKED BE	11	cul-de-sacs 100	mm may be polyester re	e used subject to sin bedding mo	o approval. Frame	es for manhole covers sh s where covers are sited	iould			
RKS		'Infill' type cover	•							
ELS TO BE CHECKEI	D AND RKS	In block paved a SfA6 p.25)	areas 150m	m deep frames	must be used (in a	accordance with cl 2.8.6				
		Laterals They should be	laid to the s	same standard a	as public sewers.	They should have no cha	anges			
		adoptable manh	ole as the o	demarcation cha	amber unless there	namber. They should have the is only on property whe	ena 📗			
O ENSURE THAT ALL		certain locations	subject to	approval. The	demarcation shoul	15 covers may be allowed be inside the boundary the driveway and not in	/ of the			
JPPLIED ARE AS THE ON AS INDICATED ON D ANY DISCREPANC	1 I	wheel tracks of		Inside the boun	dary, preferably in	the driveway and not in				
IATELY						7				
AGGREGATE SIZES		SEWERS FOI	R ADOPTIC		OMPLY WITH N AND SEVERN					
COURSE MATERIALS AY AUTHORITY AND TICE PRIOR TO ORE S	S MUST			EMENTS						
S WHERE THERE IS ND HIGH WATER TAB	BLE.	MUST BE CONNECT	COMPLETE	D FOR THE RE HE EXISTING P	VERN TRENT WAT USE OF ANY EXIS UBLIC SEWERAGE	TING				
RROUND REQUIREN I DRAINAGE AUTHOF			CATION WIL	L BE REQUIREI	F A NEW CONNEC D FOR THE FOUL A GEMENTS AND T	AND				
				TED BY THE CO				E New layout add		25/03/2 SEH 015 06/03/2 TG 015
							C	existing develo	toverlaid	16/02/2 015 SEH 09/02/2 015 SEH
Minimum dim	nensions fo	r access fittin	gs and i	nspection (chambers		Ā	3 Gully locations A F21 Invert leve		16/01/2 SEH 015 13/01/2 SEH AG 015
Туре	Depth to invert	Interna Length x width	l sizes Circular	Length x width	Cover sizes Circular		1:20			Date Initial Checked off this drawing 111111111111111111111111111111111111
Rodding eye	from cover level (m)	(mm x mm) As drain but min 100	(mm)	(mm x mm)	(mm) Same size as		1:100 1:50 1:5	- Q 1m	2m m 200mm	6m 7m 8m 9m 10m 3m 4m 5m 00mm 400mm 500mm
Access fitting small 150 diam 150 x 100 large 225 x 100	0.6 or less, except where situated in a	150 x 100 225 x 100	150 225	150 x 100¹ 225 x 100¹	pipework ¹ 150 225					
Inspection chamber shallow	0.6 or less	225 x 100 225 x 100 450 x 450	190 ² 450	Min 430 x 430	190 ¹ 430					
	> 1.2	450 x 450 450 x 450	450	max 300 x 300 ³	Access restricted to max 350 ³			R	PS	
2) Drains up to 150mm.3) A larger clear opening con	ver may be used in conju	unction with a restricted acces			fety reasons to deter entry.			Highfield House, Quinton Busines	5 Ridgeway s Park, Birmingham B32 1	AF
Minimum dim	Size of large pipe (DN)	est Min internal		Min cle opening					3 5500 E: rpsbm@rpsgrou Davidsons	p.com F: +44(0)121 213 5502
Manhala		Rectangular length and width	Circula diamete	r Rectang	ular Circular					
Manhole < 1.5m deep to soffit	≤ 150 225 300 >300	750 x 675 ⁷ 1200 x 675 1200 x 750 1800 x	1000 ⁷ 1200 1200 The larger of	1200 x 6				F	Development at Fairway Meadow Jllesthorpe, Leic	
> 1.5m deep to soffit	≤ 225 300	(DN+450) 1200 x 1000 1200 x 1075	or (DN+4 1200 1200		75 600			Title E	Engineering Layo	put
Manhole shaft⁴	375-450 >450	1350 x 1225 1800 x (DN+775)	1200 The larger of or (DN+77							
> 3.0m deep to soffit of pipe	Steps⁵ Ladder⁵ Winch ⁶	1050 x 800 1200 x 800 900 x 800	1050 1200 900	675 x 67 675 x 67				Status Preliminary	Drawn By LS	PM/Checked by
	by 675 where required by	nds or where there are junction where there are junction where there are junction where the state of the stat		afe system of work bein	g specified.			Job Ref AAC5143	Scale @ A0 1:250	Date Created Jan 2014
4) Minimum height of chaml5) Min clear space between6) Winch only - no steps or	ber in shafted manhole 2 a ladders or steps and the ladders, permanent or re		ould be approxim	ately 900mm.	676			Drawing Numb	per	Rev F
	/ manhole serving a sew	er (i.e any drain serving more	than one property	/) should be 1200 mm x	675 mm					
										rpsgroup.com