

OUR REF: R0273

17th October 2019

Mr. D Alder

c/o Foxley Tagg Planning Ltd



Dear Mr. Alder,

Land adjacent to Berrywood Lane, Bradley, SO24 9RY
Soakaway Testing

Further to completion of the soakaway testing at the above site, our letter report is as follows:

Introduction

In-situ soakaway testing has been commissioned by Foxley Tagg Planning Ltd on behalf of Mr Alder (the Client) to confirm if soakaway drainage will be suitable for a detached residential dwelling in Bradley, Alresford.

The Site

The site is located adjacent to Berrywood Lane, Bradley. The soakaway testing was carried out in two trial pits located within the north centre and south centre of the site.

According to the British Geological Survey (BGS) the site is directly underlain by the Seaford Chalk Formation of Cretaceous Age.

The Seaford Chalk Formation is described as a firm, white chalk with semi-continuous nodular and tabular flint seams.

Site Works & results of Soakaway Testing

The site work was carried out by EEGSL on 15th October 2019 and comprised of soakaway testing in two trial pits, in accordance with the methods described in BRE Digest 365⁽²⁰⁰⁷⁾.

The location of the trial pits were selected by EEGSL prior to arrival on site and considered the current proposed siting of the development. Each trial pit was excavated using a tracked excavator and both pits were taken down to an approximate depth of 1.5m (into the underlying chalk).

The trial pit details and results of soakaway testing are attached to this letter report.

As can be seen from the results of the soakaway testing, soil infiltration rates varied between the two locations. An infiltration rate of 1.65×10^{-5} was recorded within SW01 and an infiltration rate of 4.35×10^{-6} was obtained at SW02.

Conclusions

1. Based on the near surface ground conditions and results of soakaway testing, soakaway drainage is likely to be suitable in the shallow weathered Chalk strata within the area of SW01 (at a depth of 1.50mbgl).
2. It is recommended that further infiltration testing is completed once a detailed drainage design has been produced to ensure the infiltration rates required can be achieved at the specific locations on site.



----- **END OF LETTER REPORT** -----

If you have any queries, or require any further information, please do not hesitate to contact the undersigned.

Yours Sincerely,



John Grace
Regional Director
For and on behalf of Earth Environmental & Geotechnical (Southern) Ltd


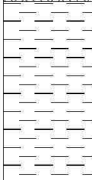
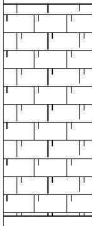
Encl. Trial Pit Logs
Soakaway Test Results
Investigation Location Plan



ENCLOSURE 1
TRIAL PIT LOGS

Trial Pit Log

Project Name: Berrywood Lane		Client: Foxley Tagg Planning Ltd		Date:	
Location: Bradley		Contractor:		Co-ords: E463564.17 N141492.30	
Project No. : R0273		Crew Name:		Equipment:	
Location Number SW01	Location Type TP	Level	Logged By	Scale 1:25	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.20		Grass over brown sandy gravelly friable TOPSOIL		
					0.80		Dark brown gravelly CLAY. Gravels are fine to coarse angular to sub-angular of chalk and flint.		
					1.50		Weathered and structureless gravelly CHALK with gravels of flint. (Dm)	1	
								2	
								3	
								4	
								5	


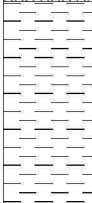
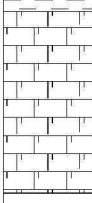

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

Remarks



Trial Pit Log

Project Name: Berrywood Lane		Client: Foxley Tagg Planning Ltd		Date:	
Location: Bradley		Contractor:		Co-ords: E463544.54 N141465.57	
Project No. : R0273		Crew Name:		Equipment:	
Location Number SW02	Location Type TP	Level	Logged By	Scale 1:25	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.20		Grass over brown sandy gravelly TOPSOIL		
							Dark brown gravelly CLAY. Gravels are fine to coarse angular to sub-angular of chalk and flint.		
					0.90		Weathered and structureless gravelly CHALK with gravels of flint. (Dm)	1	
					1.50			2	
								3	
								4	
								5	


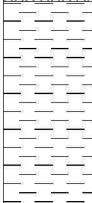
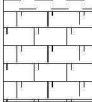

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

Remarks



Trial Pit Log

Project Name: Berrywood Lane		Client: Foxley Tagg Planning Ltd		Date:	
Location: Bradley		Contractor:		Co-ords: E463548.91 N141500.94	
Project No. : R0273		Crew Name:		Equipment:	
Location Number TP01	Location Type TP	Level	Logged By	Scale 1:25	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.20		Grass over brown sandy gravelly TOPSOIL		
							Dark brown gravelly CLAY. Gravels are fine to coarse angular to sub-angular of chalk and flint.		
					0.90		Weathered and structureless gravelly CHALK with gravels of flint. (Dm)	1	
					1.20				
								2	
								3	
								4	
								5	

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

Remarks




Trial Pit Log

Project Name: Berrywood Lane		Client: Foxley Tagg Planning Ltd		Date:	
Location: Bradley		Contractor:		Co-ords: E463558.67 N141475.92	
Project No. : R0273		Crew Name:		Equipment:	
Location Number TP02	Location Type TP	Level	Logged By	Scale 1:25	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.20		Grass over brown sandy gravelly TOPSOIL		
							Orangish brown gravelly CLAY. Gravels are fine to coarse angular to sub-angular of chalk and flint.		
							<i>Flint band at base of clay</i>		
					0.90		Weathered and structureless gravelly CHALK with gravels of flint. (Dm)	1	
					1.20			2	
								3	
								4	
								5	

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

Remarks


 EARTH ENVIRONMENTAL
& GEOTECHNICAL

Trial Pit Log

Project Name: Berrywood Lane		Client: Foxley Tagg Planning Ltd		Date:	
Location: Bradley		Contractor:		Co-ords: E463531.67 N141474.99	
Project No. : R0273		Crew Name:		Equipment:	
Location Number TP03	Location Type TP	Level	Logged By	Scale 1:25	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.20		Grass over brown sandy gravelly TOPSOIL		
							Orangish Brown gravelly CLAY. Gravels are fine to coarse angular to sub-angular of chalk and flint		
							<i>Flint band at base of clay</i>		
					0.90		Weathered and structureless gravelly CHALK with gravels of flint. (Dm)	1	
					1.20			2	
								3	
								4	
								5	

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

Remarks


**EARTH ENVIRONMENTAL
& GEOTECHNICAL**



ENCLOSURE 2
SOAKAWAY TEST RESULTS



SOIL INFILTRATION RATE TEST

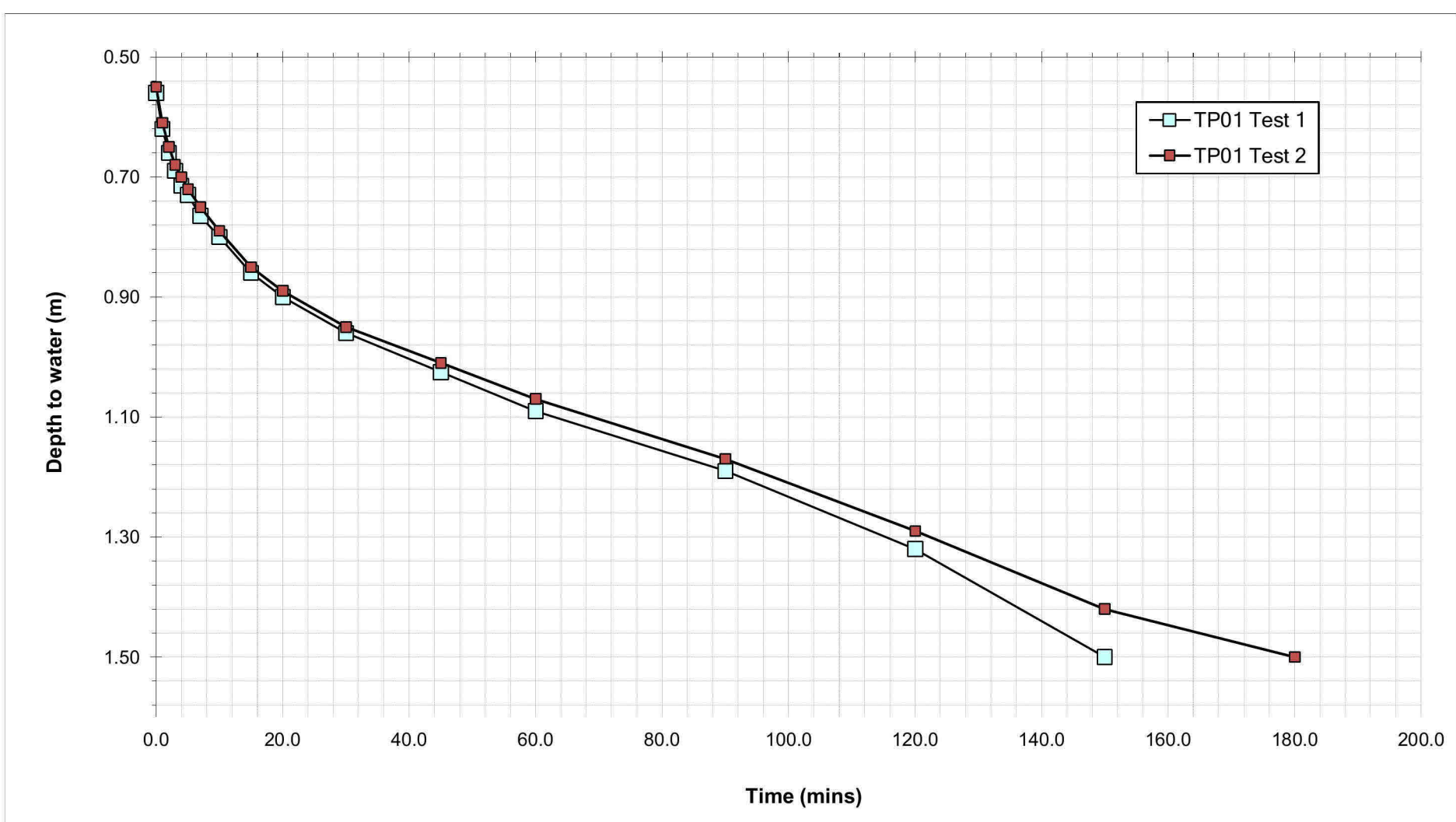
See B.R.E. Digest 365, 1991, Soakaway Design.

Site: Berrywood Lane, Bradley
 Job Number: R0273
 Client: Foxley Tagg Planning Ltd
 Date of Test: 15/10/2019

Trial Pit Number..... TP01
 Length..... 1.50 m
 Width: 0.30 m
 Depth..... 1.50 m
 Groundwater Level..... n/a m

Remarks -	TEST 1		TEST 2		TEST 3	
	Time(min)	Depth to Water (m)	Time(min)	Depth to Water (m)	Time(min)	Depth to Water (m)
Pit Stable	0.0	0.56	0.0	0.55	0.0	
	1.0	0.62	1.0	0.61	1.0	
	2.0	0.66	2.0	0.65	2.0	
	3.0	0.69	3.0	0.68	3.0	
	4.0	0.72	4.0	0.70	4.0	
	5.0	0.73	5.0	0.72	5.0	
	7.0	0.77	7.0	0.75	7.0	
	10	0.80	10	0.79	10	
	15	0.86	15	0.85	15	
	20	0.90	20	0.89	20	
	30	0.96	30	0.95	30	
	45	1.03	45	1.01	45	
	60	1.09	60	1.07	60	
	90	1.19	90	1.17	90	
	120	1.32	120	1.29	120	
	150	1.50	150	1.42	180	180
Effective Storage Depth	m	0.94		0.95		
75% Effective Storage Depth	m	0.71		0.71		
(i.e. depth below GL)	m	0.80		0.79		
25% Effective Storage Depth	m	0.24		0.24		
(i.e. depth below GL)	m	1.27		1.26		
Effective Storage Depth 75%-25%	m	0.47		0.48		
Time to fall to 75% effective depth	mins	10.00		10.00		
Time to fall to 25% effective depth	mins	110.00		112.00		
V (75%-25%)	m3	0.21		0.21		
a (50%)	m2	2.14		2.16		
t (75%-25%)	mins	100.00		102.00		
SOIL INFILTRATION RATE	m/s	1.65E-05				

DESIGN SOIL INFILTRATION RATE, f **1.65E-05**





SOIL INFILTRATION RATE TEST

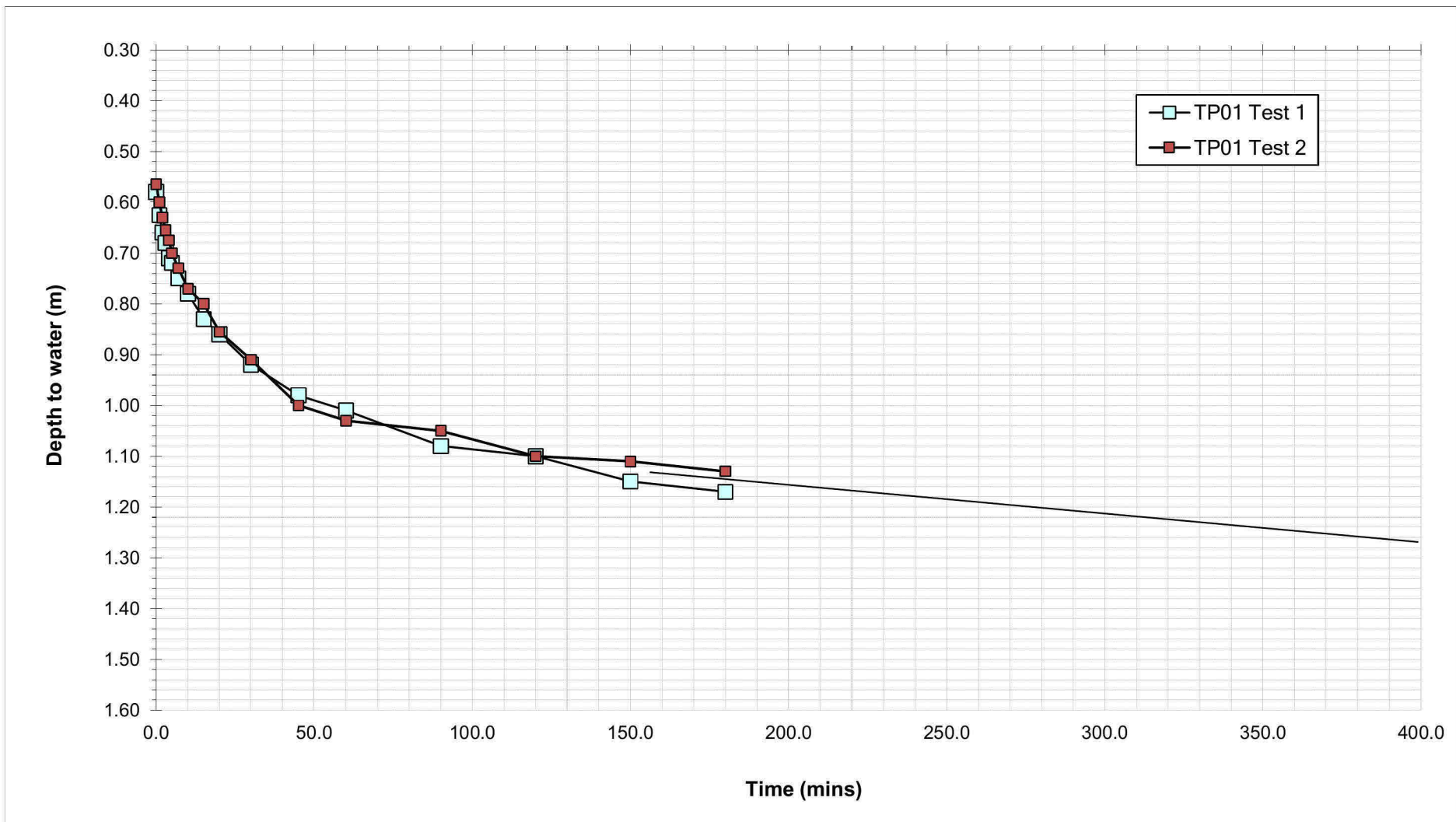
See B.R.E. Digest 365, 1991, Soakaway Design.

Site: Berrywood Lane, Bradley
 Job Number: R0273
 Client: Foxley Tagg Planning Ltd
 Date of Test: 15/10/2019

Trial Pit Number..... TP02
 Length..... 1.50 m
 Width: 0.30 m
 Depth..... 1.50 m
 Groundwater Level..... n/a m

Remarks -	TEST 1		TEST 2		TEST 3	
	Time(min)	Depth to Water (m)	Time(min)	Depth to Water (m)	Time(min)	Depth to Water (m)
Slow Infiltration Rate, 25% effective depth not achieved.	0.0	0.58	0.0	0.57	0.0	
	1.0	0.63	1.0	0.60	1.0	
	2.0	0.66	2.0	0.63	2.0	
	3.0	0.68	3.0	0.66	3.0	
	4.0	0.71	4.0	0.68	4.0	
	5.0	0.72	5.0	0.70	5.0	
	7.0	0.75	7.0	0.73	7.0	
	10	0.78	10	0.77	10	
	15	0.83	15	0.80	15	
	20	0.86	20	0.86	20	
	30	0.92	30	0.91	30	
	45	0.98	45	1.00	45	
	60	1.01	60	1.03	60	
	90	1.08	90	1.05	90	
	120	1.10	120	1.10	120	
	150	1.15	150	1.11	180	
	180	1.17	180	1.13		
	Effective Storage Depth	m	0.92		0.94	
75% Effective Storage Depth	m	0.69		0.70		
(i.e. depth below GL)	m	0.81		0.80		
25% Effective Storage Depth	m	0.23		0.23		
(i.e. depth below GL)	m	1.27		1.27		
Effective Storage Depth 75%-25%	m	0.46		0.47		
Time to fall to 75% effective depth	mins	13.00		15.00		
Time to fall to 25% effective depth	mins	390.00		390.00		
V (75%-25%)	m3	0.21		0.21		
a (50%)	m2	2.11		2.13		
t (75%-25%)	mins	377.00		375.00		
SOIL INFILTRATION RATE	m/s	4.35E-06				

DESIGN SOIL INFILTRATION RATE, f **4.35E-06**





ENCLOSURE 3
INVESTIGATION LOCATION PLAN

Land adjacent to Berrywood Lane, Bradley, Hampshire
SO24 9RY

