Drainage Investigations

Report

Report number	1244791
Client	Crawfords
Site	6 Nicholas Way, Northwood, Hillingdon
Client Ref	SU2205005
Date of Visit	14/03/2023

3 Boundary Court, Willow Farm Business Park
Castle Donington
Leicestershire
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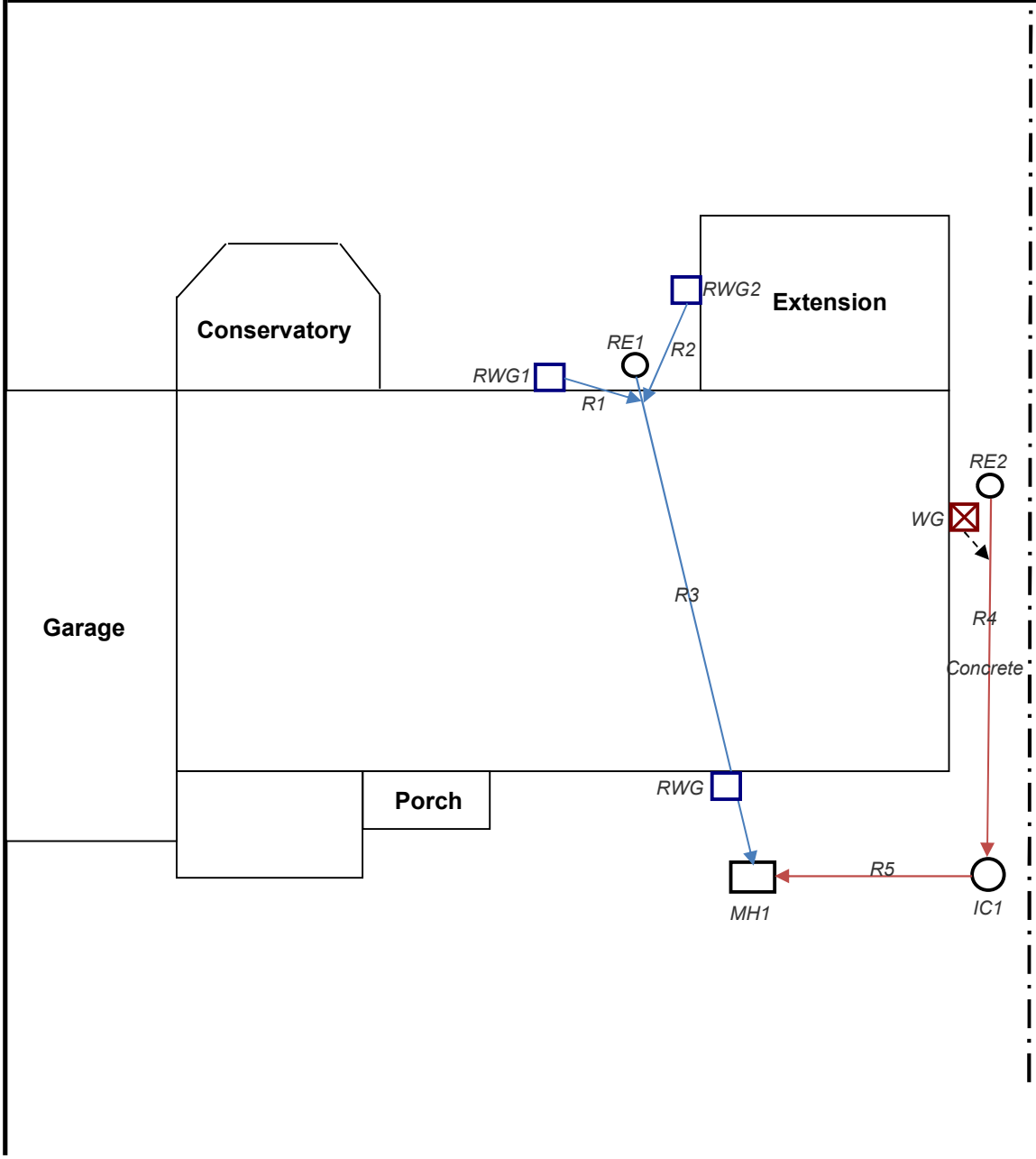
SITE AND DRAINAGE LAYOUT

Visit Date: 14/03/2023



General Comments:

(This plan is not to be scaled and is provided to illustrate general layout only)

Repair Recommendations

Date: 17/05/2023

Site: 6 Nicholas Way
Client: Crawfords
Attention of:

Client Ref: SU2205005
CET Ref: 1244791
Claim No:

A - Structurally sound with no leakage evident.
B - Cracks and fractures observed.
C - Structurally unsound

	Location	Shared System	Work Spec	Condition Grade	Drain Serviceability
1	RE1 Downstream to MH1 Run 3	No	RE1 Downstream to MH1 Run 3 - Install patch liner at 4m downstream to cover defect. HPWJ the remainder of the run to MH1, CCTV survey downstream and report findings from site.	B	Unserviceable
2					
3					
4					
5					
6					
7					
8					
9					
10					

To:	**Crawfords**	Client Ref:	SU2205005
Ftao:		Job No.	1244791
		Claim No:	
Site:	**6 Nicholas Way**	Date:	17-May-23

ESTIMATE

Item			Amount
1.0	Location	**RE1 Downstream to MH1 Run 3**	£551.84
	Shared System	No	
	Condition Grade		
	Drain Serviceability		
	Work Spec	RE1 Downstream to MH1 Run 3 - Install patch liner at 4m downstream to cover defect. HPWJ the remainder of the run to MH1, CCTV survey downstream and report findings from site.	

Notes
Repairs to shared runs and off boundary pipe-work may be the responsibility of the water authority.

Total	£551.84
plus VAT @20%	£110.37
Total + VAT	**£662.20**

Condition Grade
A - Structurally sound with no leakage evident.
B - Cracks and fractures observed.
C - Structurally unsound

Quotation is binding only if accepted within 28 days from date of issue and is subject to our Standard Terms and Conditions
The price qualification notes, stated on the drainage solutions schedule of rates, apply to this quotation.
CET Structures Ltd undertakes to return to site free of charge to carry out remedial work to the drainage repairs set out above for a period of 2 months from the date of this invoice. The company standard charge rates will apply to the visit should the work requested be unrelated to the said repairs.

ESTIMATING & COSTING SHEET - DOMESTIC DRAINAGE

Site:-	6 Nicholas Way	Client Ref	SU2205005
		Job No.	1244791
Client :-	**Crawfords**	Claim No	
		Date	
		Recommendation	1

Description

Rate Code	RE1 Downstream to MH1 Run 3	Unit	Qty	Rate	Amount
TITLE	**Survey**				
SN0511	CCTV Survey of underground drainage & report - including up to 1 hr HP Water Jetting or other cleaning.	nr	1	*£183.38*	£183.38
SN0530	High Pressure Water Jetting - Additional 1/2 hours on site.	1/2hr	2	*£26.55*	£53.11
TITLE	**Preparations / General Groundworks / Reinstatements**				
SN0025	Protection Temporary works to floors, 1000 gauge polythene.	m2	2	*£1.83*	£3.67
TITLE	**Drain Lining**				
SN1180	Patch Lining. Up to 2 m x 100mm diameter	nr	1	*£311.68*	£311.68
	Total subject to VAT @ 20%				£551.84

Note: Subject to the attached Terms and Condtions

Depths are taken to the base of excavations. Every effort will be made to match existing surfaces where disturbed although this cannot be guaranteed. All rates exclude VAT. Depths are taken to the base of excavations. The above rates are subject to re-measurement. Daywork rates do not include for materials that are charged at cost plus

KEY: ne = not exceeding, eo = extra over rate, m = linear metre, nr = number, hr = hour

CET STRUCTURES LTD TERMS AND CONDITIONS

Site:- **6 Nicholas Way**

Client Ref:-	SU2205005
Job No.:-	1244791
Claim No:-	
Date:-	17-May-23

Client :- **Crawfords**

Attention of:-

General Terms and Conditions

1 On site parking is a prerequisite of any drain repair contract. This quotation is to the addressee only and should not be forwarded unless prior agreement is obtained from CET Structures Ltd. Every effort will be made to match existing surfaces however, there will be evidence of excavation works in certain circumstances.

2 The rates do not include for excavation of surfaces other than soft ground or concrete < 100mm thick; reinstatement other than concrete <100mm thick; internal excavations; reinstatement >750mm in width; excavation of depths greater than 1.2m; reinforced concrete.

3 CET`s standard soakaway that is priced on the agreed alliance schedule of drainage rates is constructed to dimensions specified in the NHBC Guidelines for small soakaways. The soakaway is generally located 5m from any foundations (should site constraints permit) and is constructed to provide adequate short term surface water storage and percolation into surrounding ground. This small 1m3 soakaway is usually of sufficient capacity to accommodate average rainfall from an average surface area of roof space, however in extreme weather conditions and /or larger than average roof surface area feeding the soakaway, surcharging may occur.Alternative designs and prices are available at a cost along with percolation testing. Certain ground conditions may not be suitable for soakaway design due to low permeability and this information is not always readily available.

Notes

For excavation and reinstatement of any steps, will be done on day work rate.
With a minimum of 4 hours. Materials at cost plus 25%.
Any obstacles, shrubs & plants that are located in the working area will need to be removed by others to allow for these works

Coding Sheet

Sheet:		Site:	6 Nicholas Way, Northwood	
Job No.:	1244791			
Date:	14.03.23	Client:	Crawfords	

Run:	**1**				
From:	RWG1	Invert Level:	200	Direction:	D/S
To:	D/S	Invert Level:		Function:	S/W
Pipe Material:	PVC	Pipe Dia:	100		
Water/Pressure Test:		Drain Break-In:	No	Gully Condition:	As Built
				Shared Run:	No
				If Shared How:	

Distance (m)	Code	Clock Ref at	Clock Ref to	Dia mm	Intrusion %	Intrusion mm	Remarks	Surface Material	Length (m)
0.00	ST								
1.70	FH						Reached run 3 (rodding eye run)		

Comments:

Run:	2								
From:		RWG2		Invert Level:		300	Direction:	D/S	
To:		D/S		Invert Level:			Function:	S/W	
Pipe Material:		PVC		Pipe Dia:		100			
Water/Pressure Test:				Drain Break-In:		No	Gully Condition:	As Built	
Distance (m)	Code	Clock Ref at	to	Dia mm	Intrusion %	mm	Shared Run:	No	
							If Shared How:		
0.00	ST						Remarks	Surface Material	Length (m)
1.20	FH						Reached run 3 (rodding eye run)		

Comments:

Run:	3								
From:		RE1		Invert Level:		200	Direction:	D/S	
To:		MH1		Invert Level:			Function:	S/W	
Pipe Material:		PVC		Pipe Dia:		100			
Water/Pressure Test:				Drain Break-In:		No	Gully Condition:		
Distance (m)	Code	Clock Ref at	to	Dia mm	Intrusion %	mm	Shared Run: / If Shared How:	No	

Distance (m)	Code	Clock Ref at	Clock Ref to	Dia mm	Intrusion %	Intrusion mm	Remarks	Surface Material	Length (m)
0.00	ST								
0.30	JN	9					RWG2		
0.50	JN	3					RWG1		
0.70	MC						to VC		
4.30	FC	12	12						
5.00	JN	10					Unknown		
6.50	WL				20				
6.50	CU								
8.50	JN	12							
8.50	GO						Possible roots in junction. Image not clear enough		
8.65	SA						Unable to puch camera.		

Comments:

Run:	**4**								
From:		IC1		Invert Level:		400	Direction:	U/S	
To:		RE2		Invert Level:			Function:	F/W	
Pipe Material:		PVC		Pipe Dia:		100			
Water/Pressure Test:				Drain Break-In:		No	Gully Condition:	As Built	
Distance (m)	Code	Clock Ref at	to	Dia mm	Intrusion %	mm	Shared Run:	No	
							If Shared How:		
0.00	ST						Remarks	Surface Material	Length (m)
5.25	JN	10					WG - branch to gulley serviceable		
6.50	LU								
6.80	FH						reached RE2		

Comments:

Run:	5								
From:		IC1		Invert Level:		400	Direction:	D/S	
To:		MH1		Invert Level:			Function:	F/W	
Pipe Material:		PVC		Pipe Dia:		100			
Water/Pressure Test:				Drain Break-In:			Gully Condition:		
Distance (m)	Code	Clock Ref at	to	Dia mm	Intrusion %	mm	Shared Run: / If Shared How:	No	
0.00	ST						Remarks	Surface Material	Length (m)
3.95	FH						reached MH1		

Comments:

Water Authority Sewer Condition Codes

B	Broken pipe at… (or from… to..) o'clock
BR	Branch Major
CC	Crack circumferential from… to… o'clock
CL	Crack longitudinal @… o'clock
CM	Cracks multiple from… to… o'clock
CN	Connection at… o'clock, diameter… mm
CNI	Connection at… o'clock, diameter… mm, intrusion… mr
CU	Camera under water
CX	Connection defective at… o'clock
CXI	Connection defective at… o'clock, diameter… mm, intrusion… mm
D	Deformed sewer… %
DB	Displaced bricks at (or from.. to..) o'clock
DC	Dimension of sewer changes at this point
DE	Debris (non silt/grease)… % cross-sectional loss
DEG	Debris grease… % cross-sectional area loss
DES	Debris silt… % cross-sectional area loss
DI	Dropped invert, gap… mm
EHJ	Encrustation heavy from.. to.. o'clock % cross-sectional area loss (at joint)
ELJ	Encrustation light from.. to.. o'clock%
EMJ	Encrustation medium from.. to.. o'clock %, cross-sectior area loss (at joint)
ESH	Scale heavy… % cross-sectional area loss from... to… o'clock
ESL	Scale light from… to… o'clock
ESM	Scale medium… % cross-sectional area loss from… to. o'clock
FC	Fracture circumferential from… to… o'clock
FL	Fracture longitudinal at… o'clock
FM	Fractures multiple from… to… o'clock
GO	General observation at this point
GP	General photograph number… taken at this point
H	Hole in sewer at… o'clock
IDJ	Infiltration dripper at (or from… to…) o'clock (at joint)
IGJ	Infiltration gusher at (or from… to…) o'clock (at joint)
IRJ	Infiltration runner at (or from… to…) o'clock (at joint)
ISJ	Infiltration seeper at (or from… to…) o'clock (at joint)
JDM	Joint displaced medium
JDL	Joint displaced large
JN	Junction at…o'clock, diameter…mm
JX	Junction defective at.. o'clock, diameter.. mm
LC	Lining of sewer changes/starts/finishes at this point
LD	Line of sewer deviates down
LL	Line of sewer deviates left
LN	Line defect at (or from.. to..) o'clock
LR	Line of sewer deviates right
LU	Line of sewer deviates up
MB	Missing bricks at.. (or from.. to..) o'clock
MC	Material of sewer changes at this point
MH	Manhole/node
MM	Mortar missing medium at.. (or from.. to..) o'clock
MS	Mortar missing surface at.. (or from.. to..) o'clock
MT	Mortar missing total at.. (or from.. to..) o'clock
OB	Obstruction… % height/diameter loss
OJL	Open joint large
OJM	Open joint medium
PC	Length of pipe forming sewer changes at this point, new length…mm
RFJ	Roots fine (at joint)
RMJ	Roots mass… % cross-sectional area loss (at joint)
RTJ	Roots tap (at joint)
SA	Survey abandoned
SC	Shape of sewer changes at this point
SSL	Surface damage, spalling large at (or from.. to..) o'clock
SSM	Surface damage, spalling medium at (or from.. to..) o'clock
SSS	Surface damage, spalling slight at (or from.. to..) o'clock
SWL	Surface damage, wear large at… (or from.. to..) o'clock
SWM	Surface damage, wear medium at… (or from.. to..) o'clock
SWS	Surface damage, wear slight at.. (or from.. to..) o'clock
V	Vermin (rats and mice)
WL	Water level… % height/diameter
X	Sewer collapsed… % cross-sectional area loss
FH	End of survey