



environmental
drainage solutions ltd

DRAINAGE INVESTIGATION REPORT

CLIENT E2A Designs Ltd

SITE BONDFIELD DAY CENTRE -
WOMBWELL - S73 8TX

DATE 21/11/2012 JOB No. 4826

- **Comprehensive Site Surveys**
- **Drainage Rehabilitation**
- **Pipeline and Ancillary Installation**
- **Maintenance Programme
Appraisal & implementation**

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CCTV REPORT HEADER CODE EXPLANATION



Detailed below are explanations for the standard Water Research Council (WRC) CCTV report header codes. Whilst WRC defect codes are also included within the body of the report, they are accompanied by an explanation in the "Observation" column. Please contact Environmental Drainage Solutions on the number below if you wish to discuss any aspect of this report.

CODE	LOCATION DESCRIPTION
A	Main road - urban (town or city centre with heavy goods vehicles)
B	Main road - suburban/rural (all other roads with heavy goods vehicles)
C	Light road (rural roads with light traffic, town and city back streets, estate roads and parking areas)
D	Footpath or verge (within the highway boundary)
E	Fields (farmland and public open space)
F	Gardens (within private property)
G	Woodland
X	Difficult access (Motorway, railway, watercourse, inside building).

CODE	PIPE MATERIAL DESCRIPTION
AC	Asbestos cement
AK	Alkathene
BR	Brick
CC	Concrete box culvert
CI	Cast Iron
CO	Concrete
CSB	Concrete segments (bolted)
CSU	Concrete segments (unbolted)
DI	Ductile iron
GRC	Glass reinforced cement
GRP	Glass reinforced plastic
MAC	Masonry - in regular courses
MAR	Masonry - randomly coursed
PE	Polyethylene
PF	Pitch fibre
PP	Polypropylene
PSC	Plastic/steel composite
PVC	Polyvinyl chloride
RPM	Reinforced plastic matrix
SI	Spun (grey) iron
ST	Steel
VC	Vitrified clay (ie all clayware)
XXX	Other (state in comments)
ZZZ	Not known

CODE	PIPE SHAPE DESCRIPTION
A	Arched (with flat bottom)
B	Barrel (e.g. beer barrel shape)
C	Circular
E	Egg shaped
H	Horshoe (i.e. inverted U)
O	Oval
R	Rectangular
S	Square
T	Trapezoidal
U	U-shaped with flat top
X	Other (state in comments)

CODE	WEATHER DESCRIPTION
1	Dry
2	Heavy rain
3	Light rain
4	Showers
5	Snow

CODE	PIPE LINING DESCRIPTION
BL	Bitumen
CL	Cement
IS	Soft inversion type liner
PL	Plastic
RL	Resin
XXX	Other (state in comments)
ZZZ	Not known

CODE	PIPE USE DESCRIPTION
C	Combined
F	Foul
S	Surface Water
T	Trade Effluent
W	Watercourse
X	Other
Z	Not known

CODE	SURVEY DIRECTION DESCRIPTION
D	Downstream
U	Upstream

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STRUCTURAL PERFORMANCE ASSESSMENT CRITERIA

CLAYWARE AND CONCRETE DRAINAGE

Detailed below are the criteria used for the assessment of severity of defects in accordance with the Water Research Council (WRC). Proposed remedial works are based upon these assessments in conjunction with many other issues such as nature of original problem (if any), implications of collapse (depth, location etc), frequency of surcharging, and many more. Most drainage systems exhibit structural defects of some sort and the WRC assessments can only be a guideline. In the right ground conditions, quite serious defects can be stable for many years. We aim to provide a reasonable, balanced recommendation for remedial works, based upon our experience and following consultation with the client. Please contact Environmental Drainage Solutions if you wish to discuss any aspect of this report.

DEFECT	STRUCTURAL IMPLICATION
CIRCUMFERENTIAL CRACK MEDIUM JOINT DISPLACEMENT MEDIUM OPEN JOINT SLIGHT SPALLING OR WEAR	MINIMAL COLLAPSE RISK IN SHORT TERM, BUT POTENTIAL FOR FURTHER DETERIORATION MINIMAL COLLAPSE RISK IN SHORT TERM, BUT POTENTIAL FOR FURTHER DETERIORATION MINIMAL COLLAPSE RISK IN SHORT TERM, BUT POTENTIAL FOR FURTHER DETERIORATION MINIMAL COLLAPSE RISK IN SHORT TERM, BUT POTENTIAL FOR FURTHER DETERIORATION
FRACTURE WITH DEFORMATION <5% LONGITUDINAL OR MULTIPLE CRACKING MINOR LOSS OF LEVEL (i.e. DIP IN PIPE) LARGE DISPLACED JOINT LARGE OPEN JOINT SLIGHT SPALLING OR WEAR	COLLAPSE UNLIKELY IN NEAR FUTURE BUT FURTHER DETERIORATION LIKELY COLLAPSE UNLIKELY IN NEAR FUTURE BUT FURTHER DETERIORATION LIKELY COLLAPSE UNLIKELY IN NEAR FUTURE BUT FURTHER DETERIORATION LIKELY COLLAPSE UNLIKELY IN NEAR FUTURE BUT FURTHER DETERIORATION LIKELY COLLAPSE UNLIKELY IN NEAR FUTURE BUT FURTHER DETERIORATION LIKELY COLLAPSE UNLIKELY IN NEAR FUTURE BUT FURTHER DETERIORATION LIKELY
BROKEN PIPEWORK BROKEN PIPEWORK WITH DEFORMATION <10% FRACTURE WITH DEFORMATION <10% MULTIPLE FRACTURE SERIOUS LOSS OF LEVEL LARGE SPALLING OR WEAR	COLLAPSE LIKELY IN FORESEEABLE FUTURE COLLAPSE LIKELY IN FORESEEABLE FUTURE COLLAPSE LIKELY IN FORESEEABLE FUTURE COLLAPSE LIKELY IN FORESEEABLE FUTURE COLLAPSE LIKELY IN FORESEEABLE FUTURE COLLAPSE LIKELY IN FORESEEABLE FUTURE
ALREADY COLLAPSED BROKEN PIPEWORK WITH DEFORMATION >10% EXTENSIVE AREAS OF FABRIC MISSING FRACTURE WITH DEFORMATION >10%	COLLAPSED OR COLLAPSE IMMINENT COLLAPSED OR COLLAPSE IMMINENT COLLAPSED OR COLLAPSE IMMINENT COLLAPSED OR COLLAPSE IMMINENT

CCTV REPORT SUMMARY



SITE ADDRESS: BONDFIELD DAY CENTRE - WOMBWELL - S73 8TX

DATE: 21/11/2012

No.	FROM	TO	DIR	DIA(MM)	JET	COMMENTS
1	EDS1	BRANCH X	D	150		
2	EDS1	BRANCH A	U	150		
3	EDS1	BRANCH X	D	150		
4	EDS2	BRANCH X	D	150		
5	EDS2	BRANCH A	U	150		
6	EDS3	BRANCH B	U	100		
7	EDS8	BRANCH C	U	100		SURVEY ALSO CARRIED OUT IN REVERSE
8	EDS8	BRANCH B	U	100		
9	EDS8	BRANCH A	U	150		
10	EDS11	BRANCH A	U	100		
11	EDS12	BRANCH X	D	150		
12	EDS12	BRANCH A	U	100		
13	EDS10	BRANCH A	U	100		
14	PUMH1	BRANCH X	D	225		NO CHAINAGE - FAULT ON COUNTER (FROM 11.0M ALL CHAINAGE APPROXIMATE)

CCTV REPORT SHEET

Client:	E2A Designs Ltd	Sheet No:	1
Site:	BONDFIELD DAY CENTRE - WOMBWELL	Date:	21/11/2012

Job No.	Operator	Location code	Weather	Pre clean	Shape	Lining	Tape No.
4826	LD		2		C		1

Start MH	Depth(m)	Finish MH	Depth(m)	Direction	Dia(mm)	Dim(mm)	Material	Use	Length(M)
EDS1	1.36	BRANCH X		D	150	0	VC	S	

General comments	
	BRANCH X = NO DEPTH (UNKNOWN)

Count	Code	Observation	Remarks
0.6	ST	Start of survey	
0.6	MH	Manhole or node	EDS1
0.6	WL	Water Level	10% - RUNNING FAST
9.0	RFJ	Roots fine at joint	9 o'clock to 3 o'clock
11.4	RMJ	Roots mass at joint	12 o'clock to 3 o'clock
17.0	GO	General observation	GCRAWLER STRUGGLING ON JOINTS
27.1	LD	Line of pipe deviates down	SLIGHT
28.8	JDL	Large joint displacement	
28.8	LR	Line of pipe deviates right	SLIGHT
28.8	LD	Line of pipe deviates down	SHARP
29.1	SA	Survey abandoned	DUE TO DEVIATION IN LINE OF PIPEWORK

CCTV REPORT SHEET

Client:	E2A Designs Ltd						Sheet No:	2	
Site:	BONDFIELD DAY CENTRE - WOMBWELL						Date:	21/11/2012	

Job No.	Operator	Location code	Weather	Pre clean	Shape	Lining	Tape No.
4826	LD		0		C		1

Start MH	Depth(m)	Finish MH	Depth(m)	Direction	Dia(mm)	Dim(mm)	Material	Use	Length(M)
EDS1	1.36	BRANCH A		U	150	0	VC	S	36.30

General comments	
	BRANCH A = EDS8

Count	Code	Observation	Remarks
0.6	ST	Start of survey	
0.6	MH	Manhole or node	EDS1
0.6	WL	Water Level	10%
3.2	JDL	Large joint displacement	
3.2	LL	Line of pipe deviates left	SLIGHT
5.7	MH	Manhole or node	EDS3
5.7	GO	General observation	DEBRIS IN CHANNEL
5.7	GO	General observation	DEBRIS REMOVED & SURVEY CONTINUED
13.6	DES	Debris silt	10%
16.1	DE	Debris	LEAVES
33.2	CN	Connection at	11 o'clock - 150MM
36.3	MH	Manhole or node	EDS8
36.3	FH	Finish survey	

CCTV REPORT SHEET

Client:	E2A Designs Ltd	Sheet No:	3
Site:	BONDFIELD DAY CENTRE - WOMBWELL	Date:	21/11/2012

Job No.	Operator	Location code	Weather	Pre clean	Shape	Lining	Tape No.
4826	LD		0		C		1

Start MH	Depth(m)	Finish MH	Depth(m)	Direction	Dia(mm)	Dim(mm)	Material	Use	Length(M)
EDS1	1.36	BRANCH X		D	150	0	VC	S	28.60

General comments	
	BRANCH X = MAIN (NO DEPTH)

Count	Code	Observation	Remarks
0.0	ST	Start of survey	
0.0	MH	Manhole or node	EDS1
0.0	WL	Water Level	15%
28.8	JDL	Large joint displacement	
28.8	LR	Line of pipe deviates right	SLIGHT
28.8	LD	Line of pipe deviates down	SHARP
28.8	JDL	Large joint displacement	
28.8	FH	Finish survey	MAIN

CCTV REPORT SHEET

Client:	E2A Designs Ltd	Sheet No:	4
Site:	BONDFIELD DAY CENTRE - WOMBWELL	Date:	21/11/2012

Job No.	Operator	Location code	Weather	Pre clean	Shape	Lining	Tape No.
4826	LD		2		C		1

Start MH	Depth(m)	Finish MH	Depth(m)	Direction	Dia(mm)	Dim(mm)	Material	Use	Length(M)
EDS2	1.35	BRANCH X		D	150	0	VC	F	30.00

General comments	
	BRANCH X = MAIN (NO DEPTH)

Count	Code	Observation	Remarks
0.0	ST	Start of survey	
0.0	MH	Manhole or node	EDS2
0.0	WL	Water Level	0%
0.0	RF	Roots fine	AT MOUTH OF PIPE
8.2	DE	Debris	5% - STONE
11.4	RF	Roots fine	7 o'clock to 5 o'clock - 10%
27.7	DES	Debris silt	20%
29.9	JDL	Large joint displacement	
29.9	LD	Line of pipe deviates down	SHARP
29.9	GO	General observation	CRAWLER STRUGGLING TO PASS
30.0	FH	Finish survey	MAIN

CCTV REPORT SHEET

Client:	E2A Designs Ltd						Sheet No:	5	
Site:	BONDFIELD DAY CENTRE - WOMBWELL						Date:	21/11/2012	

Job No.	Operator	Location code	Weather	Pre clean	Shape	Lining	Tape No.
4826	LD		0		C		1

Start MH	Depth(m)	Finish MH	Depth(m)	Direction	Dia(mm)	Dim(mm)	Material	Use	Length(M)
EDS2	1.35	BRANCH A		U	150	0	VC	F	

General comments	
	BRANCH A = NO DEPTH (UNKNOWN)

Count	Code	Observation	Remarks
0.0	ST	Start of survey	
0.0	MH	Manhole or node	EDS2
0.0	WL	Water Level	0%
0.0	RF	Roots fine	IN MOUTH OF PIPE
0.9	RM	Roots mass	50%
0.9	SA	Survey abandoned	DUE TO ROOTS MASS

CCTV REPORT SHEET

Client:	E2A Designs Ltd						Sheet No:	6	
Site:	BONDFIELD DAY CENTRE - WOMBWELL						Date:	21/11/2012	

Job No.	Operator	Location code	Weather	Pre clean	Shape	Lining	Tape No.
4826	LD		0		C		1

Start MH	Depth(m)	Finish MH	Depth(m)	Direction	Dia(mm)	Dim(mm)	Material	Use	Length(M)
EDS3	1.34	BRANCH B		U	100	0	VC	S	

General comments	
	BRANCH B = NO DEPTH (UNKNOWN)

Count	Code	Observation	Remarks
0.0	ST	Start of survey	
0.0	MH	Manhole or node	EDS3
0.0	WL	Water Level	0%
0.0	DES	Debris silt	20%
1.3	DES	Debris silt	40%
1.3	SA	Survey abandoned	DUE TO DEBRIS SILT

CCTV REPORT SHEET

Client:	E2A Designs Ltd						Sheet No:	7	
Site:	BONDFIELD DAY CENTRE - WOMBWELL						Date:	21/11/2012	
Job No.	Operator	Location code	Weather	Pre clean	Shape	Lining	Tape No.		
4826	LD		0		C		1		
Start MH	Depth(m)	Finish MH	Depth(m)	Direction	Dia(mm)	Dim(mm)	Material	Use	Length(M)
EDS8	1.6	BRANCH C		U	100	0	VC	S	27.90
General comments		SURVEY ALSO CARRIED OUT IN REVERSE							
		BRANCH C = EDS16							
Count	Code	Observation	Remarks						
0.0	ST	Start of survey							
0.0	MH	Manhole or node	EDS8						
0.0	WL	Water Level	40%						
0.0	GO	General observation	CAMERA PUSHING INTO FLOW						
25.5	OB	Obstruction	100%						
27.9	GO	General observation	UNABLE TO PROCEED						
27.9	GO	General observation	START OF REVERSE SURVEY						
18.5	MH	Manhole or node	EDS16						
0.0	FH	Finish survey	REVERSE SURVEY COMPLETE						

Client:		E2A Designs Ltd					Sheet No:		8	
Site:		BONDFIELD DAY CENTRE - WOMBWELL					Date:		21/11/2012	
Job No.		Operator	Location code	Weather	Pre clean	Shape	Lining	Tape No.		
4826		LD		0		C		1		
Start MH	Depth(m)	Finish MH	Depth(m)	Direction	Dia(mm)	Dim(mm)	Material	Use	Length(M)	
EDS8	1.6	BRANCH B		U	100	0	VC	S		
General comments										
		BRANCH B = NO DEPTH (UNKNOWN)								
Count	Code	Observation			Remarks					
0.0	ST	Start of survey								
0.0	MH	Manhole or node			EDS8					
0.0	WL	Water Level			0%					
1.8	LR	Line of pipe deviates right			SHARP					
1.8	SA	Survey abandoned			DUE TO DEVIATION IN LINE OF PIPEWORK					

CCTV REPORT SHEET

Client:	E2A Designs Ltd	Sheet No:	9
Site:	BONDFIELD DAY CENTRE - WOMBWELL	Date:	21/11/2012

Job No.	Operator	Location code	Weather	Pre clean	Shape	Lining	Tape No.
4826	LD		0		C		1

Start MH	Depth(m)	Finish MH	Depth(m)	Direction	Dia(mm)	Dim(mm)	Material	Use	Length(M)
EDS8	1.6	BRANCH A		U	150	0	VC	S	16.20

General comments	
	BRANCH A = EDS11

Count	Code	Observation	Remarks
0.0	ST	Start of survey	
0.0	MH	Manhole or node	EDS8
0.0	WL	Water Level	0%
13.4	LR	Line of pipe deviates right	SLIGHT
16.2	MH	Manhole or node	EDS11
16.2	FH	Finish survey	

CCTV REPORT SHEET

Client:	E2A Designs Ltd	Sheet No:	10
Site:	BONDFIELD DAY CENTRE - WOMBWELL	Date:	21/11/2012

Job No.	Operator	Location code	Weather	Pre clean	Shape	Lining	Tape No.
4826	LD		0		C		1

Start MH	Depth(m)	Finish MH	Depth(m)	Direction	Dia(mm)	Dim(mm)	Material	Use	Length(M)
EDS11	0.84	BRANCH A		U	100	0	VC	S	15.40

General comments	
	BRANCH A = EDS10

Count	Code	Observation	Remarks
0.0	ST	Start of survey	
0.0	MH	Manhole or node	EDS11
0.0	WL	Water Level	0%
0.0	DES	Debris silt	5%
10.8	DE	Debris	10% - STONE
15.4	MH	Manhole or node	EDS10
15.4	FH	Finish survey	

CCTV REPORT SHEET

Client:	E2A Designs Ltd	Sheet No:	11
Site:	BONDFIELD DAY CENTRE - WOMBWELL	Date:	21/11/2012

Job No.	Operator	Location code	Weather	Pre clean	Shape	Lining	Tape No.
4826	LD		0		C		1

Start MH	Depth(m)	Finish MH	Depth(m)	Direction	Dia(mm)	Dim(mm)	Material	Use	Length(M)
EDS12	2.15	BRANCH X		D	150	0	VC	F	

General comments	
	BRANCH X = NO DEPTH (UNKNOWN)

Count	Code	Observation	Remarks
0.0	ST	Start of survey	
0.0	MH	Manhole or node	EDS12
0.0	WL	Water Level	0%
13.0	LR	Line of pipe deviates right	
13.0	MH	Manhole or node	BURIED - UNABLE TO LOCATE
13.0	GO	General observation	SURVEY CONTINUES THROUGH BURIED MANHOLE
27.7	DE	Debris	50% - STONE
27.7	SA	Survey abandoned	DUE TO DEBRIS

Client:		E2A Designs Ltd					Sheet No:		12		
Site:		BONDFIELD DAY CENTRE - WOMBWELL					Date:		21/11/2012		
Job No.		Operator	Location code	Weather	Pre clean	Shape	Lining	Tape No.			
4826		LD		0		C		1			
Start MH	Depth(m)	Finish MH	Depth(m)	Direction	Dia(mm)	Dim(mm)	Material	Use	Length(M)		
EDS12	2.15	BRANCH A		U	100	0	VC	F	4.00		
General comments											
		BRANCH A = NO DEPTH (REST BEND)									
Count	Code	Observation			Remarks						
0.0	ST	Start of survey									
0.0	MH	Manhole or node			EDS12						
0.0	WL	Water Level			0%						
4.0	JDL	Large joint displacement									
4.0	LU	Line of pipe deviates up			SEVERE						
4.0	GO	General observation			REST BEND						
4.0	FH	Finish survey									

CCTV REPORT SHEET

Client:	E2A Designs Ltd	Sheet No:	13
Site:	BONDFIELD DAY CENTRE - WOMBWELL	Date:	21/11/2012

Job No.	Operator	Location code	Weather	Pre clean	Shape	Lining	Tape No.
4826	LD		0		C		1

Start MH	Depth(m)	Finish MH	Depth(m)	Direction	Dia(mm)	Dim(mm)	Material	Use	Length(M)
EDS10	0.7	BRANCH A		U	100	0	VC	S	18.70

General comments	
	BRANCH A = EDS13

Count	Code	Observation	Remarks
0.0	ST	Start of survey	
0.0	MH	Manhole or node	EDS10
0.0	WL	Water Level	0%
0.0	JDL	Large joint displacement	
13.7	DES	Debris silt	10%
18.7	MH	Manhole or node	EDS13
18.7	GO	General observation	40% DEBRIS SILT IN CHANNEL
18.7	FH	Finish survey	

CCTV REPORT SHEET

Client:	E2A Designs Ltd						Sheet No:	14	
Site:	BONDFIELD DAY CENTRE - WOMBWELL						Date:	21/11/2012	

Job No.	Operator	Location code	Weather	Pre clean	Shape	Lining	Tape No.
4826	LD		0		C		1

Start MH	Depth(m)	Finish MH	Depth(m)	Direction	Dia(mm)	Dim(mm)	Material	Use	Length(M)
PUMH1	0.88	BRANCH X		D	225	0	VC	F	

General comments	NO CHAINAGE - FAULT ON COUNTER (FROM 11.0M ALL CHAINAGE APPROXIMATE)
	BRANCH X = NO DEPTH (UNKNOWN)

Count	Code	Observation	Remarks
0.6	ST	Start of survey	
11.0	MH	Manhole or node	PUMH2
11.0	WL	Water Level	5%
25.0	MH	Manhole or node	PUMH3
	MH	Manhole or node	PUMH4 - UNABLE TO LOCATE
	GO	General observation	LOSING TRACTION
66.0	SA	Survey abandoned	DUE TO LOSS OF TRACTION
	GO	General observation	NO CONNECTIONS TO OR FROM SITE EVIDENT

MANHOLE RECORD CARD



JOB No. 4826 SHEET 1 OF 7

CLIENT:- E2A Design Ltd. SITE:- Bondfield Day Centre

NODE REF	PUMH1	
SURVEY DATE	21/11/12	
NODE TYPE	MH/IC/GULLY/OTHER	
STATUS	PU/PR	
FUNCTION	F/SW/C	
INVERT DEPTH(M)	0.88M	
CONSTRUCTION	BR/PCC/OTHER	
REMARKS (Photos etc)		

NODE REF	PUMH2	
SURVEY DATE	21/11/12	
NODE TYPE	MH/IC/GULLY/OTHER	
STATUS	PU/PR	
FUNCTION	F/SW/C	
INVERT DEPTH(M)	1.42M	
CONSTRUCTION	BR/PCC/OTHER	
REMARKS (Photos etc)	CONSTRUCTION = CONCRETE	

NODE REF	PUMH3	
SURVEY DATE	21/11/12	
NODE TYPE	MH/IC/GULLY/OTHER	
STATUS	PU/PR	
FUNCTION	F/SW/C	
INVERT DEPTH(M)	1.50M	
CONSTRUCTION	BR/PCC/OTHER	
REMARKS (Photos etc)		

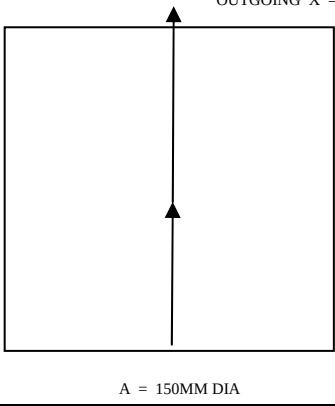
MANHOLE RECORD CARD

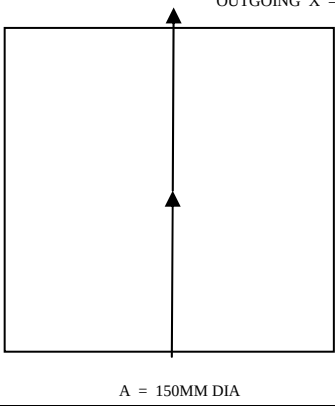


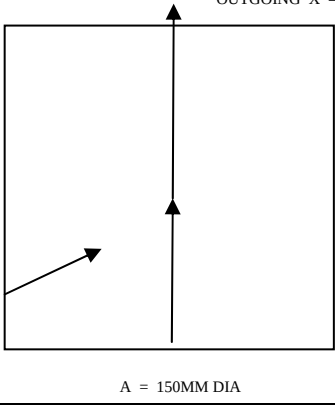
JOB No. 4826 SHEET 2 OF 7

CLIENT:- E2A Design Ltd.

SITE:- Bondfield Day Centre

NODE REF	EDS1	
SURVEY DATE	21/11/12	
NODE TYPE	MH/IC/GULLY/OTHER	
STATUS	PU/PR	
FUNCTION	F/SW/C	
INVERT DEPTH(M)	1.36M	
CONSTRUCTION	BR/PCC/OTHER	
REMARKS (Photos etc)		

NODE REF	EDS2	
SURVEY DATE	21/11/12	
NODE TYPE	MH/IC/GULLY/OTHER	
STATUS	PU/PR	
FUNCTION	F/SW/C	
INVERT DEPTH(M)	1.35M	
CONSTRUCTION	BR/PCC/OTHER	
REMARKS (Photos etc)		

NODE REF	EDS3	
SURVEY DATE	21/11/12	
NODE TYPE	MH/IC/GULLY/OTHER	
STATUS	PU/PR	
FUNCTION	F/SW/C	
INVERT DEPTH(M)	1.34M	
CONSTRUCTION	BR/PCC/OTHER	
REMARKS (Photos etc)		

MANHOLE RECORD CARD



JOB No. 4826 SHEET 3 OF 7

CLIENT:- E2A Design Ltd.

SITE:- Bondfield Day Centre

NODE REF	EDS4	OUTGOING X = 100MM DIA A = 100MM DIA. B = 100MM DIA.
SURVEY DATE	21/11/12	
NODE TYPE	MH/IC/GULLY/OTHER	
STATUS	PU/PR	
FUNCTION	F/SW/C	
INVERT DEPTH(M)	1.70M	
CONSTRUCTION	BR/PCC/OTHER	
REMARKS (Photos etc)		

NODE REF	EDS5	OUTGOING X = 150MM DIA. A = 100MM DIA. B = 100MM C = 100MM D = 100MM E = 100MM DIA.
SURVEY DATE	21/11/12	
NODE TYPE	MH/IC/GULLY/OTHER	
STATUS	PU/PR	
FUNCTION	F/SW/C	
INVERT DEPTH(M)	1.06M	
CONSTRUCTION	BR/PCC/OTHER	
REMARKS (Photos etc)		

NODE REF	EDS6	OUTGOING X = 100MM DIA. A = 100MM DIA. B = 100MM DIA. C = 100MM DIA.
SURVEY DATE	21/11/12	
NODE TYPE	MH/IC/GULLY/OTHER	
STATUS	PU/PR	
FUNCTION	F/SW/C	
INVERT DEPTH(M)	0.98M	
CONSTRUCTION	BR/PCC/OTHER	
REMARKS (Photos etc)		

MANHOLE RECORD CARD



JOB No. 4826 SHEET 4 OF 7

CLIENT:- E2A Design Ltd.

SITE:- Bondfield Day Centre

NODE REF	EDS7	OUTGOING X = 100MM DIA. C = 100MM DIA. D = 100MM DIA. E = 100MM DIA. A = 100MM DIA. B = 100MM DIA.
SURVEY DATE	21/11/12	
NODE TYPE	MH/IC/GULLY/OTHER	
STATUS	PU/PR	
FUNCTION	F/SW/C	
INVERT DEPTH(M)	0.88M	
CONSTRUCTION	BR/PCC/OTHER	
REMARKS (Photos etc)		

NODE REF	EDS8	OUTGOING X = 150MM DIA. C = 100MM DIA. B = 150MM DIA. A = 150MM DIA.
SURVEY DATE	21/11/12	
NODE TYPE	MH/IC/GULLY/OTHER	
STATUS	PU/PR	
FUNCTION	F/SW/C	
INVERT DEPTH(M)	1.60M	
CONSTRUCTION	BR/PCC/OTHER	
REMARKS (Photos etc)		

NODE REF	EDS10	OUTGOING X = 100MM DIA. B = 100MM DIA. A = 100MM DIA.
SURVEY DATE	21/11/12	
NODE TYPE	MH/IC/GULLY/OTHER	
STATUS	PU/PR	
FUNCTION	F/SW/C	
INVERT DEPTH(M)	0.70M	
CONSTRUCTION	BR/PCC/OTHER	
REMARKS (Photos etc)		

MANHOLE RECORD CARD



JOB No. 4826 SHEET 5 OF 7

CLIENT:- E2A Design Ltd.

SITE:- Bondfield Day Centre

NODE REF	EDS11	
SURVEY DATE	21/11/12	
NODE TYPE	MH/IC/GULLY/OTHER	
STATUS	PU/PR	
FUNCTION	F/SW/C	
INVERT DEPTH(M)	0.84M	
CONSTRUCTION	BR/PCC/OTHER	
REMARKS (Photos etc)		

NODE REF	EDS12	
SURVEY DATE	21/11/12	
NODE TYPE	MH/IC/GULLY/OTHER	
STATUS	PU/PR	
FUNCTION	F/SW/C	
INVERT DEPTH(M)	2.15M	
CONSTRUCTION	BR/PCC/OTHER	
REMARKS (Photos etc)		

NODE REF	EDS13	
SURVEY DATE	21/11/12	
NODE TYPE	MH/IC/GULLY/OTHER	
STATUS	PU/PR	
FUNCTION	F/SW/C	
INVERT DEPTH(M)	0.68M	
CONSTRUCTION	BR/PCC/OTHER	
REMARKS (Photos etc)		

MANHOLE RECORD CARD



JOB No. 4826 SHEET 6 OF 7

CLIENT:- E2A Design Ltd. SITE:- Bondfield Day Centre

NODE REF	EDS14	OUTGOING X = 150MM DIA. B = 100MM DIA. C = 100MM DIA. A = 100MM DIA.
SURVEY DATE	21/11/12	
NODE TYPE	MH/IC/GULLY/OTHER	
STATUS	PU/PR	
FUNCTION	F/SW/C	
INVERT DEPTH(M)	2.05M	
CONSTRUCTION	BR/PCC/OTHER	
REMARKS (Photos etc)		

NODE REF	EDS15	OUTGOING X = 100MM DIA. A = 100MM DIA. B = 100MM DIA.
SURVEY DATE	21/11/12	
NODE TYPE	MH/IC/GULLY/OTHER	
STATUS	PU/PR	
FUNCTION	F/SW/C	
INVERT DEPTH(M)	1.80M	
CONSTRUCTION	BR/PCC/OTHER	
REMARKS (Photos etc)		

MANHOLE RECORD CARD



JOB No. **4826** SHEET **7** OF **7**

CLIENT:- **E2A Design Ltd.**

SITE:- **Bondfield Day Centre**

NODE REF	EDS18	
SURVEY DATE	21/11/12	
NODE TYPE	MH/IC/GULLY/OTHER	
STATUS	PU/PR	
FUNCTION	F/SW/C	
INVERT DEPTH(M)	NOT RECORDED	
CONSTRUCTION	BR/PCC/OTHER	
REMARKS (Photos etc)		

NODE REF	EDS17	
SURVEY DATE	21/11/12	
NODE TYPE	MH/IC/GULLY/OTHER	
STATUS	PU/PR	
FUNCTION	F/SW/C	
INVERT DEPTH(M)	NOT RECORDED	
CONSTRUCTION	BR/PCC/OTHER	
REMARKS (Photos etc)		

NODE REF	EDS19	
SURVEY DATE	21/11/12	
NODE TYPE	MH/IC/GULLY/OTHER	
STATUS	PU/PR	
FUNCTION	F/SW/C	
INVERT DEPTH(M)	0.30M	
CONSTRUCTION	BR/PCC/OTHER	
REMARKS (Photos etc)		

BONDFIELD DAY CENTRE



Title: GP1

Date: 21/11/12

Description: EDS1, EDS2 & EDS3 - LOCATION



Title: GP2

Date: 21/11/12

Description: EDS1, EDS2 & EDS3 - LOCATION



Title: GP3

Date: 21/11/12

Description: EDS1



Title: GP4

Date: 21/11/12

Description: EDS2

GENERAL PHOTOS

BONDFIELD DAY CENTRE



Title: GP5
Date: 21/11/12
Description: EDS3



Title: GP6
Date: 21/11/12
Description: PUBLIC MANHOLE 1 - LOCATION



Title: GP7
Date: 21/11/12
Description: PUBLIC MANHOLES 1 - LOCATION



Title: GP8
Date: 21/11/12
Description: PUBLIC MANHOLE 2 - LOCATION

GENERAL PHOTOS

BONDFIELD DAY CENTRE



Title: GP9

Date: 21/11/12

Description: PUBLIC MANHOLE 3 - LOCATION



Title: GP10

Date: 21/11/12

Description: GENERAL VIEW - FROM ENTRANCE



Title: GP11

Date: 21/11/12

Description: GENERAL VIEW - FROM ENTRANCE



Title: GP12

Date: 21/11/12

Description: GENERAL VIEW - FROM ENTRANCE

GENERAL PHOTOS

BONDFIELD DAY CENTRE



Title: GP13

Date: 21/11/12

Description: GENERAL VIEW - THROUGH GATE B TO BUILDING 1



Title: GP14

Date: 21/11/12

Description: GENERAL VIEW - THROUGH GATE B TO BUILDING 1



Title: GP15

Date: 21/11/12

Description: GENERAL VIEW - THROUGH GATE B TO BUILDING 1



Title: GP16

Date: 21/11/12

Description: GENERAL VIEW - THROUGH GATE B TO BUILDING 1 (RAIN WATER PIPES - DISCONNECTED)

GENERAL PHOTOS

BONDFIELD DAY CENTRE



Title: GP17

Date: 21/11/12

Description: GENERAL VIEW - BUILDING 1



Title: GP18

Date: 21/11/12

Description: GENERAL VIEW - BUILDING 1



Title: GP19

Date: 21/11/12

Description: GENERAL VIEW - BUILDING 2
(RAIN WATER PIPES - DISCONNECTED)



Title: GP20

Date: 21/11/12

Description: GENERAL VIEW - BUILDING 2

GENERAL PHOTOS

BONDFIELD DAY CENTRE



Title: GP21

Date: 21/11/12

Description: GENERAL SITE VIEW



Title: GP22

Date: 21/11/12

Description: RAIN WATER PIPES
(DISCONNECTED AT GUTTER) - BUILDING 2



Title: GP23

Date: 21/11/12

Description: GULLIES AT FOOT OF RWP1 &
RWP2 - BUILDING 2



Title: GP24

Date: 21/11/12

Description: RWP3 & RWP4 (DISCONNECTED) -
BUILDING 2 (RWP4 - 2MT FROM CORNER)

GENERAL PHOTOS

BONDFIELD DAY CENTRE



Title: GP25

Date: 21/11/12

Description: EDS7 - LOCATION



Title: GP26

Date: 21/11/12

Description: EDS7



Title: GP27

Date: 21/11/12

Description: SOIL VENT PIPES - REAR OF BUILDING 2



Title: GP28

Date: 21/11/12

Description: RWP5 - BUILDING 2 (OFFSET FROM GULLY AT CORNER)

GENERAL PHOTOS

BONDFIELD DAY CENTRE



Title: GP29

Date: 21/11/12

Description: RWP6 - BUILDING 2



Title: GP30

Date: 21/11/12

Description: RWP5 (BLOCKED) - BUILDING 2
(OFFSET FROM GULLY AT CORNER)



Title: GP31

Date: 21/11/12

Description: SOIL VENT PIPES x4 - TO REAR
OF BUILDING 2



Title: GP32

Date: 21/11/12

Description: EDS5 - LOCATION

GENERAL PHOTOS

BONDFIELD DAY CENTRE



Title: GP33
Date: 21/11/12
Description: EDS5



Title: GP34
Date: 21/11/12
Description: EDS6 - LOCATION



Title: GP35
Date: 21/11/12
Description: EDS6



Title: GP36
Date: 21/11/12
Description: EDS6

GENERAL PHOTOS

BONDFIELD DAY CENTRE



Title: GP37

Date: 21/11/12

Description: EDS4 - LOCATION



Title: GP38

Date: 21/11/12

Description: EDS4 - SILTED



Title: GP39

Date: 21/11/12

Description: HIGHWAY MANHOLE 1



Title: GP40

Date: 21/11/12

Description: HIGHWAY MANHOLE 2

GENERAL PHOTOS

BONDFIELD DAY CENTRE



Title: GP41

Date: 21/11/12

Description: YARD GULLY - LOCATION
(BUILDING 2 NR. RWP1)



Title: GP42

Date: 21/11/12

Description: YARD GULLY (BUILDING 2 NR.
RWP1) - BLOCKED



Title: GP43

Date: 21/11/12

Description: EDS8 - LOCATION



Title: GP44

Date: 21/11/12

Description: EDS8

GENERAL PHOTOS

BONDFIELD DAY CENTRE



Title: GP45

Date: 21/11/12

Description: EDS12 - LOCATION



Title: GP46

Date: 21/11/12

Description: EDS12



Title: GP47

Date: 21/11/12

Description: EDS12 - LOCATION



Title: GP48

Date: 21/11/12

Description: EDS12

GENERAL PHOTOS

BONDFIELD DAY CENTRE



Title: GP49

Date: 21/11/12

Description: GULLIES - LOCATION TO FRONT OF BUILDING 1



Title: GP50

Date: 21/11/12

Description: RWP & RWG - LOCATION ENTRANCE OF BUILDING 1



Title: GP51

Date: 21/11/12

Description: RWP & RWG - LOCATION ENTRANCE OF BUILDING 1



Title: GP52

Date: 21/11/12

Description: GULLY - TO FRONT OF BUILDING 1

GENERAL PHOTOS

BONDFIELD DAY CENTRE



Title: GP53

Date: 21/11/12

Description: EDS15 - LOCATION



Title: GP54

Date: 21/11/12

Description: EDS15 (DYE TESTING) - LOCATION



Title: GP55

Date: 21/11/12

Description: EDS15



Title: GP56

Date: 21/11/12

Description: EDS14

GENERAL PHOTOS

BONDFIELD DAY CENTRE



Title: GP57

Date: 21/11/12

Description: EDS14 - LOCATION



Title: GP58

Date: 21/11/12

Description: EDS11 - LOCATION



Title: GP59

Date: 21/11/12

Description: EDS11



Title: GP60

Date: 21/11/12

Description: EDS11 - LOCATION

GENERAL PHOTOS

BONDFIELD DAY CENTRE



Title: GP61

Date: 21/11/12

Description: EDS10 - LOCATION



Title: GP62

Date: 21/11/12

Description: EDS10



Title: GP63

Date: 21/11/12

Description: RWP INTO EDS10 - REAR OF BUILDING 1



Title: GP64

Date: 21/11/12

Description: EDS13 - LOCATION

GENERAL PHOTOS

BONDFIELD DAY CENTRE



Title: GP65
Date: 21/11/12
Description: EDS13



Title: GP66
Date: 21/11/12
Description: EDS19 - LOCATION



Title: GP67
Date: 21/11/12
Description: EDS19



Title:
Date:
Description:

GENERAL PHOTOS

BONDFIELD DAY CENTRE



Title:
Date:
Description:



Title:
Date:
Description:



Title:
Date:
Description:



Title:
Date:
Description:

GENERAL PHOTOS

BONDFIELD DAY CENTRE



Title:
Date:
Description:



Title:
Date:
Description:



Title:
Date:
Description:

GENERAL PHOTOS

NOTES:
Public sewer data taken from statutory sewer records.
Manhole locations and cover levels from topographical survey supplied unless stated otherwise.
Sewer/drain lines shown dashed not surveyed.



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Client

E2A DESIGNS LTD

Title

BONDFIELD DAY CENTRE
WOMBWELL

Drawn LD

Date 21/11/12

Drawing No. EDS/EAC/4826/01

Checked GEC

Scale NTS

LEGEND

Foul Drain/Sewer
Surface Water Drain/Sewer
Watercourse/culvert
Combined Drain/Sewer

Manhole (Colour denotes use)
Gully (Colour denotes use)
Rainwater Pipe / Gully
Soil Vent Pipe

EDS1
G
RWP RWG
SVP