A

PUMPING STATION SURVEY

DENE-TECH

DENE-TECH SERVICES LIMITED
UNIT 10, LYMINGTON BARN, LYMINGTON BOTTOM ROAD, MEDSTEAD, Nr ALTON, HANTS GU34 5EW
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GENERAL INFORMATION

WTW Catchment :	**A**		
Catchment Code :	**Unknown**		
Name :	**A SPS**		
Eastings :	**000000**	**Northings:**	**000000**
Sewer Record ID :	**AA12345678**		
Operational Control :	**A**		
Date of Survey :	**12/02/2014**		
Surveyed by :-	**Company Name :**	**Dene-Tech Services Limited**	
	Name of Surveyor :	**C. Lockie**	

OVERFLOW DETAILS

Provided (Yes/No) :	**No**
Type (EO/CSO) :	**n/a**
Location :	**n/a**
Screen (Yes/No) :	**n/a**
Screen Type :	**n/a**
Bar Spacing (mm) :	**n/a**
Condition :	**n/a**
Evidence of Pollution/Use (Yes/No) :	**n/a**

Number of Pumps : **7 (3 DWF, 4 storm)**

RISING MAIN DETAILS

Length (m) :	**Unknown**
Diameter (mm) :	**DWF 450mm, storm 600mm**
Material :	

SURGE PROTECTION (Yes/No) **No**

Type :

PUMP DROP TESTS

Area of Wet Well (m^2)	**122.66m2**
Test Area (m^2)	**63.234m2**
Test Volume (m^3)	**6.323m3**

Pump Combination	Test Start Level m(AOD)	Test Stop Level m(AOD)	Test No	Draw		Fill		Net Output
				(secs)	(l/s)	(secs)	(l/s)	(l/s)
STORM PUMP 1+2	81.703	81.603	1	54	117.09	31	203.97	321.06
	81.703	81.603	2	60	105.38	30	210.77	316.15
	81.703	81.603	3	61	103.66	30	210.77	314.43
				Average Output (l/s)				**317.21**
STORM PUMP 1+3	81.703	81.603	1	60	105.38	29	218.03	323.41
	81.703	81.603	2	55	114.96	29	218.03	332.99
	81.703	81.603	3	55	114.96	30	210.77	325.73
				Average Output (l/s)				**327.38**
STORM PUMP 1+4	81.703	81.603	1	53	119.30	31	203.97	323.27
	81.703	81.603	2	51	123.98	30	210.77	334.75
	81.703	81.603	3	52	121.60	30	210.77	332.37
				Average Output (l/s)				**330.13**
STORM PUMP 2+3	81.703	81.603	1	51	123.98	31	203.97	327.95
	81.703	81.603	2	48	131.73	33	191.61	323.34
	81.703	81.603	3	48	131.73	32	197.59	329.32
				Average Output (l/s)				**326.87**
STORM PUMP 2+4	81.703	81.603	1	52	121.60	30	210.77	332.37
	81.703	81.603	2	51	123.98	31	203.97	327.95
	81.703	81.603	3	53	119.30	31	203.97	323.27
				Average Output (l/s)				**327.86**
STORM PUMP 3+4	81.703	81.603	1	53	119.30	30	210.77	330.07
	81.703	81.603	2	55	114.96	30	210.77	325.73
	81.703	81.603	3	54	117.09	30	210.77	327.86
				Average Output (l/s)				**327.89**

PUMP DROP TESTS

Area of Wet Well (m^2)	**122.66m2**
Test Area (m^2)	**63.234m2**
Test Volume (m^3)	**6.324m3**

Pump Combination	Test Start Level m(AOD)	Test Stop Level m(AOD)	Test No	Draw		Fill		Net Output
				(secs)	(l/s)	(secs)	(l/s)	(l/s)
STORM PUMP 1+2+3	81.703	81.603	1	50	126.48	26	243.23	369.71
	81.703	81.603	2	50	126.48	28	225.86	352.34
	81.703	81.603	3	50	126.48	26	243.23	369.71
				Average Output (l/s)				**363.92**
STORM PUMP 1+2+4	81.703	81.603	1	50	126.48	29	218.07	344.55
	81.703	81.603	2	48	131.75	26	243.23	374.98
	81.703	81.603	3	51	124.00	29	218.07	342.07
				Average Output (l/s)				**353.87**
STORM PUMP1+3+4	81.703	81.603	1	53	119.32	29	218.07	337.39
	81.703	81.603	2	51	124.00	27	234.22	358.22
	81.703	81.603	3	51	124.00	26	243.23	367.23
				Average Output (l/s)				**354.28**
STORM PUMP 2+3+4	81.703	81.603	1	53	119.32	27	234.22	353.54
	81.703	81.603	2	53	119.32	27	234.22	353.54
	81.703	81.603	3	53	119.32	28	225.86	345.18
				Average Output (l/s)				**350.75**
DWF PUMP 2 FLOW METER			1					
			2					
			3					
				Average Output (l/s)				**106.00**
			1					
			2					
			3					
				Average Output (l/s)				**0.00**

LEVEL DETAILS
(including Pipework and Electrodes/Floats)

TBM Levels

No	Position	Level (m AOD)
1	SP48757402	86.488
2	DWF wet well	87.033
3	Storm wet well	87.030
4		
5		

Wet Well Dimensions (m)	**12.50mØ**
Wet Well Area (m^2)	**122.66m2 (not test area)**
Wet Well Cover Level (m AOD)	**87.033m**

Pipework (Invert Levels)

No	Position	TBM Level	Depth to IL	Level (m AOD)
1	Pipe A 900mm	87.033m	8.65m	78.383
2	Pipe B 600mm	87.033m	8.65m	78.383
3	Weir wall	87.033m	5.33m	81.703
4	Sump	87.033m	8.90m	78.133
5	Pumps	87.033m	8.60m	78.433
6	Benching	87.033m	7.65m	79.383
7				

Electrodes/Floats

No	Position	TBM Level	Depth to IL	Level (m AOD)
1	DWF duty start	87.033m	8.06m	78.973
2	DWF assist start	87.033m	7.96m	79.073
3	DWF stand-by start	87.033m	-	-
4	DWF duty stop	87.033m	8.26m	78.773
5	DWF assist stop	87.033m	8.25m	78.783
6	Duty storm start	87.030m	5.73m	81.300
7	1st assist storm start	87.030m	5.53m	81.500
8	2nd assist storm start	87.030m	4.72m	82.310
9	Stand-by storm start	87.030m	-	-
10	Duty storm stop	87.030m	7.38m	79.650
11	1st assist storm stop	87.030m	6.88m	80.150
12	2nd assist storm stop	87.030m	5.02m	82.010
13	High level alarm	87.033m	5.00m	82.033

PUMPING STATION GENERAL DATA

MOTOR DETAILS

No	Type	Make	Model	Serial No	Plated Capacity	Remarks
1						
2						
3						
4						

PUMP DETAILS

No	Type	Make	Model	Serial No	Plated Capacity	Operation
1	3171.091	FLYGT	-	0840013	1460rpm	Auto rotation
2	3171.091	FLYGT	-	0840014	1460rpm	Auto rotation
3	3171.091	FLYGT	-	0840015	1460rpm	Auto rotation
4	3202.090	FLYGT	-	-	970rpm	Auto rotation
5	3202.090	FLYGT	-	-	970rpm	Auto rotation
6	3202.090	FLYGT	-	-	970rpm	Auto rotation
7	3202.090	FLYGT	-	-	970rpm	Auto rotation

ARRANGEMENT OF TELEMETRY

Mains Failure (Yes/No)	Yes
High Water Level in Wet Well (Yes/No)	Yes
High Water Level in Dry Well (Yes/No)	n/a
Motor Overload (Yes/No)	No

Other Telemetry (Details)

1	Pumps failed
2	Dosing failed
3	
4	

GENERATOR DETAILS

Generator Socket provided (Yes/No)	Yes
Permanent Generator installed (Yes/No)	No
Size of Generator (kVA)	
Generator Make	
Generator Model	
Fuel Type	
Type of Supply (Phase)	
Auto Start (Yes/No)	

SITE DETAILS

1	**Location of Station (Area Details)**	Paynes Lane industrial estate
2	**Access to Station (Road Details)**	Made road
3	**Surroundings (Urban/Rural/Residential/ Commercial/Industrial)**	Industrial
4	**Distance from station to nearest inhabited buildings (m)**	100m+
5	**Access for Vehicle (Van/Tanker/None)**	Tanker
6	**Turning for Vehicle (Van/Tanker/None)**	Van
7	**Access Difficulties (Details)**	None
8	**Fencing (Chain Link/Timber/Other/None)**	Chain link
9	**Gates (Steel/Timber/Other/None)**	Steel
10	**Non-operational Areas (Grass/Shingle/Other/None)**	Shingle

STRUCTURES

1	**Superstructure Type (Brick/Industrial/Other)**	Brick
2	**Roof (Pitched/Flat/Tiles/Slates/Sheets)**	Flat
3	**Substructure (Wet Well/Dry Well/Submersible)**	Wet well
4	**Access to Dry Well (Yes/No/Details)**	n/a
5	**Access to Wet Well (Yes/No/Details)**	Ladder
6	**Construction (Brick/Pre Cast Concrete/Insitu Concrete)**	Pre cast concrete
7	**Wet Well Ventilation (Forced/Vent Pipe/None)**	None
8	**Dry Well Ventilation (Forced/Vent Pipe/None)**	n/a
9	**Emergency Condition Report (Signs of Serious Defects - Details)**	None
10	**General Comments**	DWF pump Nos.1 and 3 are not working. DWF pump No.2 is not beating incoming flow. Individual storm pumps are not beating flow. DWF pump duty auto rotate every 5 hours and storm pump duty rotates every 4 hours. DWF pump No.2 rate was taken from flow meter reading. Unable to close incoming rotork valves for DWF pump tests. Stand-by pumps start if duty/assist pumps fail.