

# Shellharbour Wastewater Treatment Plant

## June Pollution Monitoring Summary



### EPL 211

Summary period: 01-06-2018 to 30-06-2018

Date obtained: 04-07-2018

Date published: 11-07-2018

**Licensee:** Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

**Table 1: 3 Day Geometric Mean data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits	
total suspended solids	mg/L	monthly	50	4	yes	

3 Day Geometric Mean (3DGM) is a way to average a set of values and is commonly used with water quality assessments which show a great deal of variability. 3DGM is calculated by multiplying the results of the analysis of three samples collected on three consecutive days and then taking the cubed root of that amount.

**Table 2: Routine monitoring data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	19
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
copper	ug/L	monthly	1	-	-	1.9
diazinon	ug/L	monthly	1	-	-	<0.1
faecal coliforms	CFU/100mL	every 6 days	5	12	24	37
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	170
nitrogen (ammonia)	mg/L	monthly	1	-	-	0.7
nonylphenol ethoxylate	ug/L	monthly	1	-	-	<5
sea urchin fertilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100
total suspended solids	mg/L	every 6 days	5	3	6	7

Average and percentile limits are only applied annually for routine monitoring data in Table 2

# Shellharbour Wastewater Treatment Plant

## May Pollution Monitoring Summary



### EPL 211

Summary period: 01-05-2018 to 31-05-2018

Date obtained: 04-06-2018

Date published: 13-06-2018

**Licensee:** Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

**Table 1: 3 Day Geometric Mean data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits	
total suspended solids	mg/L	monthly	50	3	yes	

3 Day Geometric Mean (3DGM) is a way to average a set of values and is commonly used with water quality assessments which show a great deal of variability. 3DGM is calculated by multiplying the results of the analysis of three samples collected on three consecutive days and then taking the cubed root of that amount.

**Table 2: Routine monitoring data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	21
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	3
copper	ug/L	monthly	1	-	-	2.1
diazinon	ug/L	monthly	1	-	-	<0.1
faecal coliforms	CFU/100mL	every 6 days	5	36	78	170
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
nitrogen (ammonia)	mg/L	monthly	1	-	-	<0.1
nonylphenol ethoxylate	ug/L	monthly	1	-	-	<5
sea urchin fertilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100
total suspended solids	mg/L	every 6 days	5	3	4	7

Average and percentile limits are only applied annually for routine monitoring data in Table 2

# Shellharbour Wastewater Treatment Plant

## April Pollution Monitoring Summary



### EPL 211

Summary period: 01-04-2018 to 30-04-2018

Date obtained: 03-05-2018

Date published: 11-05-2018

**Licensee:** Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

**Table 1: 3 Day Geometric Mean data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits	
total suspended solids	mg/L	monthly	50	4	yes	

3 Day Geometric Mean (3DGM) is a way to average a set of values and is commonly used with water quality assessments which show a great deal of variability. 3DGM is calculated by multiplying the results of the analysis of three samples collected on three consecutive days and then taking the cubed root of that amount.

**Table 2: Routine monitoring data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	10
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
copper	ug/L	monthly	1	-	-	1.7
diazinon	ug/L	monthly	1	-	-	<0.1
faecal coliforms	CFU/100mL	every 6 days	5	59	9534	47,000
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
nitrogen (ammonia)	mg/L	monthly	1	-	-	0.1
nonylphenol ethoxylate	ug/L	monthly	1	-	-	8
sea urchin fertilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100
total suspended solids	mg/L	every 6 days	5	3	4	4

Average and percentile limits are only applied annually for routine monitoring data in Table 2

# Shellharbour Wastewater Treatment Plant

## March Pollution Monitoring Summary



### EPL 211

Summary period: 01-03-2018 to 31-03-2018

Date obtained: 04-04-2018

Date published: 13-04-2018

**Licensee:** Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

**Table 1: 3 Day Geometric Mean data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits	
total suspended solids	mg/L	monthly	50	2	yes	

3 Day Geometric Mean (3DGM) is a way to average a set of values and is commonly used with water quality assessments which show a great deal of variability. 3DGM is calculated by multiplying the results of the analysis of three samples collected on three consecutive days and then taking the cubed root of that amount.

**Table 2: Routine monitoring data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	17
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
copper	ug/L	monthly	1	-	-	1.7
diazinon	ug/L	monthly	1	-	-	<0.1
faecal coliforms	CFU/100mL	every 6 days	5	57	129	370
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
nitrogen (ammonia)	mg/L	monthly	1	-	-	<0.1
nonylphenol ethoxylate	ug/L	monthly	1	-	-	<5
sea urchin fertilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100
total suspended solids	mg/L	every 6 days	5	<2	2	4

Average and percentile limits are only applied annually for routine monitoring data in Table 2

# Shellharbour Wastewater Treatment Plant

## February Pollution Monitoring Summary



### EPL 211

Summary period: 01-02-2018 to 28-02-2018

Date obtained: 07-03-2018

Date published: 15-03-2018

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

**Table 1: 3 Day Geometric Mean data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits	
total suspended solids	mg/L	monthly	50	5	yes	

3 Day Geometric Mean (3DGM) is a way to average a set of values and is commonly used with water quality assessments which show a great deal of variability. 3DGM is calculated by multiplying the results of the analysis of three samples collected on three consecutive days and then taking the cubed root of that amount.

**Table 2: Routine monitoring data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	21
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	3	11
copper	ug/L	monthly	1	-	-	2.7
diazinon	ug/L	monthly	1	-	-	<0.1
faecal coliforms	CFU/100mL	every 6 days	5	8	124055	620,000
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
nitrogen (ammonia)	mg/L	monthly	1	-	-	0.1
nonylphenol ethoxylate	ug/L	monthly	1	-	-	<5
sea urchin fertilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100
total suspended solids	mg/L	every 6 days	5	3	7	17

Average and percentile limits are only applied annually for routine monitoring data in Table 2

# Shellharbour Wastewater Treatment Plant

## January Pollution Monitoring Summary



### EPL 211

Summary period: 01-01-2018 to 31-01-2018

Date obtained: 15-02-2018

Date published: 23-02-2018

**Licensee:** Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

**Table 1: 3 Day Geometric Mean data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits	
total suspended solids	mg/L	monthly	50	4	yes	

3 Day Geometric Mean (3DGM) is a way to average a set of values and is commonly used with water quality assessments which show a great deal of variability. 3DGM is calculated by multiplying the results of the analysis of three samples collected on three consecutive days and then taking the cubed root of that amount.

**Table 2: Routine monitoring data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	31
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	3
copper	ug/L	monthly	1	-	-	2.1
diazinon	ug/L	monthly	1	-	-	<0.1
faecal coliforms	CFU/100mL	every 6 days	5	19	37	55
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
nitrogen (ammonia)	mg/L	monthly	1	-	-	0.3
nonylphenol ethoxylate	ug/L	monthly	1	-	-	<5
sea urchin fertilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100
total suspended solids	mg/L	every 6 days	5	3	4	6

Average and percentile limits are only applied annually for routine monitoring data in Table 2

# Shellharbour Wastewater Treatment Plant

## December Pollution Monitoring Summary



### EPL 211

Summary period: 01-12-2017 to 31-12-2017

Date obtained: 23-01-2018

Date published: 29-01-2018

**Licensee:** Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

**Table 1: 3 Day Geometric Mean data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits	
total suspended solids	mg/L	monthly	50	2	yes	

3 Day Geometric Mean (3DGM) is a way to average a set of values and is commonly used with water quality assessments which show a great deal of variability. 3DGM is calculated by multiplying the results of the analysis of three samples collected on three consecutive days and then taking the cubed root of that amount.

**Table 2: Routine monitoring data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	21
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	4
copper	ug/L	monthly	1	-	-	2.4
diazinon	ug/L	monthly	1	-	-	<0.1
faecal coliforms	CFU/100mL	every 6 days	5	25	39	54
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
nitrogen (ammonia)	mg/L	monthly	1	-	-	0.1
nonylphenol ethoxylate	ug/L	monthly	1	-	-	<5
sea urchin fertilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100
total suspended solids	mg/L	every 6 days	5	2	6	12

Average and percentile limits are only applied annually for routine monitoring data in Table 2

# Shellharbour Wastewater Treatment Plant

## November Pollution Monitoring Summary



### EPL 211

Summary period: 01-11-2017 to 30-11-2017

Date obtained: 05-12-2017

Date published: 14-12-2017

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

**Table 1: 3 Day Geometric Mean data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits	
total suspended solids	mg/L	monthly	50	9	yes	

3 Day Geometric Mean (3DGM) is a way to average a set of values and is commonly used with water quality assessments which show a great deal of variability. 3DGM is calculated by multiplying the results of the analysis of three samples collected on three consecutive days and then taking the cubed root of that amount.

**Table 2: Routine monitoring data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	38
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	2	3	3
copper	ug/L	monthly	1	-	-	4.7
diazinon	ug/L	monthly	1	-	-	<0.1
faecal coliforms	CFU/100mL	every 6 days	5	28	9381	41,000
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
nitrogen (ammonia)	mg/L	monthly	1	-	-	0.2
nonylphenol ethoxylate	ug/L	monthly	1	-	-	<5
sea urchin fertilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100
total suspended solids	mg/L	every 6 days	5	5	7	9

Average and percentile limits are only applied annually for routine monitoring data in Table 2



# Shellharbour Wastewater Treatment Plant

## October Pollution Monitoring Summary



### EPL 211

Summary period: 01-10-2017 to 31-10-2017

Date obtained: 13-11-2017

Date published: 22-11-2017

**Licensee:** Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

**Table 1: 3 Day Geometric Mean data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits	
total suspended solids	mg/L	monthly	50	5	yes	

3 Day Geometric Mean (3DGM) is a way to average a set of values and is commonly used with water quality assessments which show a great deal of variability. 3DGM is calculated by multiplying the results of the analysis of three samples collected on three consecutive days and then taking the cubed root of that amount.

**Table 2: Routine monitoring data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	36
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	3	4	5
copper	ug/L	monthly	1	-	-	3
diazinon	ug/L	monthly	1	-	-	<0.1
faecal coliforms	CFU/100mL	every 6 days	5	15	94	330
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
nitrogen (ammonia)	mg/L	monthly	1	-	-	0.1
nonylphenol ethoxylate	ug/L	monthly	1	-	-	13
sea urchin fertilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100
total suspended solids	mg/L	every 6 days	5	5	7	9

Average and percentile limits are only applied annually for routine monitoring data in Table 2

# Shellharbour Wastewater Treatment Plant

## September Pollution Monitoring Summary



### EPL 211

Summary period: 01-09-2017 to 30-09-2017

Date obtained: 06-10-2017

Date published: 17-10-2017

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

**Table 1: 3 Day Geometric Mean data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits	
total suspended solids	mg/L	monthly	50	6	yes	

3 Day Geometric Mean (3DGM) is a way to average a set of values and is commonly used with water quality assessments which show a great deal of variability. 3DGM is calculated by multiplying the results of the analysis of three samples collected on three consecutive days and then taking the cubed root of that amount.

**Table 2: Routine monitoring data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	32
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	2	3	4
copper	ug/L	monthly	1	-	-	3.7
diazinon	ug/L	monthly	1	-	-	<0.1
faecal coliforms	CFU/100mL	every 6 days	5	70	532	980
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
nitrogen (ammonia)	mg/L	monthly	1	-	-	0.4
nonylphenol ethoxylate	ug/L	monthly	1	-	-	<5
sea urchin fertilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100
total suspended solids	mg/L	every 6 days	5	3	5	6

Average and percentile limits are only applied annually for routine monitoring data in Table 2

# Shellharbour Wastewater Treatment Plant

## August Pollution Monitoring Summary



### EPL 211

Summary period: 01-08-2017 to 31-08-2017

Date obtained: 18-09-2017

Date published: 21-09-2017

**Licensee:** Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

**Table 1: 3 Day Geometric Mean data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits	
total suspended solids	mg/L	monthly	50	3	yes	

3 Day Geometric Mean (3DGM) is a way to average a set of values and is commonly used with water quality assessments which show a great deal of variability. 3DGM is calculated by multiplying the results of the analysis of three samples collected on three consecutive days and then taking the cubed root of that amount.

**Table 2: Routine monitoring data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	26
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	3
copper	ug/L	monthly	1	-	-	3.4
diazinon	ug/L	monthly	1	-	-	<0.1
faecal coliforms	CFU/100mL	every 6 days	5	220	696	1,900
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	150
nitrogen (ammonia)	mg/L	monthly	1	-	-	<0.1
nonylphenol ethoxylate	ug/L	monthly	1	-	-	<5
sea urchin fertilisation (EC50)	% Effluent/Vol	monthly	1	-	-	77.9
total suspended solids	mg/L	every 6 days	5	3	3	4

Average and percentile limits are only applied annually for routine monitoring data in Table 2.

# Shellharbour Wastewater Treatment Plant

## July Pollution Monitoring Summary



### EPL 211

Summary period: 01-07-2017 to 31-07-2017

Date obtained: 17-08-2017

Date published: 23-08-2017

**Licensee:** Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

**Table 1: 3 Day Geometric Mean data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits	
total suspended solids	mg/L	monthly	50	3	yes	

3 Day Geometric Mean (3DGM) is a way to average a set of values and is commonly used with water quality assessments which show a great deal of variability. 3DGM is calculated by multiplying the results of the analysis of three samples collected on three consecutive days and then taking the cubed root of that amount.

**Table 2: Routine monitoring data**

EPA Point 4 Site code SH0004		Point description: At the southern end of the secondary effluent channel				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	20
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	2	3
copper	ug/L	monthly	1	-	-	2.6
diazinon	ug/L	monthly	1	-	-	<0.1
faecal coliforms	CFU/100mL	every 6 days	6	13	289	1,400
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
nitrogen (ammonia)	mg/L	monthly	1	-	-	<0.1
nonylphenol ethoxylate	ug/L	monthly	1	-	-	<5
sea urchin fertilisation (EC50)	% Effluent/Vol	monthly	1	-	-	83.1
total suspended solids	mg/L	every 6 days	5	4	4	5

Average and percentile limits are only applied annually for routine monitoring data in Table 2.