### North Head Wastewater Treatment Plant June Pollution Monitoring Summary Air Quality



#### **EPL 378**

Summary period: 01-06-2019 to 30-06-2019

Date obtained: 11-07-19
Date published: 17-07-19

Licensee: Sydney Water

PO Box 399

| EPA Point 33          | Point descrip     | Point description: Ventilation outlet at Scotts Creek |                   |                   |                   |                  |                   |  |  |  |  |
|-----------------------|-------------------|---|-------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of measure   | sampling<br>frequency                                 | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1440              | <0.004            | <0.004            | 5                | yes               |  |  |  |  |

| EPA Point 34          | Point description: Ventilation outlet at Lane Cove River West |                       |                      |                   |                   |                  |                   |  |  |  |
|-----------------------|---|-----------------------|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|
| pollutant             | unit of<br>measure  | sampling<br>frequency | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>   | 30 minutes            | 1440                 | <0.004            | <0.004            | 5                | yes               |  |  |  |

| EPA Point 35          | Point descript     | Point description: Ventilation outlet at North Head STP for Northside Storage Tunnel |                      |                   |                   |                  |                   |  |  |  |
|-----------------------|--------------------|--|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency  | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |
| hydrogen sulphide gas | mg/m³              | 30 minutes   | 1440                 | <0.01             | 0.93              | 5                | yes               |  |  |  |

| EPA Point 63          | Point descrip      | Point description: Central scrubber outlet at North Head STP |                   |                   |                   |                  |                   |  |  |  |
|-----------------------|--------------------|--|-------------------|-------------------|-------------------|------------------|-------------------|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency  | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |
| chlorine gas          | mg/m <sup>3</sup>  | 30 minutes   | 1440              | <0.15             | 2.30              | 200              | yes               |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes   | 1440              | <0.075            | <0.075            | 5                | yes               |  |  |  |

| EPA Point 66          | Point descript     | Point description: Bio Trickling Filter / Standby Scrubber at North Head STP |                      |                   |                   |                  |                   |  |  |  |
|-----------------------|--------------------|--|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency  | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |
| chlorine gas          | mg/m <sup>3</sup>  | 30 minutes   | 1440                 | <0.59             | <0.59             | 200              | yes               |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes   | 1440                 | <0.071            | <0.071            | 5                | yes               |  |  |  |

<sup>\*</sup>Maximum limits for air quality are based on the Protection of the Environment Operations (Clean Air) Regulation 2010 - Schedule 4 Standards of concentration for scheduled premises: general activities and plant.

### North Head Wastewater Treatment Plant May Pollution Monitoring Summary Air Quality



#### **EPL 378**

Summary period: 01-05-2019 to 31-05-2019

Date obtained: 04-06-19 Date published: 12-06-19 Licensee: Sydney Water

PO Box 399

| EPA Point 33          | Point descrip      | Point description: Ventilation outlet at Scotts Creek |                   |                   |                   |                  |                   |  |  |  |  |
|-----------------------|--------------------|---|-------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency                                 | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes  | 1488              | <0.004            | <0.004            | 5                | yes               |  |  |  |  |

| EPA Point 34          | Point description: Ventilation outlet at Lane Cove River West |                       |                      |                   |                   |                  |                   |  |  |  |
|-----------------------|---|-----------------------|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|
| pollutant             | unit of<br>measure  | sampling<br>frequency | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>   | 30 minutes            | 1488                 | <0.004            | 0.023             | 5                | yes               |  |  |  |

| EPA Point 35          | Point descript     | Point description: Ventilation outlet at North Head STP for Northside Storage Tunnel |                      |                   |                   |                  |                   |  |  |  |
|-----------------------|--------------------|--|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency  | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |
| hydrogen sulphide gas | mg/m³              | 30 minutes   | 1488                 | <0.01             | 1.31              | 5                | yes               |  |  |  |

| EPA Point 63          | Point description: Central scrubber outlet at North Head STP |                       |                      |                   |                   |                  |                   |  |  |  |
|-----------------------|--|-----------------------|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|
| pollutant             | unit of<br>measure   | sampling<br>frequency | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |
| chlorine gas          | mg/m³  | 30 minutes            | 1488                 | <0.15             | 0.19              | 200              | yes               |  |  |  |
| hydrogen sulphide gas | mg/m³  | 30 minutes            | 1488                 | <0.075            | <0.075            | 5                | yes               |  |  |  |

| EPA Point 66          | Point descript     | Point description: Bio Trickling Filter / Standby Scrubber at North Head STP |                   |                   |                   |                  |                   |  |  |  |
|-----------------------|--------------------|--|-------------------|-------------------|-------------------|------------------|-------------------|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency  | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |
| chlorine gas          | mg/m <sup>3</sup>  | 30 minutes   | 1488              | <0.59             | 1.00              | 200              | yes               |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes   | 1488              | <0.071            | <0.071            | 5                | yes               |  |  |  |

<sup>\*</sup>Maximum limits for air quality are based on the Protection of the Environment Operations (Clean Air) Regulation 2010 - Schedule 4 Standards of concentration for scheduled premises: general activities and plant.

### North Head Wastewater Treatment Plant April Pollution Monitoring Summary Air Quality



#### **EPL 378**

Summary period: 01-04-2019 to 30-04-2019

Date obtained: 02-05-19
Date published: 13-05-19

Licensee: Sydney Water

PO Box 399

| EPA Point 33          | Point descrip      | Point description: Ventilation outlet at Scotts Creek |                   |                   |                   |                  |                   |  |  |  |  |
|-----------------------|--------------------|---|-------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency                                 | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes  | 1440              | <0.004            | <0.004            | 5                | yes               |  |  |  |  |

| EPA Point 34          | Point description: Ventilation outlet at Lane Cove River West |                       |                      |                   |                   |                  |                   |  |  |  |
|-----------------------|---|-----------------------|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|
| pollutant             | unit of<br>measure  | sampling<br>frequency | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>   | 30 minutes            | 1440                 | <0.004            | <0.004            | 5                | yes               |  |  |  |

| EPA Point 35          | Point descrip      | Point description: Ventilation outlet at North Head STP for Northside Storage Tunnel |                      |                   |                   |                  |                   |  |  |  |  |
|-----------------------|--------------------|--|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency  | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes   | 1440                 | <0.01             | 0.61              | 5                | yes               |  |  |  |  |

| EPA Point 63          | Point description: Central scrubber outlet at North Head STP |                       |                   |                   |                   |                  |                   |  |  |  |
|-----------------------|--|-----------------------|-------------------|-------------------|-------------------|------------------|-------------------|--|--|--|
| pollutant             | unit of<br>measure   | sampling<br>frequency | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |
| chlorine gas          | mg/m <sup>3</sup>  | 30 minutes            | 1440              | <0.15             | 0.54              | 200              | yes               |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes            | 1440              | <0.075            | 0.157             | 5                | yes               |  |  |  |

| EPA Point 66          | Point descript     | oint description: Bio Trickling Filter / Standby Scrubber at North Head STP |                   |                   |                   |                  |                   |  |  |  |
|-----------------------|--------------------|---|-------------------|-------------------|-------------------|------------------|-------------------|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency   | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |
| chlorine gas          | mg/m <sup>3</sup>  | 30 minutes  | 1440              | <0.59             | <0.59             | 200              | yes               |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes  | 1440              | <0.071            | <0.071            | 5                | yes               |  |  |  |

<sup>\*</sup>Maximum limits for air quality are based on the Protection of the Environment Operations (Clean Air) Regulation 2010 - Schedule 4 Standards of concentration for scheduled premises: general activities and plant.

### North Head Wastewater Treatment Plant March Pollution Monitoring Summary Air Quality



**EPL 378** 

Summary period: 01-03-2019 to 31-03-2019

Date obtained: 02-04-19 Date published: 15-04-19 Licensee: Sydney Water

PO Box 399

| EPA Point 33          | Point descrip      | Point description: Ventilation outlet at Scotts Creek |                   |                   |                   |                  |                   |  |  |  |  |
|-----------------------|--------------------|---|-------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency                                 | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes  | 1488              | <0.004            | <0.004            | 5                | yes               |  |  |  |  |

| EPA Point 34          | Point descrip      | Point description: Ventilation outlet at Lane Cove River West |                      |                   |                   |                  |                   |  |  |  |
|-----------------------|--------------------|---|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency   | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes  | 1488                 | <0.004            | 0.116             | 5                | yes               |  |  |  |

| EPA Point 35          | Point descrip      | oint description: Ventilation outlet at North Head STP for Northside Storage Tunnel |                      |                   |                   |                  |                   |  |  |  |
|-----------------------|--------------------|---|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency   | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes  | 1479¹                | <0.01             | 3.09              | 5                | yes               |  |  |  |

| EPA Point 63          | Point descript     | Point description: Central scrubber outlet at North Head STP |                   |                   |                   |                  |                   |  |  |  |  |
|-----------------------|--------------------|--|-------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency  | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| chlorine gas          | mg/m <sup>3</sup>  | 30 minutes   | 1488              | <0.15             | 0.50              | 200              | yes               |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes   | 1488              | <0.075            | 0.126             | 5                | yes               |  |  |  |  |

| EPA Point 66          | Point descript     | oint description: Bio Trickling Filter / Standby Scrubber at North Head STP |                      |                   |                   |                  |                   |  |  |  |  |
|-----------------------|--------------------|---|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency   | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| chlorine gas          | mg/m <sup>3</sup>  | 30 minutes  | 1488                 | <0.59             | <0.59             | 200              | yes               |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes  | 1488                 | <0.071            | 0.858             | 5                | yes               |  |  |  |  |

<sup>1.</sup> As a result of a power cut to the site, hydrogen sulphide concentration data was unavailable between 21:59 on the 14 March and 02:30 on the 15th March. There was no forced ventilation during this outage.

<sup>\*</sup>Maximum limits for air quality are based on the Protection of the Environment Operations (Clean Air) Regulation 2010 - Schedule 4 Standards of concentration for scheduled premises: general activities and plant.

## North Head Wastewater Treatment Plant February Pollution Monitoring Summary Air Quality



#### **EPL 378**

Summary period: 01-02-2019 to 28-02-2019

Date obtained: 15-03-19
Date published: 20-03-19

Licensee: Sydney Water

PO Box 399

| EPA Point 33          | Point descrip     | Point description: Ventilation outlet at Scotts Creek |                   |                   |                   |                  |                   |  |  |  |
|-----------------------|-------------------|---|-------------------|-------------------|-------------------|------------------|-------------------|--|--|--|
| pollutant             | unit of measure   | sampling<br>frequency                                 | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1344              | <0.004            | 0.058             | 5                | ves               |  |  |  |

| EPA Point 34          | Point description: Ventilation outlet at Lane Cove River West |                       |                      |                   |                   |                  |                   |  |  |  |
|-----------------------|---|-----------------------|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|
| pollutant             | unit of<br>measure  | sampling<br>frequency | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |
| hydrogen sulphide gas | mg/m³   | 30 minutes            | 1344                 | <0.004            | 0.128             | 5                | yes               |  |  |  |

| EPA Point 35          | Point descript     | oint description: Ventilation outlet at North Head STP for Northside Storage Tunnel |                      |                   |                   |                  |                   |  |  |  |
|-----------------------|--------------------|---|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency   | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |
| hydrogen sulphide gas | mg/m³              | 30 minutes  | 1344                 | <0.01             | 1.04              | 5                | yes               |  |  |  |

| EPA Point 63          | Point description: Central scrubber outlet at North Head STP |                       |                   |                   |                   |                  |                   |  |  |  |  |
|-----------------------|--|-----------------------|-------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of<br>measure   | sampling<br>frequency | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| chlorine gas          | mg/m <sup>3</sup>  | 30 minutes            | 1344              | <0.15             | 0.25              | 200              | yes               |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes            | 1344              | <0.075            | <0.075            | 5                | yes               |  |  |  |  |

| EPA Point 66          | Point descript     | Point description: Bio Trickling Filter / Standby Scrubber at North Head STP |                   |                   |                   |                  |                   |  |  |  |
|-----------------------|--------------------|--|-------------------|-------------------|-------------------|------------------|-------------------|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency  | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |
| chlorine gas          | mg/m <sup>3</sup>  | 30 minutes   | 1344              | <0.59             | <0.59             | 200              | yes               |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes   | 1344              | <0.071            | <0.071            | 5                | yes               |  |  |  |

## North Head Wastewater Treatment Plant January Pollution Monitoring Summary Air Quality



### **EPL 378**

Summary period: 01-01-2019 to 31-01-2019

Date obtained: 14-02-19
Date published: 18-02-19

Licensee: Sydney Water

PO Box 399

| EPA Point 33          | Point descrip      | Point description: Ventilation outlet at Scotts Creek |                   |                   |                   |                  |                   |  |  |  |  |
|-----------------------|--------------------|---|-------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency                                 | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes  | 1488              | <0.004            | <0.004            | 5                | ves               |  |  |  |  |

| EPA Point 34          | Point descrip      | Point description: Ventilation outlet at Lane Cove River West |                      |                   |                   |                  |                   |  |  |  |
|-----------------------|--------------------|---|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency   | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes  | 1488                 | <0.004            | 0.004             | 5                | yes               |  |  |  |

| EPA Point 35          | Point descript     | oint description: Ventilation outlet at North Head STP for Northside Storage Tunnel |      |       |      |   |     |  |  |  |
|-----------------------|--------------------|---|------|-------|------|---|-----|--|--|--|
| pollutant             | unit of<br>measure |   |      |       |      |   |     |  |  |  |
| hydrogen sulphide gas | mg/m³              | 30 minutes  | 1488 | <0.01 | 4.17 | 5 | yes |  |  |  |

| EPA Point 63          | Point description: Central scrubber outlet at North Head STP |                       |                   |                   |                   |                  |                   |  |  |
|-----------------------|--|-----------------------|-------------------|-------------------|-------------------|------------------|-------------------|--|--|
| pollutant             | unit of<br>measure   | sampling<br>frequency | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |
| chlorine gas          | mg/m <sup>3</sup>  | 30 minutes            | 1488              | <0.15             | <0.15             | 200              | yes               |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes            | 1488              | <0.075            | 0.252             | 5                | yes               |  |  |

| EPA Point 66          | Point description: Bio Trickling Filter / Standby Scrubber at North Head STP |                       |                      |                   |                   |                  |                   |  |  |
|-----------------------|--|-----------------------|----------------------|-------------------|-------------------|------------------|-------------------|--|--|
| pollutant             | unit of<br>measure   | sampling<br>frequency | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |
| chlorine gas          | mg/m³  | 30 minutes            | 1488                 | <0.59             | <0.59             | 200              | yes               |  |  |
| hydrogen sulphide gas | mg/m³  | 30 minutes            | 1488                 | <0.071            | 2.442             | 5                | yes               |  |  |

### North Head Wastewater Treatment Plant December Pollution Monitoring Summary Air Quality



### **EPL 378**

Summary period: 01-12-2018 to 31-12-2018

Date obtained: 07-01-19
Date published: 18-01-19

Licensee: Sydney Water

PO Box 399

| EPA Point 33          | Point descrip      | Point description: Ventilation outlet at Scotts Creek |                   |                   |                   |                  |                   |  |  |  |  |
|-----------------------|--------------------|---|-------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency                                 | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes  | 1488              | <0.004            | <0.004            | 5                | yes               |  |  |  |  |

| EPA Point 34          | Point descrip      | Point description: Ventilation outlet at Lane Cove River West |                      |                   |                   |                  |                   |  |  |  |  |
|-----------------------|--------------------|---|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency   | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes  | 1488                 | <0.004            | 0.114             | 5                | yes               |  |  |  |  |

| EPA Point 35          | Point descrip      | oint description: Ventilation outlet at North Head STP for Northside Storage Tunnel |      |       |      |   |     |  |  |  |
|-----------------------|--------------------|---|------|-------|------|---|-----|--|--|--|
| pollutant             | unit of<br>measure |   |      |       |      |   |     |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes  | 1488 | <0.01 | 1.88 | 5 | yes |  |  |  |

| EPA Point 63          | Point description: Central scrubber outlet at North Head STP |                       |                   |                   |                   |                  |                   |  |  |
|-----------------------|--|-----------------------|-------------------|-------------------|-------------------|------------------|-------------------|--|--|
| pollutant             | unit of<br>measure   | sampling<br>frequency | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |
| chlorine gas          | mg/m³  | 30 minutes            | 1488              | <0.15             | 1.18              | 200              | yes               |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes            | 1488              | <0.075            | 0.398             | 5                | yes               |  |  |

| EPA Point 66          | Point descrip      | Point description: Bio Trickling Filter / Standby Scrubber at North Head STP |      |        |       |     |     |  |  |  |  |
|-----------------------|--------------------|--|------|--------|-------|-----|-----|--|--|--|--|
| pollutant             | unit of<br>measure |  |      |        |       |     |     |  |  |  |  |
| chlorine gas          | mg/m <sup>3</sup>  | 30 minutes   | 1488 | <0.59  | <0.59 | 200 | yes |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes   | 1488 | <0.071 | 0.128 | 5   | yes |  |  |  |  |

## North Head Wastewater Treatment Plant November Pollution Monitoring Summary Air Quality



### **EPL 378**

Summary period: 01-11-2018 to 30-11-2018

Date obtained: 03-12-18

Date published: 17-12-18

Licensee: Sydney Water

PO Box 399

| EPA Point 33          | Point descrip      | Point description: Ventilation outlet at Scotts Creek |                      |                   |                   |                  |                   |  |  |  |  |
|-----------------------|--------------------|---|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency                                 | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes  | 1440                 | <0.004            | <0.004            | 5                | yes               |  |  |  |  |

| EPA Point 34          | Point descrip      | Point description: Ventilation outlet at Lane Cove River West |                      |                   |                   |                  |                   |  |  |  |  |
|-----------------------|--------------------|---|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency   | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes  | 1440                 | <0.004            | 0.008             | 5                | yes               |  |  |  |  |

| EPA Point 35          | Point descrip      | oint description: Ventilation outlet at North Head STP for Northside Storage Tunnel |      |       |      |   |     |  |  |  |
|-----------------------|--------------------|---|------|-------|------|---|-----|--|--|--|
| pollutant             | unit of<br>measure |   |      |       |      |   |     |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes  | 1440 | <0.01 | 3.42 | 5 | yes |  |  |  |

| EPA Point 63          | Point description: Central scrubber outlet at North Head STP |                       |                   |                   |                   |                  |                   |  |  |  |  |
|-----------------------|--|-----------------------|-------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of<br>measure   | sampling<br>frequency | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| chlorine gas          | mg/m <sup>3</sup>  | 30 minutes            | 1440              | <0.15             | 1.07              | 200              | yes               |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes            | 1440              | <0.075            | 1.767             | 5                | yes               |  |  |  |  |

| EPA Point 66          | Point description: Bio Trickling Filter / Standby Scrubber at North Head STP |                       |                      |                   |                   |                  |                   |  |  |
|-----------------------|--|-----------------------|----------------------|-------------------|-------------------|------------------|-------------------|--|--|
| pollutant             | unit of<br>measure   | sampling<br>frequency | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |
| chlorine gas          | mg/m³  | 30 minutes            | 1440                 | <0.59             | <0.59             | 200              | yes               |  |  |
| hydrogen sulphide gas | mg/m³  | 30 minutes            | 1440                 | <0.071            | 0.948             | 5                | yes               |  |  |

## North Head Wastewater Treatment Plant October Pollution Monitoring Summary Air Quality



### **EPL 378**

Summary period: 01-10-2018 to 31-10-2018

Date obtained: 07-11-18

Date published: 16-11-18

Licensee: Sydney Water

PO Box 399

| EPA Point 33          | Point descrip     | Point description: Ventilation outlet at Scotts Creek |                   |                   |                   |                  |                   |  |  |  |  |
|-----------------------|-------------------|---|-------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of measure   | sampling<br>frequency                                 | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1486              | <0.004            | <0.004            | 5                | ves               |  |  |  |  |

| EPA Point 34          | Point descrip      | Point description: Ventilation outlet at Lane Cove River West |                      |                   |                   |                  |                   |  |  |  |  |
|-----------------------|--------------------|---|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency   | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes  | 1486                 | <0.004            | 0.043             | 5                | yes               |  |  |  |  |

| EPA Point 35          | Point descript   | oint description: Ventilation outlet at North Head STP for Northside Storage Tunnel |      |       |      |   |                   |  |  |  |
|-----------------------|--|---|------|-------|------|---|-------------------|--|--|--|
| pollutant             | unit of sampling number of minimum maximum maximum measure frequency samples result result limit |   |      |       |      |   | within<br>limits* |  |  |  |
| hydrogen sulphide gas | mg/m³  | 30 minutes  | 1486 | <0.01 | 3.70 | 5 | yes               |  |  |  |

| EPA Point 63          | Point description: Central scrubber outlet at North Head STP |                       |                   |                   |                   |                  |                   |  |  |  |  |
|-----------------------|--|-----------------------|-------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of<br>measure   | sampling<br>frequency | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| chlorine gas          | mg/m <sup>3</sup>  | 30 minutes            | 1486              | <0.15             | 1.14              | 200              | yes               |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes            | 1486              | <0.075            | 0.617             | 5                | yes               |  |  |  |  |

| EPA Point 66          | Point descrip     | Point description: Bio Trickling Filter / Standby Scrubber at North Head STP |                   |                   |                   |                  |                   |  |  |  |  |
|-----------------------|-------------------|--|-------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of measure   | sampling<br>frequency  | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| chlorine gas          | mg/m <sup>3</sup> | 30 minutes   | 1486              | <0.59             | <0.59             | 200              | yes               |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1486              | <0.071            | 1.444             | 5                | yes               |  |  |  |  |

## North Head Wastewater Treatment Plant September Pollution Monitoring Summary Air Quality



### **EPL 378**

Summary period: 01-09-2018 to 30-09-2018

Date obtained: 05-10-18

Date published: 09-10-18

Licensee: Sydney Water

PO Box 399

| EPA Point 33          | Point descrip   | Point description: Ventilation outlet at Scotts Creek |      |        |        |   |     |  |  |  |  |
|-----------------------|---|---|------|--------|--------|---|-----|--|--|--|--|
| pollutant             | unit of sampling number of minimum maximum maximum with measure frequency samples result result limit limit |   |      |        |        |   |     |  |  |  |  |
| hydrogen sulphide gas | mg/m³   | 30 minutes  | 1440 | <0.004 | <0.004 | 5 | ves |  |  |  |  |

| EPA Point 34          | Point descrip      | Point description: Ventilation outlet at Lane Cove River West |                      |                   |                   |                  |                   |  |  |  |  |
|-----------------------|--------------------|---|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency   | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes  | 1440                 | <0.004            | <0.004            | 5                | yes               |  |  |  |  |

| EPA Point 35          | Point descript   | oint description: Ventilation outlet at North Head STP for Northside Storage Tunnel |      |       |      |   |                   |  |  |  |
|-----------------------|--|---|------|-------|------|---|-------------------|--|--|--|
| pollutant             | unit of sampling number of minimum maximum maximum measure frequency samples result result limit |   |      |       |      |   | within<br>limits* |  |  |  |
| hydrogen sulphide gas | mg/m³  | 30 minutes  | 1440 | <0.01 | 3.93 | 5 | yes               |  |  |  |

| EPA Point 63          | Point description: Central scrubber outlet at North Head STP |                       |                      |                   |                   |                  |                   |  |  |  |
|-----------------------|--|-----------------------|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|
| pollutant             | unit of<br>measure   | sampling<br>frequency | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |
| chlorine gas          | mg/m <sup>3</sup>  | 30 minutes            | 1440                 | <0.15             | 3.48              | 200              | yes               |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes            | 1440                 | <0.075            | <0.075            | 5                | yes               |  |  |  |

| EPA Point 66          | Point descrip      | Point description: Bio Trickling Filter / Standby Scrubber at North Head STP |                      |                   |                   |                  |                   |  |  |  |  |
|-----------------------|--------------------|--|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency  | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| chlorine gas          | mg/m <sup>3</sup>  | 30 minutes   | 1440                 | <0.59             | <0.59             | 200              | yes               |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes   | 1440                 | <0.071            | 0.579             | 5                | yes               |  |  |  |  |

## North Head Wastewater Treatment Plant August Pollution Monitoring Summary Air Quality



**EPL 378** 

Summary period: 01-08-2018 to 31-08-2018

Date obtained: 03-09-18

Date published: 14-09-18

Licensee: Sydney Water

PO Box 399

| EPA Point 33          | Point descrip     | Point description: Ventilation outlet at Scotts Creek |                      |                   |                   |                  |                   |  |  |  |  |
|-----------------------|-------------------|---|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of measure   | sampling<br>frequency                                 | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1488                 | <0.004            | <0.004            | 5                | ves               |  |  |  |  |

| EPA Point 34          | Point descrip      | Point description: Ventilation outlet at Lane Cove River West |                      |                   |                   |                  |                   |  |  |  |  |
|-----------------------|--------------------|---|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency   | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes  | 1488                 | <0.004            | <0.004            | 5                | yes               |  |  |  |  |

| EPA Point 35          | Point descrip      | oint description: Ventilation outlet at North Head STP for Northside Storage Tunnel |      |       |      |   |     |  |  |  |
|-----------------------|--------------------|---|------|-------|------|---|-----|--|--|--|
| pollutant             | unit of<br>measure |   |      |       |      |   |     |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes  | 1488 | <0.01 | 0.62 | 5 | yes |  |  |  |

| EPA Point 63          | Point description: Central scrubber outlet at North Head STP |                       |                   |                   |                   |                  |                   |  |  |
|-----------------------|--|-----------------------|-------------------|-------------------|-------------------|------------------|-------------------|--|--|
| pollutant             | unit of<br>measure   | sampling<br>frequency | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |
| chlorine gas          | mg/m <sup>3</sup>  | 30 minutes            | 1488              | <0.15             | 2.33              | 200              | yes               |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes            | 1488              | <0.075            | <0.075            | 5                | yes               |  |  |

| EPA Point 66          | Point descript     | oint description: Bio Trickling Filter / Standby Scrubber at North Head STP |                   |                   |                   |                  |                   |  |  |  |
|-----------------------|--------------------|---|-------------------|-------------------|-------------------|------------------|-------------------|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency   | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |
| chlorine gas          | mg/m <sup>3</sup>  | 30 minutes  | 1488              | <0.59             | <0.59             | 200              | yes               |  |  |  |
| hydrogen sulphide gas | mg/m³              | 30 minutes  | 1488              | <0.071            | 0.903             | 5                | yes               |  |  |  |

### North Head Wastewater Treatment Plant July Pollution Monitoring Summary Air Quality



#### **EPL 378**

Summary period: 01-07-2018 to 31-07-2018

Date obtained: 27-08-18
Date published: 30-08-18

Licensee: Sydney Water

PO Box 399

| EPA Point 33          | Point descrip     | Point description: Ventilation outlet at Scotts Creek |                   |                   |                   |                  |                   |  |  |  |  |
|-----------------------|-------------------|---|-------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of measure   | sampling<br>frequency                                 | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1488              | <0.004            | 0.006             | 5                | ves               |  |  |  |  |

| EPA Point 34          | Point descrip      | Point description: Ventilation outlet at Lane Cove River West |                      |                   |                   |                  |                   |  |  |  |  |
|-----------------------|--------------------|---|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of<br>measure | sampling<br>frequency   | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes  | 1488                 | <0.004            | 0.042             | 5                | yes               |  |  |  |  |

| EPA Point 35          | Point descript     | oint description: Ventilation outlet at North Head STP for Northside Storage Tunnel |      |       |      |   |                 |  |  |  |
|-----------------------|--------------------|---|------|-------|------|---|-----------------|--|--|--|
| pollutant             | unit of<br>measure |   |      |       |      |   |                 |  |  |  |
| hydrogen sulphide gas | mg/m³              | 30 minutes  | 1488 | <0.01 | 7.07 | 5 | no <sup>1</sup> |  |  |  |

| EPA Point 63          | Point description: Central scrubber outlet at North Head STP |                       |                   |                   |                   |                  |                   |  |  |
|-----------------------|--|-----------------------|-------------------|-------------------|-------------------|------------------|-------------------|--|--|
| pollutant             | unit of<br>measure   | sampling<br>frequency | number of samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |
| chlorine gas          | mg/m <sup>3</sup>  | 30 minutes            | 1488              | <0.15             | 3.16              | 200              | yes               |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | 30 minutes            | 1488              | <0.075            | 0.682             | 5                | yes               |  |  |

| EPA Point 66          | Point descrip     | Point description: Bio Trickling Filter / Standby Scrubber at North Head STP |                      |                   |                   |                  |                   |  |  |  |  |
|-----------------------|-------------------|--|----------------------|-------------------|-------------------|------------------|-------------------|--|--|--|--|
| pollutant             | unit of measure   | sampling<br>frequency  | number of<br>samples | minimum<br>result | maximum<br>result | maximum<br>limit | within<br>limits* |  |  |  |  |
| chlorine gas          | mg/m <sup>3</sup> | 30 minutes   | 1488                 | <0.59             | <0.59             | 200              | yes               |  |  |  |  |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1488                 | <0.071            | 0.259             | 5                | yes               |  |  |  |  |

<sup>&</sup>lt;sup>1</sup>On Saturday 28 July 2018 between 5 am and 10 am there were 13 events totalling 135 minutes in which the NST fans were operating and NST scrubber emissions contained hydrogen sulphide in excess of 5 mg/m<sup>3</sup>.

<sup>\*</sup>Maximum limits for air quality are based on the Protection of the Environment Operations (Clean Air) Regulation 2010 - Schedule 4 Standards of concentration for scheduled premises: general activities and plant.

# North Head Wastewater Treatment Plant Air Quality Correction Log

**EPL 378** 

**Licensee:** Sydney Water

PO Box 399



| EPA Point 66          | Point description: Bio Trickling Filter / Standby Scrubber at North Head STP |               |         |                |         |                |                 |                                  |
|-----------------------|--|---------------|---------|----------------|---------|----------------|-----------------|----------------------------------|
|                       | unit of  | Original data |         | Corrected data |         | Date corrected | Date originally | Reason                           |
| Pollutant             | measure  | minimum       | maximum | minimum        | maximum | Date Corrected | published       | RedSUII                          |
| hydrogen sulphide gas | mg/m <sup>3</sup>  | <0.071        | <0.858  | <0.071         | 0.858   | 13-05-19       | 15-04-19        | Incorrect maximum value reported |