

# North Head Water Resource Recovery Facility

## June Pollution Monitoring Summary

### Air Quality



#### EPL 378

Summary period: 01-06-2023 to 30-06-2023

Date obtained: 06-07-2023

Date published: 19-07-2023

Licensee: Sydney Water

PO Box 399

PARRAMATTA NSW 2124

| EPA Point 33          |                   | Point description: Ventilation outlet at Scotts Creek |                   |                |                |               |                |
|-----------------------|-------------------|---|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency                                    | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1,440             | <0.004         | <0.004         | 5             | yes            |

| EPA Point 34          |                   | Point description: Ventilation outlet at Lane Cove River West |                   |                |                |               |                |
|-----------------------|-------------------|---|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency  | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1,440             | <0.004         | <0.004         | 5             | yes            |

| EPA Point 35          |                   | Point description: Ventilation outlet at North Head STP for Northside Storage Tunnel |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1,440             | <0.01          | 0.33           | 5             | yes            |

| EPA Point 63          |                   | Point description: Central scrubber outlet at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| chlorine gas          | mg/m <sup>3</sup> | 30 minutes   | 1,440             | <0.15          | 4.26           | 200           | yes            |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1,440             | <0.075         | 1.94           | 5             | yes            |

| EPA Point 66          |                   | Point description: Bio Trickle Filter / Standby Scrubber at North Head STP |                   |                |                |               |                 |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|-----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits*  |
| chlorine gas          | mg/m <sup>3</sup> | 30 minutes   | 1,440             | <0.59          | 1.91           | 200           | yes             |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1,440             | <0.071         | 19.5           | 5             | no <sup>1</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.

<sup>1</sup>EPA Point 66 exceeded the maximum limit for hydrogen sulphide gas limit on four occasions during the June period:

1: 13/06/2023 at 09:00 following the start up of tunnel pump following multiple days of water stagnation in the Northside Storage Tunnel as a result of NSOOS desilting.

2-4: 16/06/2023 at 22:00, 16/06/2023 at 23:00 and 17/06/2023 08:00 whilst the BTF polishing scrubber was offline for maintenance/cleaning. The service provider was organised to calibrate the outlet H2S analysers.

# North Head Water Resource Recovery Facility

## May Pollution Monitoring Summary

### Air Quality



#### EPL 378

Summary period: 01-05-2023 to 31-05-2023

Date obtained: 13-06-2023

Date published: 20-06-2023

Licensee: Sydney Water

PO Box 399

PARRAMATTA NSW 2124

| EPA Point 33          |                   | Point description: Ventilation outlet at Scotts Creek |                   |                |                |               |                |
|-----------------------|-------------------|---|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency                                    | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1,488             | <0.004         | <0.004         | 5             | yes            |

| EPA Point 34          |                   | Point description: Ventilation outlet at Lane Cove River West |                   |                |                |               |                |
|-----------------------|-------------------|---|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency  | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1,488             | <0.004         | <0.004         | 5             | yes            |

| EPA Point 35          |                   | Point description: Ventilation outlet at North Head STP for Northside Storage Tunnel |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1,488             | <0.01          | 1.98           | 5             | yes            |

| EPA Point 63          |                   | Point description: Central scrubber outlet at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| chlorine gas          | mg/m <sup>3</sup> | 30 minutes   | 1,488             | <0.15          | 1.07           | 200           | yes            |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1,488             | <0.075         | 1.30           | 5             | yes            |

| EPA Point 66          |                   | Point description: Bio Trickle Filter / Standby Scrubber at North Head STP |                   |                |                |               |                 |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|-----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits*  |
| chlorine gas          | mg/m <sup>3</sup> | 30 minutes   | 1,488             | <0.59          | <0.59          | 200           | yes             |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1,488             | <0.071         | 14.51          | 5             | no <sup>1</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.

<sup>1</sup>EPA Point 66 exceeded the maximum limit for hydrogen sulphide gas limit twice during the May period on 24/05/2023 at 15:00 and 16:00 following the start up of tunnel pump following multiple days of water stagnation in the Northside Storage Tunnel as a result of NSOOS desilting.

# North Head Water Resource Recovery Facility

## April Pollution Monitoring Summary

### Air Quality



#### EPL 378

Summary period: 01-04-2023 to 30-04-2023

Date obtained: 17-05-2023

Date published: 19-05-2023

Licensee: Sydney Water

PO Box 399

PARRAMATTA NSW 2124

| EPA Point 33          |                   | Point description: Ventilation outlet at Scotts Creek |                   |                |                |               |                |
|-----------------------|-------------------|---|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency                                    | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1,440             | <0.004         | <0.004         | 5             | yes            |

| EPA Point 34          |                   | Point description: Ventilation outlet at Lane Cove River West |                   |                |                |               |                |
|-----------------------|-------------------|---|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency  | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1,440             | <0.004         | 0.048          | 5             | yes            |

| EPA Point 35          |                   | Point description: Ventilation outlet at North Head STP for Northside Storage Tunnel |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1,440             | <0.01          | 0.63           | 5             | yes            |

| EPA Point 63          |                   | Point description: Central scrubber outlet at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| chlorine gas          | mg/m <sup>3</sup> | 30 minutes   | 1,440             | <0.15          | 0.56           | 200           | yes            |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1,440             | <0.075         | 1.26           | 5             | yes            |

| EPA Point 66          |                   | Point description: Bio Trickle Filter / Standby Scrubber at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| chlorine gas          | mg/m <sup>3</sup> | 30 minutes   | 1,440             | <0.59          | <0.59          | 200           | yes            |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1,440             | <0.071         | 2.65           | 5             | yes            |

\*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 Water Resource Recovery Facility

## March Pollution Monitoring Summary

### Air Quality



#### EPL 378

Summary period: 01-03-2023 to 31-03-2023

Date obtained: 04-04-2023

Date published: 17-04-2023

Licensee: Sydney Water

PO Box 399

PARRAMATTA NSW 2124

| EPA Point 33          |                   | Point description: Ventilation outlet at Scotts Creek |                   |                |                |               |                |
|-----------------------|-------------------|---|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency                                    | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1488              | <0.004         | 0.005          | 5             | yes            |

| EPA Point 34          |                   | Point description: Ventilation outlet at Lane Cove River West |                   |                |                |               |                |
|-----------------------|-------------------|---|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency  | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1488              | <0.004         | 0.037          | 5             | yes            |

| EPA Point 35          |                   | Point description: Ventilation outlet at North Head STP for Northside Storage Tunnel |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1488              | <0.01          | 0.37           | 5             | yes            |

| EPA Point 63          |                   | Point description: Central scrubber outlet at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| chlorine gas          | mg/m <sup>3</sup> | 30 minutes   | 1488              | <0.15          | 0.8            | 200           | yes            |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1488              | <0.075         | 2.13           | 5             | yes            |

| EPA Point 66          |                   | Point description: Bio Trickle Filter / Standby Scrubber at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within 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         | 0.41           | 5             | yes            |

\*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 Water Resource Recovery Facility

## February Pollution Monitoring Summary

### Air Quality



#### EPL 378

Summary period: 01-02-2023 to 28-02-2023

Date obtained: 17-03-2023

Date published: 24-03-2023

Licensee: Sydney Water

PO Box 399

PARRAMATTA NSW 2124

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

| EPA Point 34          |                   | Point description: Ventilation outlet at Lane Cove River West |                   |                |                |               |                |
|-----------------------|-------------------|---|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency  | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1344              | <0.004         | 0.113          | 5             | yes            |

| EPA Point 35          |                   | Point description: Ventilation outlet at North Head STP for Northside Storage Tunnel |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1344              | <0.01          | 0.62           | 5             | yes            |

| EPA Point 63          |                   | Point description: Central scrubber outlet at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| chlorine gas          | mg/m <sup>3</sup> | 30 minutes   | 1344              | <0.15          | 2.36           | 200           | yes            |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1344              | <0.075         | 1.55           | 5             | yes            |

| EPA Point 66          |                   | Point description: Bio Trickle Filter / Standby Scrubber at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within 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         | 0.30           | 5             | yes            |

\*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 Water Resource Recovery Facility

## January Pollution Monitoring Summary

### Air Quality



#### EPL 378

Summary period: 01-01-2023 to 31-01-2023

Date obtained: 10-02-2023

Date published: 17-02-2023

Licensee: Sydney Water

PO Box 399

PARRAMATTA NSW 2124

| EPA Point 33          |                   | Point description: Ventilation outlet at Scotts Creek |                   |                |                |               |                |
|-----------------------|-------------------|---|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency                                    | number of samples | minimum result | maximum result | maximum limit | within 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 measure   | sampling frequency  | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1488              | <0.004         | 0.014          | 5             | yes            |

| EPA Point 35          |                   | Point description: Ventilation outlet at North Head STP for Northside Storage Tunnel |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1488              | <0.01          | 2.73           | 5             | yes            |

| EPA Point 63          |                   | Point description: Central scrubber outlet at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| chlorine gas          | mg/m <sup>3</sup> | 30 minutes   | 1488              | <0.15          | 5.97           | 200           | yes            |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1488              | <0.075         | 2.13           | 5             | yes            |

| EPA Point 66          |                   | Point description: Bio Trickle Filter / Standby Scrubber at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within 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         | 0.14           | 5             | yes            |

\*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 Water Resource Recovery Facility

## December Pollution Monitoring Summary

### Air Quality



#### EPL 378

Summary period: 01-12-2022 to 31-12-2022

Date obtained: 10-02-2023

Date published: 17-02-2023

Licensee: Sydney Water

PO Box 399

PARRAMATTA NSW 2124

| EPA Point 33          |                   | Point description: Ventilation outlet at Scotts Creek |                   |                |                |               |                |
|-----------------------|-------------------|---|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency                                    | number of samples | minimum result | maximum result | maximum limit | within 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 measure   | sampling frequency  | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1488              | <0.004         | 0.028          | 5             | yes            |

| EPA Point 35          |                   | Point description: Ventilation outlet at North Head STP for Northside Storage Tunnel |                   |                |                |               |                 |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|-----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits*  |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1488              | <0.01          | 7.1            | 5             | no <sup>1</sup> |

| EPA Point 63          |                   | Point description: Central scrubber outlet at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| chlorine gas          | mg/m <sup>3</sup> | 30 minutes   | 1488              | <0.15          | 0.87           | 200           | yes            |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1488              | <0.075         | 2.13           | 5             | yes            |

| EPA Point 66          |                   | Point description: Bio Trickle Filter / Standby Scrubber at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within 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              | 0.12           | 0.14           | 5             | yes            |

\*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.

<sup>1</sup>Two exceedances at 13:00 & 13:30 on 10/12/2022 during plant shutdown for IW & FE valves replacement.

# North Head Water Resource Recovery Facility

## November Pollution Monitoring Summary

### Air Quality



#### EPL 378

Summary period: 01-11-2022 to 30-11-2022

Date obtained: 06-04-2023

Date published: 26-06-2023\*\*

Licensee: Sydney Water

PO Box 399

PARRAMATTA NSW 2124

| EPA Point 33          |                   | Point description: Ventilation outlet at Scotts Creek |                   |                |                |               |                |
|-----------------------|-------------------|---|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency                                    | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1439 <sup>1</sup> | <0.004         | <0.004         | 5             | yes            |

| EPA Point 34          |                   | Point description: Ventilation outlet at Lane Cove River West |                   |                |                |               |                |
|-----------------------|-------------------|---|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency  | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 311 <sup>2</sup>  | <0.004         | <0.004         | 5             | yes            |

| EPA Point 35          |                   | Point description: Ventilation outlet at North Head STP for Northside Storage Tunnel |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1440              | <0.01          | 1.11           | 5             | yes            |

| EPA Point 63          |                   | Point description: Central scrubber outlet at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| chlorine gas          | mg/m <sup>3</sup> | 30 minutes   | 1440              | <0.15          | <0.15          | 200           | yes            |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1440              | <0.075         | 2.09           | 5             | yes            |

| EPA Point 66          |                   | Point description: Bio Trickle Filter / Standby Scrubber at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within 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         | 0.917          | 5             | yes            |

\*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.

\*\* November 2023 North Head WRRF air quality report delayed due to data integration issues with instrumentation.

<sup>1</sup> Communication failure prevented recording of one data point on 24/11/2022 at 09:30.

<sup>2</sup> Communication failure prevented recording of 1129 data points between 01/11/2022 00:00 and 24/11/2022 12:00.



# North Head Water Resource Recovery Facility

## October Pollution Monitoring Summary

### Air Quality



#### EPL 378

Summary period: 01-10-2022 to 31-10-2022

Date obtained: 28-11-2022

Date published: 17-02-2022<sup>1</sup>

Licensee: Sydney Water

PO Box 399

PARRAMATTA NSW 2124

| EPA Point 33          |                   | Point description: Ventilation outlet at Scotts Creek |                   |                |                |               |                |
|-----------------------|-------------------|---|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency                                    | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1486 <sup>2</sup> | <0.004         | <0.004         | 5             | yes            |

| EPA Point 34          |                   | Point description: Ventilation outlet at Lane Cove River West |                   |                |                |               |                |
|-----------------------|-------------------|---|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency  | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1486 <sup>2</sup> | <0.004         | 0.101          | 5             | yes            |

| EPA Point 35          |                   | Point description: Ventilation outlet at North Head STP for Northside Storage Tunnel |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1486 <sup>2</sup> | <0.01          | 1.41           | 5             | yes            |

| EPA Point 63          |                   | Point description: Central scrubber outlet at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| chlorine gas          | mg/m <sup>3</sup> | 30 minutes   | 1486 <sup>2</sup> | <0.15          | 0.86           | 200           | yes            |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1486 <sup>2</sup> | <0.075         | 2.13           | 5             | yes            |

| EPA Point 66          |                   | Point description: Bio Trickle Filter / Standby Scrubber at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| chlorine gas          | mg/m <sup>3</sup> | 30 minutes   | 1486 <sup>2</sup> | <0.59          | <0.59          | 200           | yes            |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1486 <sup>2</sup> | <0.071         | 0.18           | 5             | yes            |

\*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.

<sup>1</sup>Data republished in February 2023 as 24 missing data points became available. There was no change to the overall results.

<sup>2</sup>Scheduled daylight saving changeover caused the non-existence of two data points on 02/10/2022 at 02:00 & 02:30 am.

# North Head Water Resource Recovery Facility

## September Pollution Monitoring Summary

### Air Quality



#### EPL 378

Summary period: 01-09-2022 to 30-09-2022

Date obtained: 20-10-2022

Date published: 25-10-2022

Licensee: Sydney Water

PO Box 399

PARRAMATTA NSW 2124

| EPA Point 33          |                   | Point description: Ventilation outlet at Scotts Creek |                   |                |                |               |                |
|-----------------------|-------------------|---|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency                                    | number of samples | minimum result | maximum result | maximum limit | within 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 measure   | sampling frequency  | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1440              | <0.004         | 0.012          | 5             | yes            |

| EPA Point 35          |                   | Point description: Ventilation outlet at North Head STP for Northside Storage Tunnel |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1440              | <0.01          | 0.49           | 5             | yes            |

| EPA Point 63          |                   | Point description: Central scrubber outlet at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| chlorine gas          | mg/m <sup>3</sup> | 30 minutes   | 1440              | <0.15          | 3.4            | 200           | yes            |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1440              | <0.075         | 1.69           | 5             | yes            |

| EPA Point 66          |                   | Point description: Bio Trickle Filter / Standby Scrubber at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within 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         | 0.18           | 5             | yes            |

\*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 Water Resource Recovery Facility

## August Pollution Monitoring Summary

### Air Quality



#### EPL 378

Summary period: 01-08-2022 to 31-08-2022

Date obtained: 09-09-2022

Date published: 21-09-2022

Licensee: Sydney Water

PO Box 399

PARRAMATTA NSW 2124

| EPA Point 33          |                   | Point description: Ventilation outlet at Scotts Creek |                   |                |                |               |                |
|-----------------------|-------------------|---|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency                                    | number of samples | minimum result | maximum result | maximum limit | within 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 measure   | sampling frequency  | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1488              | <0.004         | 0.040          | 5             | yes            |

| EPA Point 35          |                   | Point description: Ventilation outlet at North Head STP for Northside Storage Tunnel |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1488              | <0.01          | 0.35           | 5             | yes            |

| EPA Point 63          |                   | Point description: Central scrubber outlet at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| chlorine gas          | mg/m <sup>3</sup> | 30 minutes   | 1488              | <0.15          | 2.86           | 200           | yes            |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1488              | <0.075         | 1.4            | 5             | yes            |

| EPA Point 66          |                   | Point description: Bio Trickle Filter / Standby Scrubber at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within 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         | 0.18           | 5             | yes            |

\*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 Water Resource Recovery Facility

## July Pollution Monitoring Summary

### Air Quality



#### EPL 378

Summary period: 01-07-2022 to 31-07-2022

Date obtained: 29-08-2022

Date published: 17-02-2023<sup>1</sup>

Licensee: Sydney Water

PO Box 399

PARRAMATTA NSW 2124

| EPA Point 33          |                   | Point description: Ventilation outlet at Scotts Creek |                   |                |                |               |                |
|-----------------------|-------------------|---|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency                                    | number of samples | minimum result | maximum result | maximum limit | within 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 measure   | sampling frequency  | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes  | 1488              | <0.004         | 0.086          | 5             | yes            |

| EPA Point 35          |                   | Point description: Ventilation outlet at North Head STP for Northside Storage Tunnel |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within limits* |
| hydrogen sulphide gas | mg/m <sup>3</sup> | 30 minutes   | 1488              | <0.01          | 0.76           | 5             | yes            |

| EPA Point 63          |                   | Point description: Central scrubber outlet at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within 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         | 1.16           | 5             | yes            |

| EPA Point 66          |                   | Point description: Bio Trickle Filter / Standby Scrubber at North Head STP |                   |                |                |               |                |
|-----------------------|-------------------|--|-------------------|----------------|----------------|---------------|----------------|
| pollutant             | unit of measure   | sampling frequency   | number of samples | minimum result | maximum result | maximum limit | within 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         | 0.18           | 5             | yes            |

\*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.

<sup>1</sup>Data republished in February 2023 as two missing data points became available. There was no change to the overall results.

