

| Date        | 20/05/2021    |
|-------------|---------------|
| Description | Initial Issue |
| Approved By |               |
| Originator  |               |



Cliffs of Moher Wastewater Treatment Plant

Operational Report for April 2021



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### 1. Introduction

This report covers the period of April 2021 for the operation of Cliffs of Moher Wastewater Treatment Plant by EPS, on behalf of Cliffs of Moher Visitor Experience.

### 2. Executive Summary

The plant processed 121 m3 of effluent for the month, at an average daily flow of approximately 4 m³/day during February.

There were no influent sample taking for the month of April as there are insufficient flows been processed through the plant. The Plant Operator has been adding Water at the Inlet Screen and Molasses to sustain the MLSS Levels at the plant.

The final effluent results from the 27<sup>th</sup> of April were non-compliant as per contract conditions for BOD, Ammonia and Total Phosphorus. All other results were compliant.

The inlet pump was repaired on the 14th of April.



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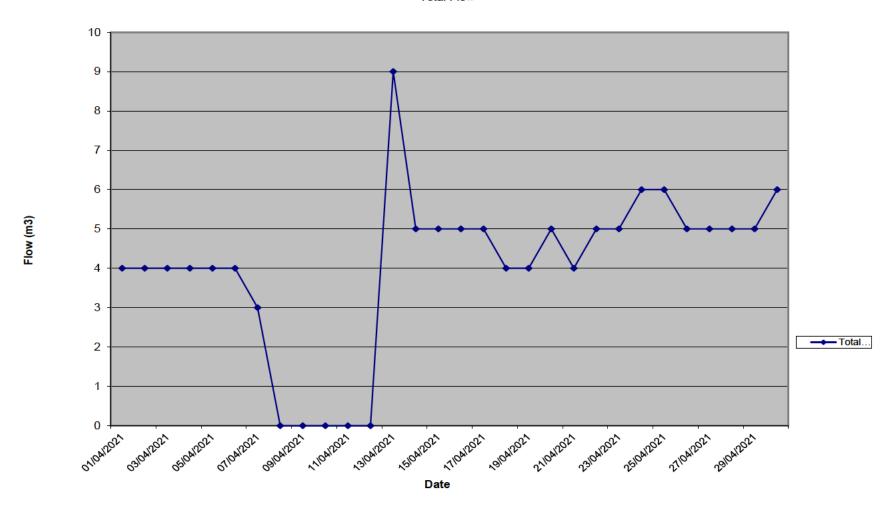
# 3. Graphical Presentation of Data

| Table of total daily flows for April 2021 MBR's |                               |                               |            |
|---|-------------------------------|-------------------------------|------------|
| Date  | MBR Flow #1 (m <sup>3</sup> ) | MBR Flow #2 (m <sup>3</sup> ) | Total Flow |
| 01/04/2021                                      | 4                             | 0                             | 4          |
| 02/04/2021                                      | 4                             | 0                             | 4          |
| 03/04/2021                                      | 4                             | 0                             | 4          |
| 04/04/2021                                      | 4                             | 0                             | 4          |
| 05/04/2021                                      | 4                             | 0                             | 4          |
| 06/04/2021                                      | 4                             | 0                             | 4          |
| 07/04/2021                                      | 3                             | 0                             | 3          |
| 08/04/2021                                      | 0                             | 0                             | 0          |
| 09/04/2021                                      | 0                             | 0                             | 0          |
| 10/04/2021                                      | 0                             | 0                             | 0          |
| 11/04/2021                                      | 0                             | 0                             | 0          |
| 12/04/2021                                      | 0                             | 0                             | 0          |
| 13/04/2021                                      | 9                             | 0                             | 9          |
| 14/04/2021                                      | 5                             | 0                             | 5          |
| 15/04/2021                                      | 5                             | 0                             | 5          |
| 16/04/2021                                      | 5                             | 0                             | 5          |
| 17/04/2021                                      | 5                             | 0                             | 5          |
| 18/04/2021                                      | 4                             | 0                             | 4          |
| 19/04/2021                                      | 4                             | 0                             | 4          |
| 20/04/2021                                      | 5                             | 0                             | 5          |
| 21/04/2021                                      | 4                             | 0                             | 4          |
| 22/04/2021                                      | 5                             | 0                             | 5          |
| 23/04/2021                                      | 5                             | 0                             | 5          |
| 24/04/2021                                      | 6                             | 0                             | 6          |
| 25/04/2021                                      | 6                             | 0                             | 6          |
| 26/04/2021                                      | 5                             | 0                             | 5          |
| 27/04/2021                                      | 5                             | 0                             | 5          |
| 28/04/2021                                      | 5                             | 0                             | 5          |
| 29/04/2021                                      | 5                             | 0                             | 5          |
| 30/04/2021                                      | 6                             | 0                             | 6          |
|   |                               |                               |            |
| Average   | 4                             | 0                             | 4          |



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**Total Flow** 



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### **Table of Cumulative Hours Run**

|                           | 30/03/2021 | 30/04/2021 | Ave Daily Usage |
|---------------------------|------------|------------|-----------------|
|                           |            |            | Hours           |
| Inlet screen              | 31,288     | 31,291     | 0.10            |
| Inlet pump 1              | 4,318      | 4,326      | 0.28            |
| Inlet pump 2              | 5,142      | 5,142      | 0.00            |
| Balance tank 1,pump 1     | 4,756      | 4,766      | 0.34            |
| Balance tank 1,pump 2     | 6,952      | 6,952      | 0.00            |
| Anoxic mixer no. 1        | 89,724     | 90,467     | 25.62           |
| Anoxic mixer no. 2        | 55,422     | 55,422     | 0.00            |
| Membrane pump 1 (RAS)     | 82,571     | 83,315     | 25.66           |
| Membrane pump 2 (RAS)     | 51,877     | 51,877     | 0.00            |
| Sludge holding tank mixer | 4,072      | 4,072      | 0.00            |
| Odour fan no. 1           | 59,806     | 59,806     | 0.00            |
| Odour fan no. 2           | 62,544     | 63,289     | 25.69           |
| Forward feed no.1         | 10,368     | 10,368     | 0.00            |
| Forward feed no.2         | 16,186     | 16,202     | 0.55            |
| Drainage pump             | 1,065      | 1,066      | 0.03            |
| Balance tank 2, pump no.1 | 7,001      | 7,001      | 0.00            |
| Balance tank 2, pump no.2 | 16,896     | 16,896     | 0.00            |
| Air Blower 1              | 20,109     | 20,109     | 0.00            |
| Air Blower 2              | 57,896     | 57,896     | 0.00            |
| Air Blower 3              | 94,128     | 94,862     | 25.31           |
| Air compressor            | 7,621      | 8,366      | 25.69           |
| Ultraviolet system        | 60,978     | 60,978     | 0.00            |

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# 4. Process and Operational Issues

| Process and Operational Issues                |                    |                |
|---|--------------------|----------------|
| Date Description of Process Operational Issue |                    | Implemented by |
|   | Nothing this month |                |
|   |                    |                |

### 5. Health & Safety Issues

| Site Safety Induction Report    |   |  |  |                  |
|---------------------------------|---|--|--|------------------|
| Contract Number Contract Number |   |  |  |                  |
| Date                            | Inductor  | Inductee Inductee Signature Inductee Company |  | Inductee Company |
| No                              | No Site Safety Inductions were undertaken during this monitoring period |  |  |                  |
|                                 |   |  |  |                  |
|                                 |   |  |  |                  |

|   | Health & Safety Statistics Report    |              |      |        |  |
|---|--------------------------------------|--------------|------|--------|--|
| Plant Manager   |                                      |              | Date | May-21 |  |
| For Period  | April-21                             |              |      | _      |  |
| Site Involved   | Cliffs of Moher WW                   | ΓP           |      |        |  |
|   |                                      |              |      |        |  |
| Category 1: Covers Fataliti                               | es and major Injuries                |              |      |        |  |
| Category 2: Covers lost time                              | e accident resulting in more than 3  | days absence |      |        |  |
| Category 3: Covers lost tim                               | e accidents resulting in 3 days abse | ence or less |      |        |  |
| lajor Incident: Accident not covered by categories 1 to 3 |                                      |              |      |        |  |

|                      | Direct Employees |            |                 |                |           |   |
|----------------------|------------------|------------|-----------------|----------------|-----------|---|
| Number of Employees: |                  | 1          | Exposure Hours: |                | 32hrs     |   |
|                      |                  |            |                 |                |           |   |
|                      | Category 1       | Category 2 | Category 3      | Major Incident | Near Miss |   |
| Number of            |                  |            |                 |                |           |   |
| Accidents            | 0                | 0          | 0               | 0              |           | 0 |
| Days lost            |                  |            |                 |                |           |   |

| Direct Employees     |            |            |                 |                |           |
|----------------------|------------|------------|-----------------|----------------|-----------|
| Number of Employees: |            |            | Exposure Hours: |                |           |
| Subcontractors       |            |            |                 |                |           |
| on Site              |            |            |                 |                |           |
|                      | Category 1 | Category 2 | Category 3      | Major Incident | Near Miss |
| Number of            |            |            |                 |                |           |
| Accidents            | 0          | 0          | 0               | 0              | 0         |
| Days lost            |            |            |                 |                |           |

ARP7/4 INSERTED HERE IF AN ACCIDENT OR INCIDENT HAS OCCUERD (USE PHOTOCOPY OF EPS FORM HS002)

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### 6. Complaints Register

No written complaints were received during this monitoring period

|   | Complaints Register            |                                      |  |  |  |
|---|--------------------------------|--------------------------------------|--|--|--|
|   |                                |                                      |  |  |  |
| Complainant's Name                                | Date                           |                                      |  |  |  |
| Nature of Complaint                               |                                |                                      |  |  |  |
| Acknowledgement of Complaint                      | Author of Acknowledgement      | Date Sent                            |  |  |  |
| Cause of Complaint                                |                                |                                      |  |  |  |
| Action taken to<br>Resolve cause of<br>Complaint: |                                |                                      |  |  |  |
| Final Outcome Report                              | Author of Final Outcome Report | Date Forwarded to<br>Local Authority |  |  |  |

# 7. Equipment Calibration Records

|      | Equipment Calibration Record |            |                   |             |             |         |
|------|------------------------------|------------|-------------------|-------------|-------------|---------|
| Date | Equipment                    | Serial No. |                   | Next Calib. | Calib. Cert | Comment |
| Date | Description                  | Serial No. | (Name & Company)  | Due         | Recd.       | Comment |
|      |                              |            | Nothing to report |             |             |         |
|      |                              |            |                   |             |             |         |
|      |                              |            |                   |             | ·           |         |

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### 8. Waste & Sludge Disposal Records

|      | Non-Sludge Waste Disposal Record |                |                                |                        |                                       |
|------|----------------------------------|----------------|--------------------------------|------------------------|---------------------------------------|
| Date | Waste Description                | Amount removed | Removed By<br>(Name & Company) | Destination<br>Address | Receipt for<br>Acceptance of<br>Waste |
|      |                                  |                |                                |                        |                                       |
|      |                                  |                |                                |                        |                                       |
|      |                                  |                |                                | ·                      |                                       |

|           | Outgoing Sludge Record |                           |                    |                        |                        |  |
|-----------|------------------------|---------------------------|--------------------|------------------------|------------------------|--|
| Batch No. | Date                   | Destination of<br>Product | Type of<br>Product | Quantity of<br>Product | Contact at Destination |  |
|           |                        |                           |                    |                        | Nothing to Report      |  |
|           |                        |                           |                    |                        |                        |  |
|           |                        |                           |                    |                        |                        |  |

### 9. Analysis Results for Mixed Liquor

| Analysis Results for Mixed Liquor (mg/l) |  |  |  |  |  |
|--|--|--|--|--|--|
| Date                                     | MLSS MBR 1 Anoxic 1 MLSS MBR2 Anoxic 2 |  |  |  |  |
| 20/04/2021                               | 10,660 mg/l                            |  |  |  |  |
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### 10. Analysis Results for Influent

| Analysis Results for influent |                               |                               |              |                       |                |                                |         |
|-------------------------------|-------------------------------|-------------------------------|--------------|-----------------------|----------------|--------------------------------|---------|
| Date                          | BOD<br>(mg/l O <sub>2</sub> ) | COD<br>(mg/l O <sub>2</sub> ) | SS<br>(mg/l) | Total Nitrogen (mg/l) | Ammonia (mg/l) | Total<br>Phosphorous<br>(mg/l) | рН      |
|                               |                               |                               |              |                       |                |                                |         |
|                               |                               |                               |              |                       |                |                                |         |
|                               |                               |                               |              |                       |                |                                |         |
| Maximum for month             | 0                             | 0                             | 0            |                       | 0              | 0.0                            | 0.0     |
| Average for month             | #DIV/0!                       | #DIV/0!                       | #DIV/0!      |                       | #DIV/0!        | #DIV/0!                        | #DIV/0! |
| Design values                 | 220                           |                               | 170          |                       | 105            | 11.2                           |         |

# 11. Analysis Results for Final Effluent

| Analysis Results for Final Effluent |                               |                               |              |                          |                   |                                |        |
|-------------------------------------|-------------------------------|-------------------------------|--------------|--------------------------|-------------------|--------------------------------|--------|
| Date                                | BOD<br>(mg/l O <sub>2</sub> ) | COD<br>(mg/l O <sub>2</sub> ) | SS<br>(mg/l) | Total Nitrogen<br>(mg/l) | Ammonia<br>(mg/l) | Total<br>Phosphorous<br>(mg/l) | рН     |
| 27/04/2021                          | 20                            | 89                            | 5            |                          | 12                | 5.53                           | 7.32   |
|                                     |                               |                               |              |                          |                   |                                |        |
|                                     |                               |                               |              |                          |                   |                                |        |
| Average for month                   | 20.0                          | 89                            | 5.0          | N/A                      | 12.00             | 5.53                           | 7.3    |
| Licence limit                       | 15                            | 100                           | 15           | 15                       | 5                 | 2                              | 6 to 9 |

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