



REPORT TO: THE CITY MANAGER

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1. ITEM NUMBER

2. SUBJECT

**FEEDBACK ON THE INTERNATIONAL TRIP UNDERTAKEN TO PARTICIPATE IN THE 2022 GLOBAL WATER SUMMIT FROM THE 16TH OF MAY TO THE 18TH OF MAY 2022 IN MADRID, SPAIN**

3. EVENT SUMMARY

| EVENT DETAILS          |  |
|------------------------|--|
| CONFERENCE/SEMINAR     | Global Water Summit 2022   |
| OTHER                  |  |
| DATE                   | 16th to 18th May 2022  |
| VENUE                  | Novatel Hotel and Conference Centre, Madrid  |
| TOTAL COST TO THE CITY | Total cost the City is R 10 989,41 (this excludes refund to be obtained from Global Water Intelligence for all travel and accommodation) |
| CITY                   | Madrid   |
| COUNTRY                | Spain  |

| ATTENDEE DETAILS |                         |
|------------------|-------------------------|
| NAME AND SURNAME | DESIGNATION             |
| Michael Killick  | Director: Bulk Services |

| PROVIDE SUMMARY OF HOST ORGANISATION / CITY  |
|--|
| <p>Global Water Intelligence (GWI) is the leading publisher and events organiser serving the international water industry. GWI provides customers with high-level intelligence that enables them to make the most informed strategic decisions for their business. GWI's products and services cover all key segments of the international water sector, including desalination and reuse, finance, digital solutions, utilities and industrial water. Global Water Intelligence produces six annual live events, alongside a varied online offering. These events are aimed at providing market leading insight.</p> <p>The Global Water Summit (one of the live events) focusses on the analysis and dissemination of the issues most critical for the industry, these events shape the direction of the global markets. The Global Water Awards are also presented as part of the Summit, acting as a benchmark for industry success.</p> <p>In 2022 the Global Water Summit was held in Madrid, Spain.</p> |

#### 4. OBJECTIVE

The theme of the conference was entitled “water positive zero carbon”. The conference explored that ways in which water utilities could contribute to the security of the world’s freshwater resources while at the same time reducing emissions to mitigate the impact of climate change. The synergies between emissions and water security, together with the global political commitment for climate action create the potential for transformational change.

The linkages between water and energy specifically for **desalination, water reuse and sludge beneficiation provide an opportunity and a challenge**. It is a complex challenge. It will involve finance, innovation and the evolution of new services. It needs to be understood by utility and industrial water users alike.

The following key lessons and learnings were taken from the conference.

- Desalination and Water Reuse is the big theme at the moment. It is where water, carbon, and the environment have the strongest synergies, and it is a major investment priority on both the municipal and industrial side. With the reverse osmosis process both resource schemes are very energy intensive. In RSA with load shedding this will be more of a challenge.
- Indirect water reuse is currently much more widely implemented than direct reuse. Direct reuse is however getting traction and standards and regulations are being developed for this application.
- Faecal Sludge Management will form an important component on the drive towards water positive zero carbon the process of making it happen is also likely to be an interesting way of understanding how carbon finance can change the economics of wastewater treatment. Faecal Sludge management will form an important component of the City’s budget going forward
- Desalination technologies, wave generated floating desalination plants and undersea desalination plants (using undersea water pressure) are new technologies being developed
- Beneficial use of brine. Brine which is usually considered as a “waste” product in the desalination. Brine does contain minerals which could be exploited. It may make commercial sense to consider the full economic value chain.
- There is no shortage of finance only shortage of well-developed projects
- The future of procurement models is uncertain - The EPC (engineering (E), procurement (P) and construction (C)) model seems to be less favoured now. E and P seem to be separating out from C because the risks inherent in the latter completely overshadow the margins in the other two areas.
- Face to Face engagements of this nature are far more productive than virtual conferences
- It is not only the developed world that can teach the under developed world, but the developed world can also learn lessons from the

experiences and challenges of utilities in the under developed world. Communication and sharing between utilities in this regard is key.

## **5. OUTCOMES**

The 2022 Global Water Summit presented an opportunity for the City of Cape Town to forge relationships that will facilitate further learning and to ensure that the City is aware of latest trends and developments in water reuse, desalination and sludge beneficiation. The conference also presented the participant an opportunity to engage with key representatives from the Leading Utilities of the World with the potential aim of making an application to join this organisation.

The participant participated extensively in the conference in sessions of relevance to Cape Town. These included the following: Plenary Sessions, Round table discussions focusing on reuse, desalination, sludge beneficiation and issues relating to becoming a water sensitive city. In addition various parallel sessions were attended relating to the Leading Utilities of the World, Desalination and Water Reuse.

The participant was invited to the conference as a speaker and panelist. The participant had to prepare and deliver a presentation on the “Stakeholder acceptance” of water reuse in the City of Cape Town. Annexure A contains a link to the presentation delivered by the participant.

The key lessons and insights from the conference are set out in Section 4 above.

## **6. ACTIONS REQUIRED**

Leading Utilities of the World (LUOW) is a network of the world's most forward-thinking water and wastewater utilities, as defined by the network's 14 distinct innovation areas. Its members represent the gold standard of utility innovation and performance throughout the developed world's water sector. ([www.leadingutilities.org](http://www.leadingutilities.org)). Multiple discussions were held with key decision makers in the LUOW around the possibility of the City of Cape Town being considered for membership. It was agreed with John Ringham, the Chairman of LUOW, that the City should prepare a concept note detailing the 3 innovation areas the City would like to be considered for as well as what ongoing initiatives the City is implementing in this regard

Perspectives need to shift to incorporate sludge treatment as an integral part of overall sustainable wastewater management because only focusing on effluent quality can lead to increased sludge treatment requirements, more waste and overall higher costs. This circular economy approach will help to integrate solutions across sectors for optimising in energy, water, waste, environment and health protection and livelihood improvements. Largely driven by legislation, wastewater sludge is increasingly viewed as a resource. Energy and resource recovery from wastewater sludge is regarded as an

attractive business model. What is challenging in the municipal space is affordability as biosolids beneficiation facilities have a large capital cost. Due to the cost of the technology, large quantities of sludge need to be treated to allow for the efficiency of scale to be viable.

The City of Cape Town is planning to undertake sludge beneficiation at the Cape Flats Wastewater Treatment Works. A proposal on how to take this project forward is currently under development and will be tabled with senior management and the Mayoral Committee Member.

## 7. IMPLICATIONS

- |   |  |                              |
|---|--|------------------------------|
| <b>7.1 Constitutional and Policy Implications</b> | No <input checked="" type="checkbox"/> | Yes <input type="checkbox"/> |
| <b>7.2 Environmental implications</b>             | No <input checked="" type="checkbox"/> | Yes <input type="checkbox"/> |
| <b>7.3 Financial Implications</b>                 | No <input checked="" type="checkbox"/> | Yes <input type="checkbox"/> |
| <b>7.4 Legal Implications</b>                     | No <input checked="" type="checkbox"/> | Yes <input type="checkbox"/> |
| <b>7.5 Staff Implications</b>                     | No <input checked="" type="checkbox"/> | Yes <input type="checkbox"/> |
| <b>7.6 Risk Implications</b>                      | No <input checked="" type="checkbox"/> | Yes <input type="checkbox"/> |
| <b>7.7 <u>POPIA Compliance</u></b>                |  |                              |

- ☒ It is confirmed that this report has been checked and considered for POPIA Compliance.

*NOTE: POPIA Section MUST be completed otherwise the report will be returned to the author for revision.*

*Contact your Directorate POPIA Stewards should you require assistance.*

**The City has a contract in place with XL Embassy Travel for the safe-keeping of Traveller's personal information as required by the POPI Act.**

## 8. RECOMMENDATIONS

It is recommended that:

- a) the feedback report on the trip to attend the 2022 Global Water Summit in Madrid, Spain undertaken by Michael Killick from the 16<sup>th</sup> to 18<sup>th</sup> May 2022 be noted.

## 9. GENERAL DISCUSSION

The supersizing re-use session where the participant acted as a presenter and panellist was aimed at creating an understanding of the place of indirect potable reuse projects in a water security strategy of utilities. The panelists were asked why their organisations decided to pursue water reuse and what were the relative benefits and drawbacks as opposed to desalination. Panelists were also asked what challenges they experienced which were holding back the wider adoption of water reuse and how these challenges can be overcome

All presentations, documentation and conference proceedings are contained as links in Annexure A.

Individual engagements were held with the following conference delegates / organisations:

- Leading Utilities of the World Chairperson – John Ringham – discussions around joining the Leading Water Utilities of the World
- Manila Water CEO – J.V Emmanuel A. De Dios – Regulation of water reuse
- Oneka Technologies: Alternative Desalination Technologies
- Global Water Intelligence – Asim Koldzo – future large projects the City will be implementing
- Booky Oren (Global Water Technologies) – linking City to other water utilities to share and learn experiences and challenges
- International Finance Corporation – Nico Saporiti – financing feasibility studies around sludge beneficiation
- Public Utilities Board (PUB) Singapore – Michael Toh – Indirect Water reuse. Singapore has been successfully implementing this for a number of years. The City can learn lessons from PUB.

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**10. ANNEXURE A: Presentations given at the Conference. (Please note that the presentation given by the participant is included under “Supersizing Reuse). Presentations can also be emailed upon request.**

**FOR FURTHER DETAILS, CONTACT:**

|                |                                 |  |              |
|----------------|---------------------------------|--|--------------|
| DATE           | 13/6/2022                       |  |              |
| NAME           | M. A Killick                    | CONTACT NUMBER   | 083 393 1284 |
| E-MAIL ADDRESS | michael.killick@capetown.gov.za |  |              |
| DIRECTORATE    | Water and Sanitation            | FILE REF NO  |              |
| SIGNATURE :    | M.A. KILICK                     | Digitally signed by M.A. KILICK<br>Date: 2022.06.13 14:48:20 +02'00' |              |


**EXECUTIVE DIRECTOR**

MICHAEL WEBSTER

COMMENT:

The ED's signature represents support for report content and confirms POPIA compliance.

SIGNATURE:

 Digitally signed by Michael John Webster  
Date: 2022.06.13 16:03:59 +02'00'

NAME

DATE

**MANAGER: INTERNATIONAL RELATIONS**

COMMENT:

DR. DENVER VAN SCHALKWYK

DATE

Denver Van Schalkwyk

Digitally signed by Denver Van Schalkwyk  
Date: 2022.06.14 07:37:23 +02'00'

☐ REPORT COMPLIANT WITH THE PROVISIONS OF COUNCIL'S DELEGATIONS, POLICIES, BY-LAWS AND ALL LEGISLATION RELATING TO THE MATTER UNDER CONSIDERATION.

**LEGAL COMPLIANCE**

☐ NON-COMPLIANT

COMMENT:

NAME

For information

TEL

DATE

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**CITY MANAGER**

DATE

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☒ NOTED

☐ REFERRED BACK

COMMENT:

The content of the feedback report is noted. However, my instruction was that the feedback report be submitted no later than two (2) weeks after returning from the trip abroad (refer to recommendation b of the report approving the international trip to Spain). Kindly implement measures to ensure that my instructions are attended to timeously in the future.

## ANNEXURE A: PRESENTATIONS

When you click on the link below a new window will open and the download will appear. Enter the password below to begin the download. You may need to adjust your browser permission settings to allow the link to open in a new window.

Password: gws2022

Day 1- Tuesday 17th May 2022

[Opening Plenary: Water-Positive, Zero Carbon](#)

[Defining Water Positive](#)

[Water Technology Idol 2022](#)

[Circular Water](#)

[Accelerating New Models for Desal](#)

[The Next Digital Frontier](#)

Day 2- Wednesday 18th May 2022

[Big Plans Roadshow: Saudi Arabia](#)

[Big Plans Roadshow: Israel](#)

[Utility Innovation and Global Best Practices](#)

[Next Generation Water Technologies for Industry](#)

[Supersizing Potable Water Reuse](#)

[Leading the Race to Zero](#)

[30 Technologies for Net Zero](#)

[Making Brine Refining Profitable](#)

[GWl Insights](#)

All Presentations Link:

[Day 1 \(Tuesday\) All Presentations](#)

[Day 2 \(Wednesday\) All Presentations](#)