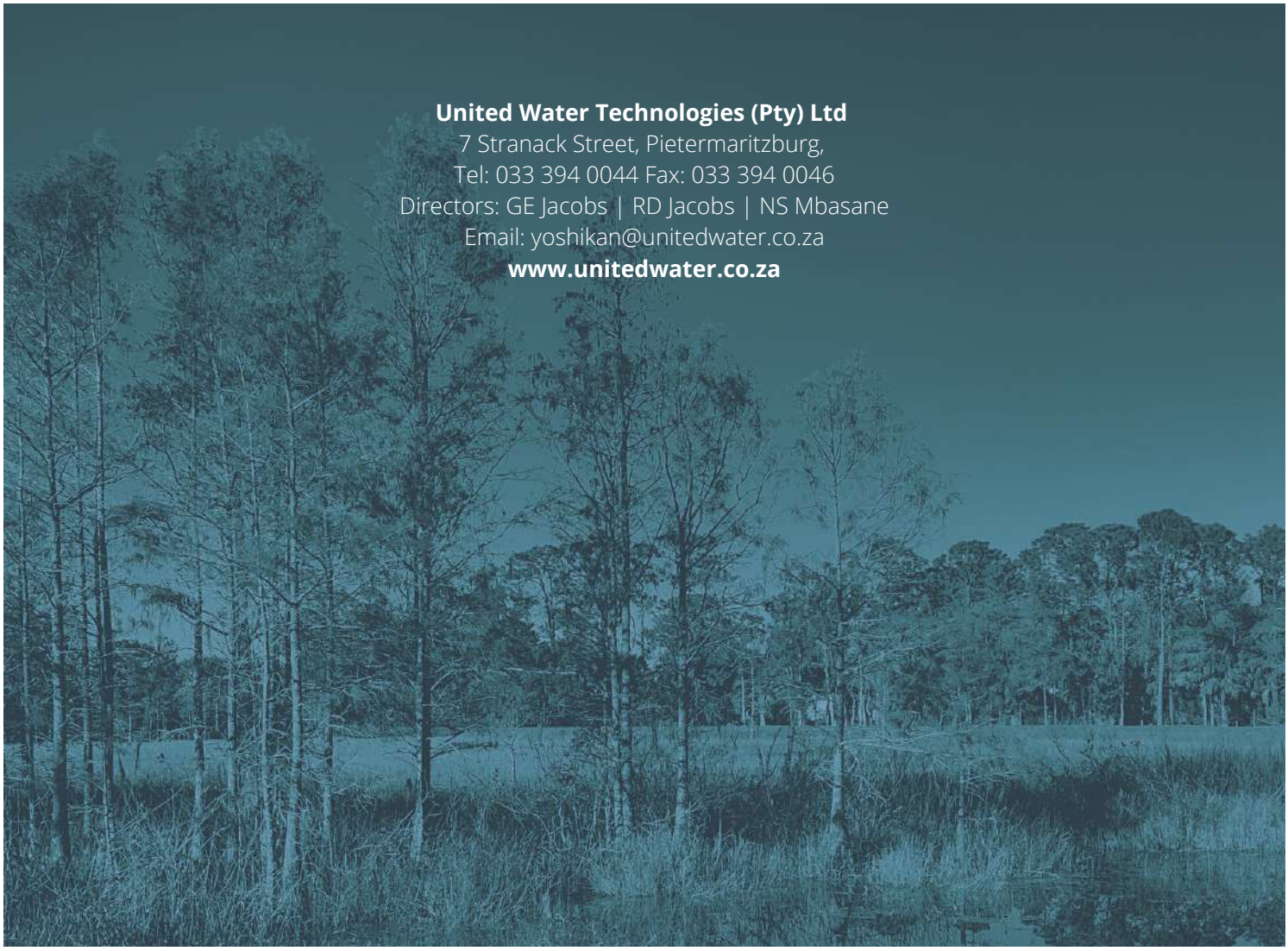

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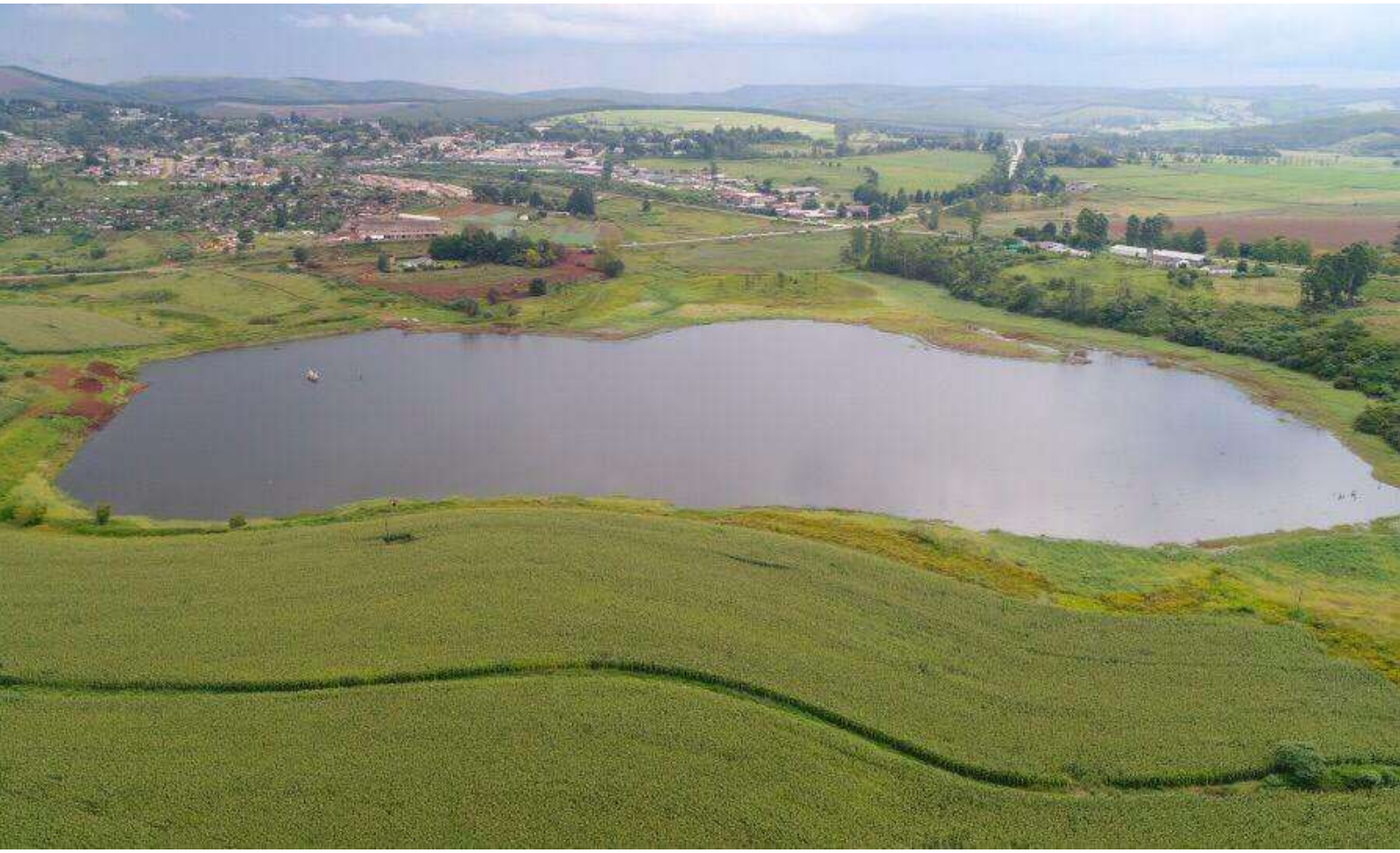
UNITED WATER
TECHNOLOGIES

CASE STUDY: DAM CLEARING AND ALIEN WEED REMOVAL

Location: Ixopo Municipal Dam, Ixopo, KwaZulu-Natal Province, South Africa
Client: Umgeni Water
Contractor: United Water Technologies
Project Duration: 3 Months (December 2019 – February 2020)

IXOPO DAM AT THE START OF THE PROJECT



IXOPO DAM ON PROJECT COMPLETION

PROJECT SCOPE

- Removal and disposal of Invasive Alien Plant (IAP) Species, including Water Hyacinth, Parrots Feather and Kariba Weeds from the Dam (approximately 20Ha)
- Removal, clearing and disposal of excess bush including Limpopo Grass around the banks of the Dam (approximately 5Ha)
- Release of Biocontrol Agents.

LARGE HARVESTER IN OPERATION

SMALL HARVESTER IN OPERATION

DAM CLEARING AND DRYING AREA

NOTES

- The successful completion of the project provided relief to the previously overly burdened ecosystem through the manual removal of the live and rotting biomass from the system.

- Advice on bioagents and their release process was sourced from different service providers including SASRI, CBC and DEA: NRMP, and independent environmental consultants.

RECOMMENDATIONS INCLUDED:

- That herbicides are only used as a last resort, and that mechanical removal accompanies any large scale herbicide application. Herbicides are non-selective and therefore has an impact on killing unintended species, besides the negative impact that not removing dead plant matter can have on the health of the Dam and overall water quality. Herbicides have residual effects and therefore can be absorbed by unintended plants in other areas of the Dam, and could remain longer in the water systems and subsequently affecting the surrounding areas. Several species recorded along the banks of the Dam are indigenous species, hence chemical control is not recommended as far as possible.

- The invasive species were harvested and stored along the banks of the dam to dry out. Once the biomass along the periphery of the dam was dry, it was removed, buried and covered within a salvage pit on the adjoining farm. This was done in order to combat the rotting of biomass species and re-infestation. Furthermore, the dry biomass consisted only of IAP which require water to germinate and grow. Thus, burying the biomass would not have adverse effects on the environment, and the germination of these species cannot occur in terrestrial areas.

- Upstream waterways and dams are investigated and IAP cleared as required to prevent re-infestation of the Ixopo Dam

- Monitoring of the release of the biocontrol agents to ensure that it spreads also to the regrowth

- On-going wetlands health testing is conducted to ensure the overall optimal health for the dam.