

Notes on Paddavlei wetland visit: 22 December 2016

The Department of Environmental Affairs' NRM (DEA-NRM) branch was requested to meet with the members of the Paddavlei Eco Group (PEG, created by the Hawston Development Agency) and Mr Pierre de Villiers from CapeNature in Hawston, Western Cape on 22 December 2016.

The PEG developed "PADDAVLEI AND SURROUNDS REHABILITATION DOCUMENT" which includes a proposal for the rehabilitation of the so called Paddavlei and Skilpadsvlei and to the system downstream flowing out to the Bot river estuary.

DEA-NRM supports the initiative to rehabilitate the wetland. The rehabilitation of Paddvlei wetland holds cultural, functional and biodiversity value to the system. Based on rehabilitation objectives as described by the PEG, the following recommendations are made for your consideration. Reference to areas of concern are referenced in point form to the map in figure 1:

1. A phased approach should be taken for the rehabilitation of the system from Paddavlei to the Bot river estuary.
2. Focus initial rehabilitation efforts on Paddavlei (point 1) by implementing interventions that does not require any Environmental Authorisations such as the removal of Alien invasive species (including kikuyu grass) and the removal of building rubble within the wetland. Refer to figure 1 to 3 for examples of successful removal of kikuyu and revegetation of a wetland within the City of Cape Town. This will minimise competition for indigenous vegetation to be re-established on the edge and within the limited buffer zone of the wetland. A written Rehabilitation plan with planned deliverables, time of the year for activities to take place and budget required will be a positive start to the project.
3. Establish the rehabilitation objectives for the remainder of the wetland system as identified in the PEG rehabilitation proposal: what is the rehabilitation potential, biodiversity value and functional value that will be added to the system should the identified rehabilitation activities be implemented.
4. It is advisable to appoint a Professional Estuarine Ecologist to perform a comprehensive Wetland assessment as to guide the rehabilitation through a better understanding of its original condition, flow regime and functionality. This will likely improve the outcome of any final decisions to remove earth berms or lifting of water tables at the culvert at the lower end of Paddavlei.
5. It is advisable to confirm the elevation profile of the entire profile as the slope is very low towards the Bot river estuary which shows a clear topographical rise between Paddavlei and Skilpadsvlei (point 2). The expected surface flow, as suggested in the proposed rehabilitation interventions, may not be possible as a result of this rise. The section between Paddavlei en Skilpadsvlei is likely connected via seepage and occasional seasonal surface water. This needs to be confirmed by a comprehensive wetland assessment.
6. Earth berm splitting Paddavlei in two sections (point 3): The removal of the earth berm will require an Environmental authorisation. It is recommended that and a Professional wetland Ecologist and an Engineer assess the proposed rehabilitation intervention.

- Culvert at lower end of Paddavlei (point 4): Consult the local Municipality on what the design rationale behind the culvert depth was. Should the raising of the culvert be supported by all parties it is recommended a survey be completed to establish the correct height based on calculated back flooding. Unfortunately the wetland is within a residential area and risks to flooding should be taken note of.

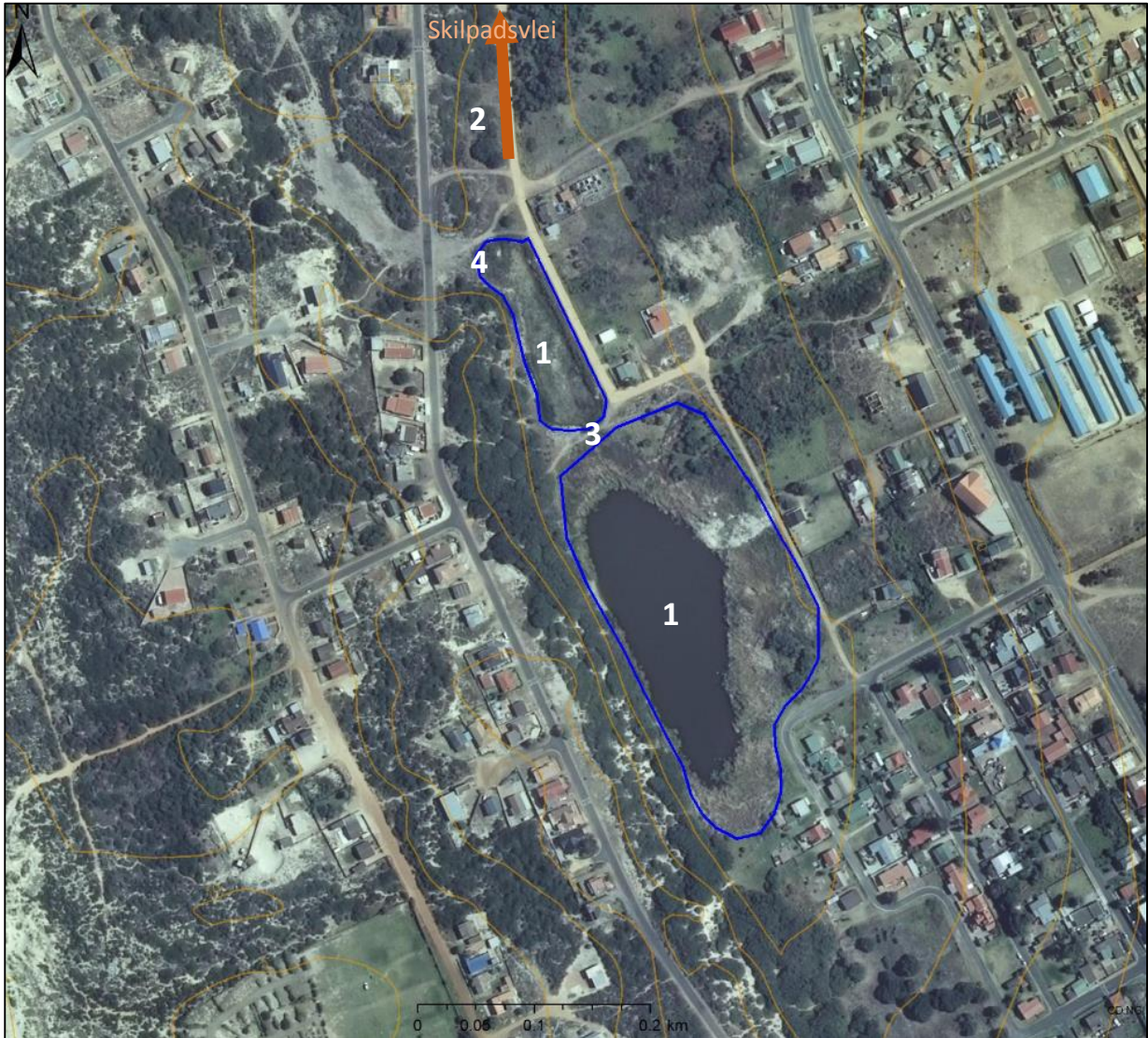


Figure 1. Map of Paddavlei with references in point form.



Figure 2. Kikuyu infested wetland before.



Figure 3. Kikuyu infested wetland during.



Figure 4. Kikuyu infested wetland after revegetation with indigenous wetland plants.

Meaningful intervention in the lower reaches towards the Bot river estuary, such as the management of woody alien species should not be missed. The removal of alien invasive species within wetland have significant positive impact on flow and the improvement of biodiversity.

The DEA-NRM which the PEG the best success with their efforts in attempt to rehabilitate the Paddavlei wetland system. The DEA-NRM will provide advice where possible.

Best Regards

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