

Attachment 1: Aerial photograph identifying the vegetation proposed to be cleared



Proposed removal area of Typha at Big Swamp wetland

-  Proposed Typha orientalis removal
-  Big Swamp wetland

Big Swamp wetland – supporting information and photographs

Big Swamp wetland as it is a highly modified environment. This wetland was originally an ephemeral dampland which has been significantly modified over time (see attached historical aerial photographs) including:

- land was cleared and reclamation for use as residential blocks commenced in the 1920s by carting sand and filling the dampland
- the use of two sections as municipal landfills (south west and north east) (1960s-1980s)
- the topography was altered to artificially create numerous islands (1980s -1990s) (photo attached)
- planting at the site has been undertaken since with a mixture of local native and introduced species.

Big Swamp currently has three main functions; a stormwater compensation basin, an ecological function (predominantly as habitat for native and migratory fauna) and a place of recreation. Big Swamp is listed and an Environmentally Sensitive Area as it is a defined wetland and as such it is understood that a clearing permit is required to reduce the infestation of *Typha orientalis* (Typha). Although Typha was reintroduced after the modifications listed above, it is not known how Typha recolonised in this wetland, but it is thought to have self-seeded. Nevertheless, Typha is acting in a very invasive manner and with monocultures covering large sections of the wetland to the exclusion of all other native species as visible in the photographs taken at Big Swamp wetland on 9th July 2020 below and in the attached Figure. The Typha is also reducing the wetlands capacity to function as a stormwater compensation basin by impeding the movement of water and crowding drainage outlets. Initially, only up to 1 ha of Typha is proposed to be removed from Big Swamp in the priority locations identified in the attached figure. However, follow up control treatments are likely to be required in future years to ensure the Typha does not recolonise the area – additional clearing permits will be sought as required.



Plate 1: Photograph taken from the southern boardwalk at Big Swamp looking north east



Plate 2: Photograph taken from the southern boardwalk at Big Swamp looking southeast



Plate 3: Photograph taken from the southern boardwalk looking northeast



Plate 4: Photograph taken from the southern boardwalk with introduced grasses and Typha



Plate 5: Photograph taken from the southern boardwalk at Big Swamp looking north



Proposed removal area of Typha at Big Swamp wetland - historical aerial 1959


-  Proposed Typha orientalis removal
-  Big Swamp wetland



-  Proposed Typha orientalis removal
-  Big Swamp wetland

Proposed removal area of Typha at Big Swamp wetland - historical aerial 1970



-  Proposed Typha orientalis removal
-  Big Swamp wetland

Proposed removal area of Typha at Big Swamp wetland - historical aerial 1988



Proposed removal area of Typha at Big Swamp wetland - historical aerial 1992

-  Proposed Typha orientalis removal
-  Big Swamp wetland



Proposed removal area of Typha at Big Swamp wetland - historical aerial 2020

-  Proposed Typha orientalis removal
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