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PAARL

FOLLOW-UP BIODIVERSITY SURVEY FOR A PROPOSED NEW WATER RESERVOIR AT WORCESTER

Due to comments received on the biodiversity aspects of the site, the undersigned was requested to undertake a follow-up biodiversity survey during late winter/early spring to capture winter/spring flowering bulbs.

Among other, it must be determined if *Ixia mostertii*, which is an endangered geophyte recorded nearby, occurs on the site. According to the online Red List of South African Plants¹ “This species has lost habitat to agricultural expansion in the Breede River Valley near Wolseley, and to urban expansion around Worcester. Recently, part of a small, isolated subpopulation was lost to expanding fruit orchards. Part of a subpopulation on the outskirts of Worcester was lost to a housing development in the past 20 years, and the remainder of this subpopulation occurs on a site earmarked for development, where ongoing construction of infrastructure is already causing ongoing habitat loss and degradation. A third subpopulation has been impacted by the development of a casino and golf course, and informal settlements are spreading across the remainder of this site.”

A follow-up survey was undertaken on 1 August 2020, during which the following species additional to the previous survey were recorded (the majority of these outside the footprint area):

- *Eriocephalus africanus*
- *Felicia filifolia*
- *Othonna arbuscula*

¹ <http://redlist.sanbi.org/species.php?species=1547-41>

- *Othonna retrofracta*
- *Roepera flexuosa*
- *Tetragonia cf fruticosa*
- *Bulbinella nutans*
- *Massonia depressa*
- *Oxalis obtusa*

None of these are Species of Conservation Concern. More of the previously recorded *Antimima cf hamatilis* were recorded, notably below the site (see Map 1 below).



Map 1 Updated botanical attributes map with regards to the occurrence of *Antimima cf hamatilis*.

It is highly likely that more bulb species will emerge later during September and October. With regards to *Ixia mostertii*, no recording of it was made on site or in the area directly below it. Recent observations² were from nearby areas to the south of the N1. It may be that it is or was more common on the lower slopes! Please note that it also flowers later in September.

With regards to access to the site during the construction phase, it is strongly recommended that the

² <https://www.inaturalist.org/taxa/588047-Ixia-mostertii>

existing dirt road or firebreak be used. The establishment of a new road should not be allowed. A possible short-cut from the firebreak to the site was also investigated, but it was also found to be too sensitive with a high presence of *Antimima cf hamatilis* and should not be considered.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'M. G. Berry'.

Mark Berry Pr Sci Nat