



30 June 2017

Mt Buller Mt Stirling Resort Management
Alpine Central
MT BULLER, VIC, 3723

c/o Alicia Burnett (ERM)

Our ref: 31/30733
8785

Your ref:

Dear Sir/Madam

Mt Buller Sustainable Water Security Project Overview of Mt Buller Off-Stream Storage Dam documents

1 Purpose of this document

GHD has been requested to provide a short letter which explains the context, chronology and background to a number of documents which may be utilised as part of the Environmental Effects Statement (EES) referral for the Mt Buller Sustainable Water Security Project – Off-Stream Storage. Specifically the:

- *Water Supply Demand Strategy for Mt Buller, Mt Stirling and Mirimbah Water Supply Systems* (GHD, May 2013). Doc 204835;
- *Mt Buller Sustainable Water Security Project – Off-Stream Storage* (GHD, July 2014) Doc 227530;
- *Options Assessment Report* (GHD, July 2014) Doc 6974; and
- *Options Summary* (GHD, August 2016).

2 Background

A number of points are worth making in relation to the conceptualisation of the project, options development, siting and concept design. These are as follows:

- Water supply, treatment and storage infrastructure has progressively developed on Mt Buller over the last five decades in response to the size of the village, visitation rates, the activities being undertaken, technological and regulatory developments. There have been a range of informal and formal water supply and treatment investigations over this time. The level of documentation of the range of historical investigations which have been undertaken is variable. The list of historical investigations cited in GHD documents is unlikely to be exhaustive, but is considered representative of the issues and options considered over time.
- Water supply, treatment and storage issues have become more important over the last decade with the increase in village occupancy (summer and winter), the development of snowmaking infrastructure and regulatory (drinking water) requirements.
- The development of the most recent concept design for the storage and water supply (2013 to 2016) has been a highly iterative process which has been informed by a wide range of constraints. These constraints are described in the above documents. Key constraints have included:
 - Environmental (eg. presence of native flora, fauna, alpine bog communities)

- Geotechnical and associated construction methodology
- Existing services, ski resort and water supply infrastructure (as well as operational considerations including their patterns of use)
- Economic (including short and long term capital investment)
- The iterative process resulted in multiple revisions of the concept designs as new information came to light on potential constraints (or the manageability of previously identified constraints). This iterative and evolving design process is reflected in the project drawings and documentation. The current concept design for the storage dam and water supply infrastructure (and associated construction footprint) is considered the best achievable given the multiple constraints which have been identified.

3 Document summary

3.1 Water Supply Demand Strategy for Mt Buller, Mt Stirling and Mirimbah Water Supply Systems (GHD, May 2013)

The purpose of the water supply demand strategy is described within Section 1.1 of the document. The Alpine Resort is unusual in that water demands are highly variable throughout the year (major peak in winter), whilst the supply (Boggy Creek) is small and is heavily constrained during dry periods.

The report was a first attempt to pull together key supply and demand data, and review this against operational and engineering aspects. The report qualitatively evaluated a range of supply options. A range of information gaps were identified.

Of note are the assumptions for future snowmaking water demand (Section 5.1, Table 5) which were influenced by a range of demand factors (Table 8). These were subsequently revised downwards.

3.2 Mt Buller Sustainable Water Security Project – Off-Stream Storage (GHD, July 2014)

This document was developed following a series of site investigations associated with the water supply system and off-stream storage. A review of the previously developed supply/demand balance (including snowmaking water demand) was undertaken (Section 3 of the document). The report presents revised water demand figures for the medium growth scenario. These figures have been utilised for subsequent project planning and engineering. The report also expands on the summer time storage requirement (section 3.1.4) indicating that a storage capacity of 60 ML is required in order to cater for predicted summer time potable water use and emergency storage.

A series of concepts for the potential reconfiguration of the water supply and treatment system following the construction of a new storage were also developed and presented in the document (Section 4). This step was important in order to identify / confirm the required ancillary infrastructure and overall project construction footprint. Concept 1A was selected by the RMB to be the preferred concept. Given the sizeable capital investment, the upgrade to water treatment facilities has been deferred. The current concept design for the storage and ancillary infrastructure has been developed on the basis that the existing treatment facilities would be used. Any future development of water treatment facilities is anticipated to be undertaken within the currently proposed project construction footprint.

3.3 Options Assessment Report (GHD, July 2014)

This report was finalised at the same time as the Off-Stream Storage report (above). It documents work undertaken over the preceding year or so. It:

- Provides the background and context to water supply investigations and infrastructure development on Mt Buller;
- Summarises the supply/demand issues and presents water demand information (medium growth scenario), consistent with the Off-Stream Storage report;
- Presents the strategic and planning context for the project (also used later to inform a multicriteria assessment);
- Provides an explanation of the strategic water supply options which were considered in order to potentially address water security issues at the Resort, and provides a comparison of these options against performance criteria agreed with the RMB;
- Presents a Multi-Criteria Assessment methodology and site selection analysis informed by a range of social, environmental and economic considerations. Three potential storage dam sites were initially considered and evaluated based on multiple storage dam design options. One site (Koflers) was eliminated relatively early in the assessment process;
- Concludes that the Control Centre site is the preferred site for a 100 ML storage.

3.4 Options Summary (GHD, August 2016)

This document is a shortened and updated version of the Options Assessment Report (GHD, July 2014). Aspects such as historical development, strategic and planning context information were not included as they were intended to be covered elsewhere in the project planning application. A variety of other minor amendments to the structure were made.

An additional section (Section 5.2.3) was added to explain and document the refinements to the concept design which continued to occur after July 2014.

I trust that this letter will assist with the review of project documentation. Please feel free to contact me if further information is required.

Sincerely
GHD Pty Ltd



Stephen Dahl

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