Planning Officer's Report - LDCA 19 DECEMBER 2022

APPLICATION	**2022/86 –** Proposed Construction of a Reservoir & Expansion to Existing Reservoir
PERMISSION SOUGHT	Full Permission
REGISTERED	22nd November 2022
APPLICANT	Connect St Helena
PARCEL	DPRR0117, DPRR0118 & DPRR0286
LOCALITY	High Ridge, Levelwood
ZONE	Green Heartland Zone
CONSERVATION AREA	None
CURRENT USE	Vacant land next to Existing Reservoir
PUBLICITY	The application was advertised as follows: ▪ Sentinel Newspaper on 24th November 2022 ▪ A site notice displayed in accordance with Regulations.
EXPIRY	8th December 2022
REPRESENTATIONS	None Received
DECISION ROUTE	~~Delegated~~ / ~~LDCA~~ / **EXCO**

A. CONSULTATION FEEDBACK

1.	Sewage & Water Division	No Objection - **The Applicant**
2.	Energy Division	No Objection
3.	Fire & Rescue	No Response
4.	Roads Section	No Objection
5.	Property Division	No Response
6.	Environmental Management	No Response
7.	Public Health	No Objection
8.	Agriculture & Natural Resources	No Response
9.	St Helena Police Services	Not Consulted
10.	Aerodrome Safe Guarding	No Objection
11.	Sustainable Development	No Response
12.	National Trust	No Objection
13.	Sure SA Ltd	No Objection

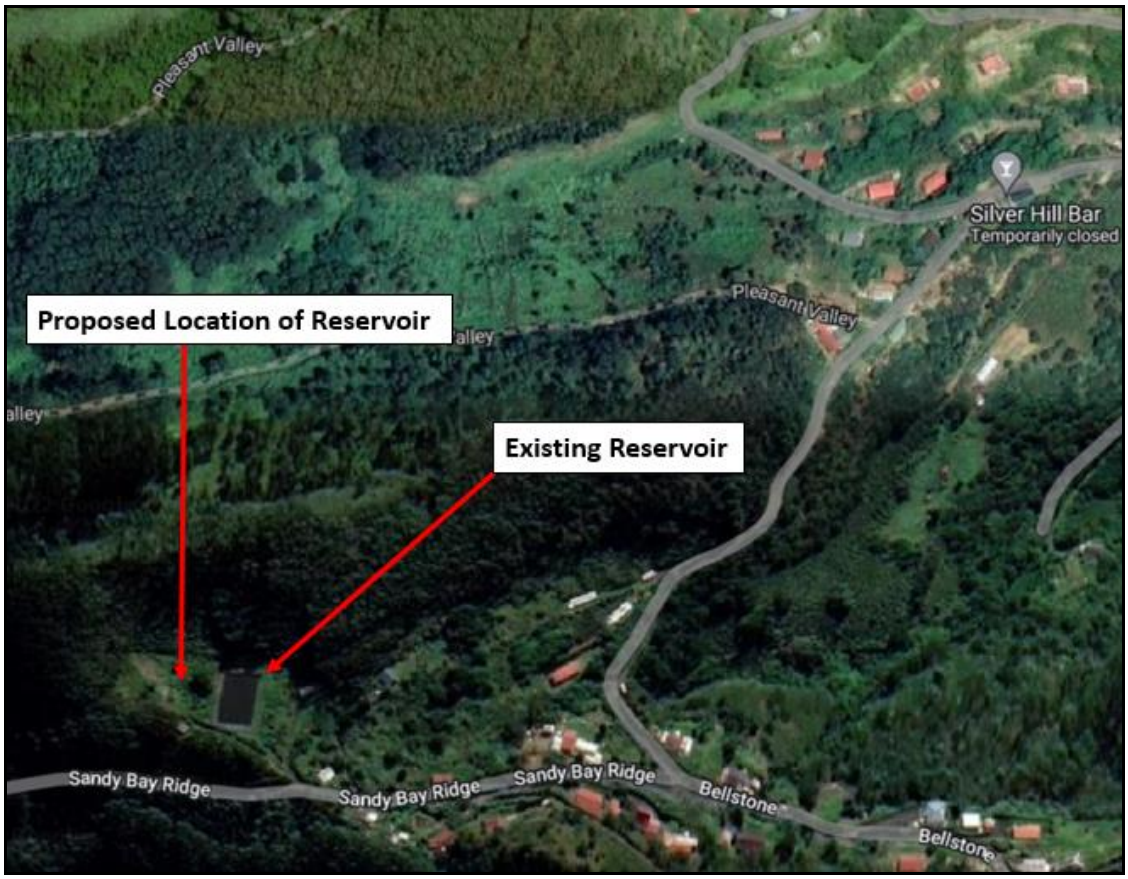
14. Heritage Society No Response

B. PLANNING OFFICER'S APPRAISAL

LOCALITY & ZONING

The development site is within an area known as High Ridge, Levelwood, where the plots comprise of an existing reservoir and vacant adjoining land. The plots are designated within the Green Heartland Zone and has no conservation area restrictions.

Diagram 1: Location Plan



PROPOSED

The proposal involves both construction of a new reservoir as well enlargement of the existing reservoir. In terms of works to be carried out, the existing reservoir will be enlarged and comprise of the following general excavation and embankment fill to enlarge the existing raw water reservoir, installation of sub-surface drains below the reservoir cut and fill slopes, installation of sub-surface drains along the toe of excavation cut slopes, installation of a bottom outlet works with outlet valve chamber, installation of an emergency overflow facility for the reservoir, ancillary works (fencing, planting of grass on the outside of reservoir slopes and excavation cut slopes and disposal of excess/surplus material.

Similar works are proposed for the construction of the new reservoir, which will involve the general excavation and embankment fill to construct a new raw water reservoir. Installation of sub-surface drains below the reservoir bottom and reservoir cut and fill slopes, installation of sub-surface drains along the toe of excavation cut slopes, installation of a bottom outlet works with outlet valve chamber, installation of an emergency overflow facility for the reservoir, ancillary works (fencing, planting of grass on the outside reservoir slopes and excavation cut slopes, and disposal of excess/surplus material.

The Levelwood Water Treatment Works has been identified as the suitable treatable water source to serve the Sandy Bay area with treated water. Sandy Bay has historically only been supplied with untreated water from natural sources found within the area. The supply for treated water in the Sandy Bay area aligns with the decision taken by Executive Council in 2011, that all areas across the island should be supplied with treated water.

The development of the raw water resources (construction of an additional new raw water reservoir and enlargement of the existing raw water reservoir) at the Levelwood Water Treatment Works, together with the bulk water supply pipeline recently installed between the Levelwood Water Treatment Works and Sandy Bay, will form the backbone of the bulk water supply to the Sandy Bay area.

The two reservoirs are needed to ensure the water security situation experienced in the Levelwood Water Supply Zone will not suffer, once treated water is also supplied to the Sandy Bay area.

The development site for the new reservoir abuts the existing reservoir site with the land secured from Solomon's in 2019. It was determined that a collective reservoir capacity of approximately 17,550m^3 in size should be developed at the site to adequately serve the Levelwood and Sandy bay communities in the short to medium term, which will increase the current capacity of the existing reservoir by over 300% from 3877m^3.

Due to excess flow of raw water being experienced for most of the year from the natural source currently feeding the Levelwood Water Treatment Works, namely Deep Valley, the planned reservoir will allow for improved rainwater collection from the natural springs for raw water abstraction, ensuring less water is lost during periods of high rainfall. Making optimal use of natural water sources such as Deep Valley would consequently contain operational cost and reduce pressure on water traffic increases in future.

Why this site was chosen?

Alternative site locations for the new reservoir were investigated by Connect St Helena. The current site was chosen based on a cost benefit analysis informing a decision to progress with the current proposal both from a practical and holistic cost-effective approach for Connect St Helena and the consumer.

Sites that were investigated included Sharks Valley and Deep Valley. Sharks Valley is renowned for having a continuous water flow throughout the year even during dry periods, and is seen to be the most logical location to create a catchment/storage area for this reason. However to achieve this, it would be necessary to develop an access road with storm water management to mitigate road erosion from heavy rainfall, as regular weekly access would be required. A pump house with electrical supply will need to be installed along with a new pipeline to connect the raw water to the existing treatment plant at Taglate. In addition, there are other logistical considerations when creating a remote network to any new site, which will lead to time constraints. Ultimately the cost to complete the additional requirements to achieve an operational catchment/ reservoir at Sharks Valley would exceed an additional estimated sum of £250,000.00 – excluding the day to day operational cost for pumping, staff support and travel, effectively having an adverse effect on the cost to the consumer.

The current location at Taglate has minimal added costs associated with the proposed site, other than the cost to establish the additional reservoir. In fact it offers cost savings and practical rewards in that the earth moved will not create additional costs of being transported away from the site, as it is intended to be used to expand the capacity of the existing reservoir therefore the current proposed site will have a twofold advantage. This example indicates that any alternative sites for a new catchment reservoir in and around the Levelwood area will have additional costs and logistical challenges associated with it. Alternative sites will have its merits in terms of water supply, however together with the historical and current data supporting the overflows at the current reservoir demonstrates that the selected site has its advantage of being the most practical and cost effective solution.

An Environmental Impact Assessment (EIA) screening opinion was also carried out in collaboration with the Chief Environment Officer, where it was determined an EIA was not required for this proposed development.

Diagram 2: Site Plan

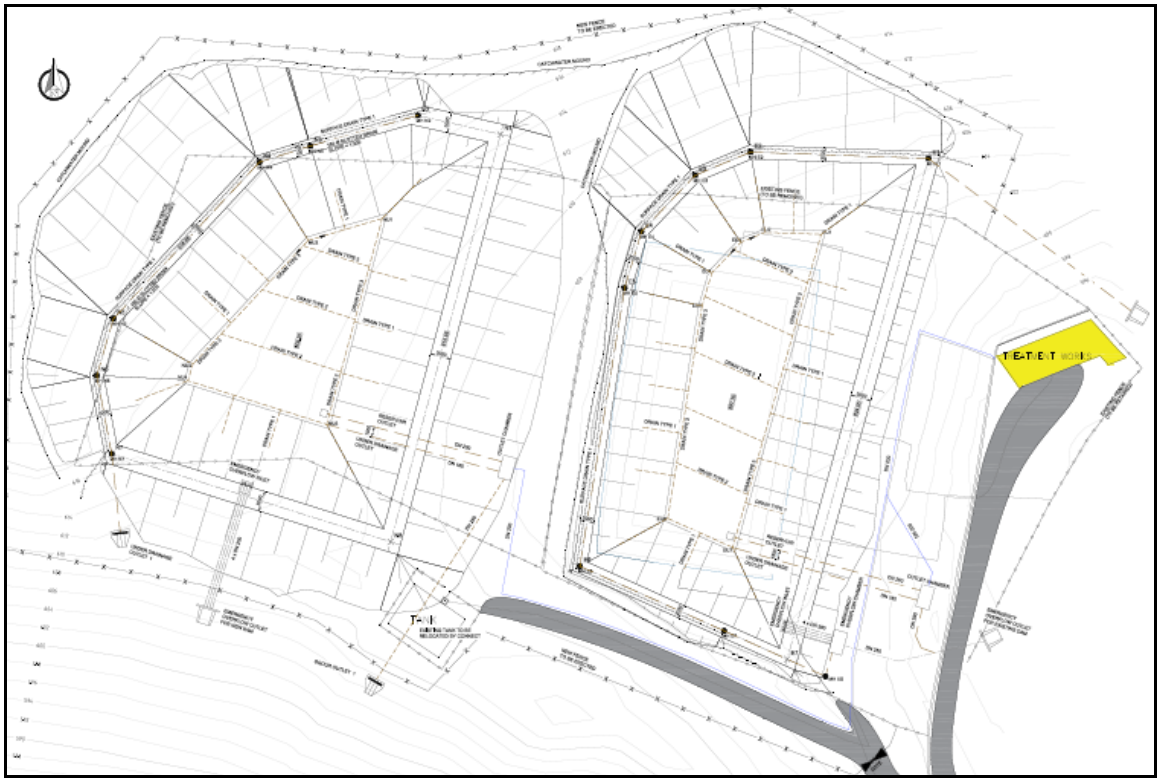


Diagram 3: Photograph of Existing Reservoir

Diagram 4: Photograph of Area for New Reservoir

Diagram 5: Site Section Locations

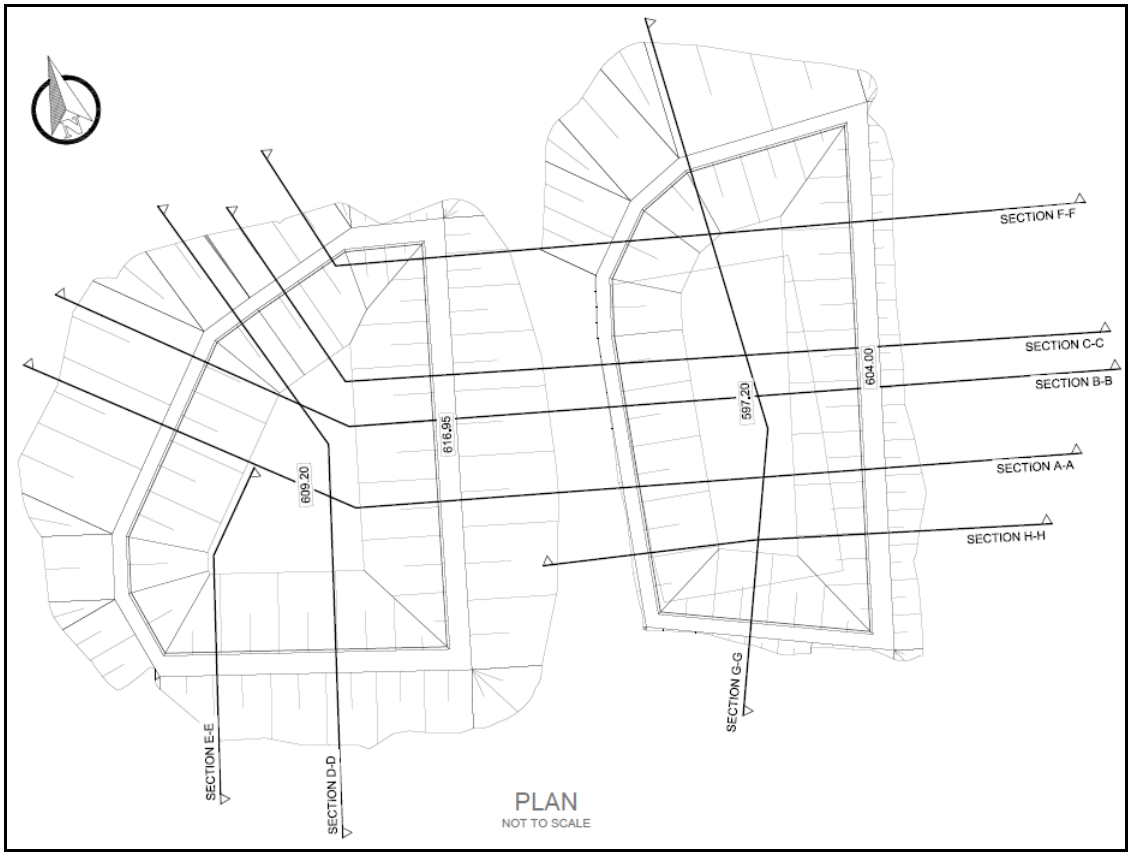
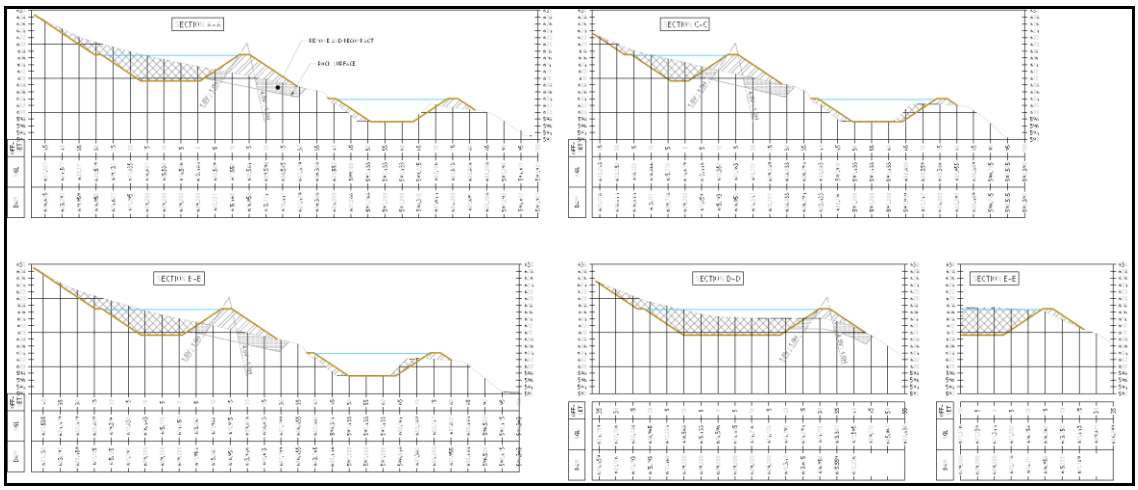
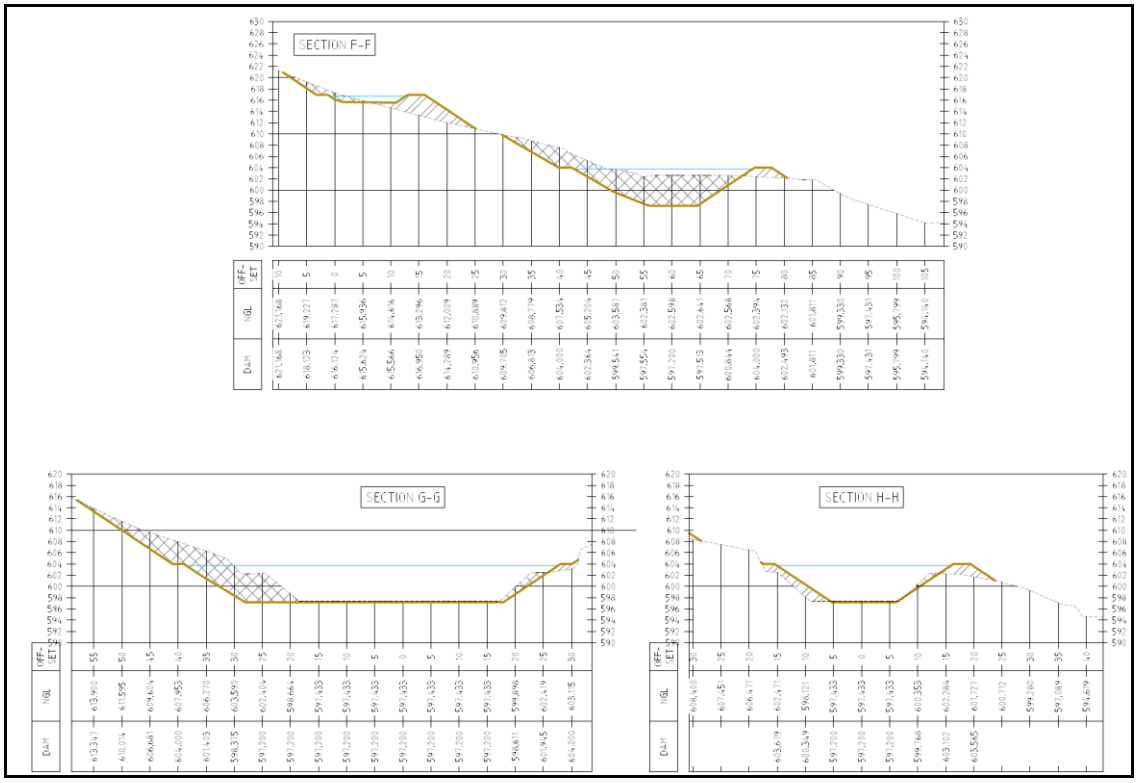


Diagram 6: Site Sections





LEGAL AND POLICY FRAMEWORK

The relevant policies of the Land Development Control Plan (LDCP 2012 - 2022) that are applicable in the assessment of the proposed development are set out below:

- Green Heartland - GH1
- Water Supplies - W1
- Agriculture & Forestry - AF1 b)

OFFICER'S ASSESSMENT

The LDCP contains a presumption in favour of basic infrastructure to enable wider development if the Island, including facilities for water storage, treatment and distribution. Policy W1 a) reads "development permission will be granted for the construction of facilities, taking into account all aspects of climate change, for the abstraction, treatment, storage and distribution of potable and irrigation water supplies to service the development needs of the island on sites that are proved by engineering analysis to be optimum for their purpose…"

Policy AF1 b) reads "development permission will not be granted for non-agriculture development which utilises agricultural land, or land so used in the past five years, unless that development is tourism related and forms an integral part of a commercial agricultural enterprise, or is for the purpose of infrastructure including renewable energy, telecommunications, water supply or sustainable treatment of sewage or solid waste."

The Green Heartland Policy states "there will be a presumption in favour of retaining the undeveloped nature of the Green Heartland and its natural ecology…"

This proposal looks to address the increasing demand and improve water security in the Levelwood Water Supply Zone, where the new reservoir will have a capacity to hold 7250m^3 of water with overflow into the existing. The expansion of the existing reservoir will increase its capacity from 4300m^3 to 10,300m^3. The proposal is therefore supported by the island-wide presumption in favour of facilities for water storage, treatment and distribution and Policy W1.

The site itself was previously used as garden ground, as well as for livestock grazing and was rented to farmers for such purposes, where the land was procured at the end of 2019 by Connect St Helena Ltd for the purpose of building a new reservoir. The habitat is pasture dominated by kikuyu grass, where the proposed development is not within an ecologically sensitive area. Although the land was previously used for agricultural purposes, policy AF1 b) permits development of infrastructure related to water supply, which in this case can be supported.

However, the proposed development contravenes Green Heartland policy GH.1 albeit the site is not in an ecologically sensitive area, the works will have a moderately adverse impact visually on the landscape, in an area where the undeveloped nature should be retained. However there are material considerations including social, economic and environmental benefits for allowing this development.

For example within SHG's Vision and Strategy 2022-2025, one of the key objectives is to develop and maintain physical infrastructure, including utilities. Furthermore one of goals within the Sustainable Economic Development Plan are to improve water infrastructure with the vision to achieve development which is economically, environmentally and socially sustainable by increasing standards of living and quality

of life. As a result of climate change with the uncertainty in weather patterns, this proposal will ensure there will be sufficient surplus water supply from the winter period that can be stored therefore aligning with these strategic objectives and goals for the Island.

It is also advantageous that the proposal is on land within close proximity of Connect St Helena's existing infrastructure, which reduces the need to utilise land that may have been suitable for other types of development, as well as reduce the environmental impact of having an alternative site such as Sharks Valley, which not only would have been at an increased cost to both the developer and consumers, but would have had a significant impact on new infrastructure to be laid back up to the existing supply at Taglate.

Overall, this proposal complies with the relevant policies in the LDCP which support development of this nature, apart from an element of the Green Heartland policy which seeks to retain the undeveloped nature of the area. However, the Island-wide LDCP presumption in favour of water supply infrastructure, the water supply policy and the economic, social and environmental benefits outlined above are considered to outweigh the conflict with Green Heartland policy in this case. The application can therefore be supported.