



Lakestream

Environmental Services

**REVISED DEVELOPMENT PLAN
AND REQUEST FOR VARIATION
FOR RE-DEVELOPMENT OF A DOCK
At PARADISE PARK
ON SOLANA BAY, OSOYOOS LAKE
AT 5901 – 62 Ave., RR1, Site 14, Comp 50, Osoyoos, B.C.**

**Report Prepared for:
PARADISE PARK LESSEES ASSOCIATION**

**Prepared by:
LAKESTREAM ENVIRONMENTAL SERVICES**



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Resource Biologist**

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1.0 Introduction

1.1 Background

In May of 2012 the undersigned of Lakestream Environmental Services was retained by the Paradise Park Lessees Association, to prepare an application to Crown Lands of the Ministry of Forests, Lands and Natural Resource Operations (MFLNRO) for the redevelopment of their dock located on Solana Bay in the town of Osoyoos. An Environmental Impact Assessment was prepared along with an application for a tenure amendment which would allow for a change of their existing status from private moorage to group/strata moorage. These were submitted to Crown Lands in July 2013, and following requests for additional information in November 2013, our application was accepted for review.

On March 17, 2014 the undersigned was notified by Brian Robertson of the Ecosystems group that there were a number of items which required clarification pertaining to the design and location of the proposed dock including:

- With respect to the new finger sections there will be a requirement that the floats be discontinuous, with a 1 meters spacing between floats
- The current design drawing that has been submitted shows a depth of water at the end of the dock but no depth of water where the boat moorage is intended to take place. In a no color zone (Large Lakes Protocol) there is a requirement to have a minimum of .8 meters of water at low water where boats are intended to be moored. A side profile drawing including water depths is required.
- If .8 meters of water cannot be achieved the QEP may request a variance to the depth of water by submitting a boat mgt plan. The boat mgt plans speak to issues such as time of use, manner in which boats will be operated as they depart and arrive in the shallow water, recognition that dredging is unlikely to be accepted should an application be received, and a statement included that the operations will not result in a serious harm to fish. Please note this is not an exhaustive list of issues that should be built into a mgt plan. The document must also be signed off by the QEP and the owner of the property.

After consideration of these requirements, the undersigned contacted Randy North, the representative for the Paradise Park Lessees Association, to discuss various options to meet these guidelines. The following revisions will address the concerns expressed by the Ministry.

2.0 Requirement for Minimum Moorage Depths

As pointed out by Ecosystems there is a requirement to have a minimum of .8 meters of water at low water where boats are intended to be moored. In order to address this requirement we have prepared a new proposal for dock configuration as follows:

Figure 1 shows the existing location of the dock and access ramp relative to the Osoyoos Lake High Water Mark. Figures 2 and 3 show our proposed extension of the access ramp from 6.1m to 12.1m which will allow for relocation of the main dock into deeper water which will insure that there is a minimum of 0.8 depth for boat moorage during the intended boat moorage season, which begins approximately May 15 and extends to September 30 of each season. Osoyoos Lake is a controlled basin and lake levels normally peak in mid-May and slowly decline through the summer months. The largest rate of decline normally occurs after October 1. Because we cannot provide a minimum of 0.8m clearance throughout the low water period we have also provided a request for variance and boat management plan (next section) which will address a boat use period and specifications for approach and exit from the area. These requirements will also be addressed in the Strata regulations which are reviewed annually at the Annual General Meeting of the Association.

Relocation of the dock an additional 9.14m from the present distance from shore should also ensure that the dock will remain floating throughout the low water period. At present the dock regularly becomes beached during the winter season which we recognize is a problem.

With respect to concerns for the span distance of 12.1m for the access ramp, the dock supplier has offered that the design will incorporate an aluminum supporting structure which will ensure that the structure does not sag during use. Also, an adjustable support can be added above the HWM on private land to ensure the access ramp remains above the lake level.

3.0 Boat Management Plan and Variance Application

Paradise Park operates primarily as a vacation destination and receives its heaviest use during the months of late May through to September. Dock use is regulated accordingly and all owners and users of the property are governed by a set of Park Rules and Regulations which are reviewed annually at their AGM. It is proposed that the terms and conditions defined in this Boat Management Plan be adopted as part of the Park's Rules and Regulations which are governed by the general membership and signed off by their Directors. The following outline defines usage of the dock, safety aspects and environmental considerations which are designed to comply with Crown Lands regulations:

1. It is proposed that use of the dock for moorage be confined to the period May 1 to September 30 on an annual basis. This will provide the minimum depth required for moorage (0.8m) and reduce any risk to ecosystem values. At present, park rules specify that loading and unloading of boats occur at the end (deepest portion) of the dock and this practice will continue. Boats will not be allowed to be stored at the dock beyond this time frame and owners will be required to remove their boats and store them on land for the winter season.
2. Boats that require the largest draft, such as wake boats with fixed propellers, will be assigned the outer slips while boats with engine tilt controls will utilize the shallower berths. Standard boat owner practice is to raise their leg tilt on approach to their berths to avoid propeller contact with the lake bottom and this will be emphasized in the Park's Rules and Regulations.
3. Boat operating speeds anywhere within Solana Bay are presently regulated to a no-wake speed of 10 kph. Paradise Park boaters are well aware of this regulation and exercise caution especially near their dock where children fish and swim.
4. It is recognized that if water levels fall below a point where environmental damage may occur from boat use then operation of water vessels may be ceased. One option would be to relocate the floating dock further from the beach in deeper water if this occurs.
5. As part of the original application for an increase in dock size and a change in tenure, an Environmental Impact Assessment was prepared. It is the opinion of the undersigned that there will be no negative impacts to fish and/or aquatic species. In fact, with the revised plan to relocate the floating dock 9.1m outward from the existing location, risk of impacts will be further reduced. We recognize that the work window for this location is closed from April 1 to July 1 and we will not attempt any changes until after July 1, 2014. This work window is designed to protect spawning bass and other warm water species. In the opinion of the undersigned the substrate composition in this location is not suitable as bass spawning habitat as they normally will require more cover protection afforded by rock, wood or aquatic plants. A survey for mussels was also completed in the dock area and none were found.
6. The Association President is aware that the floats on the new fingers should be constructed as discontinuous with 1m spacing and will ensure that these measures are followed.

Respectfully submitted,



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Randy North,
President of the Paradise Park Lessees Association
In agreement with the Section 3 Boat Management Plan and Variance Application

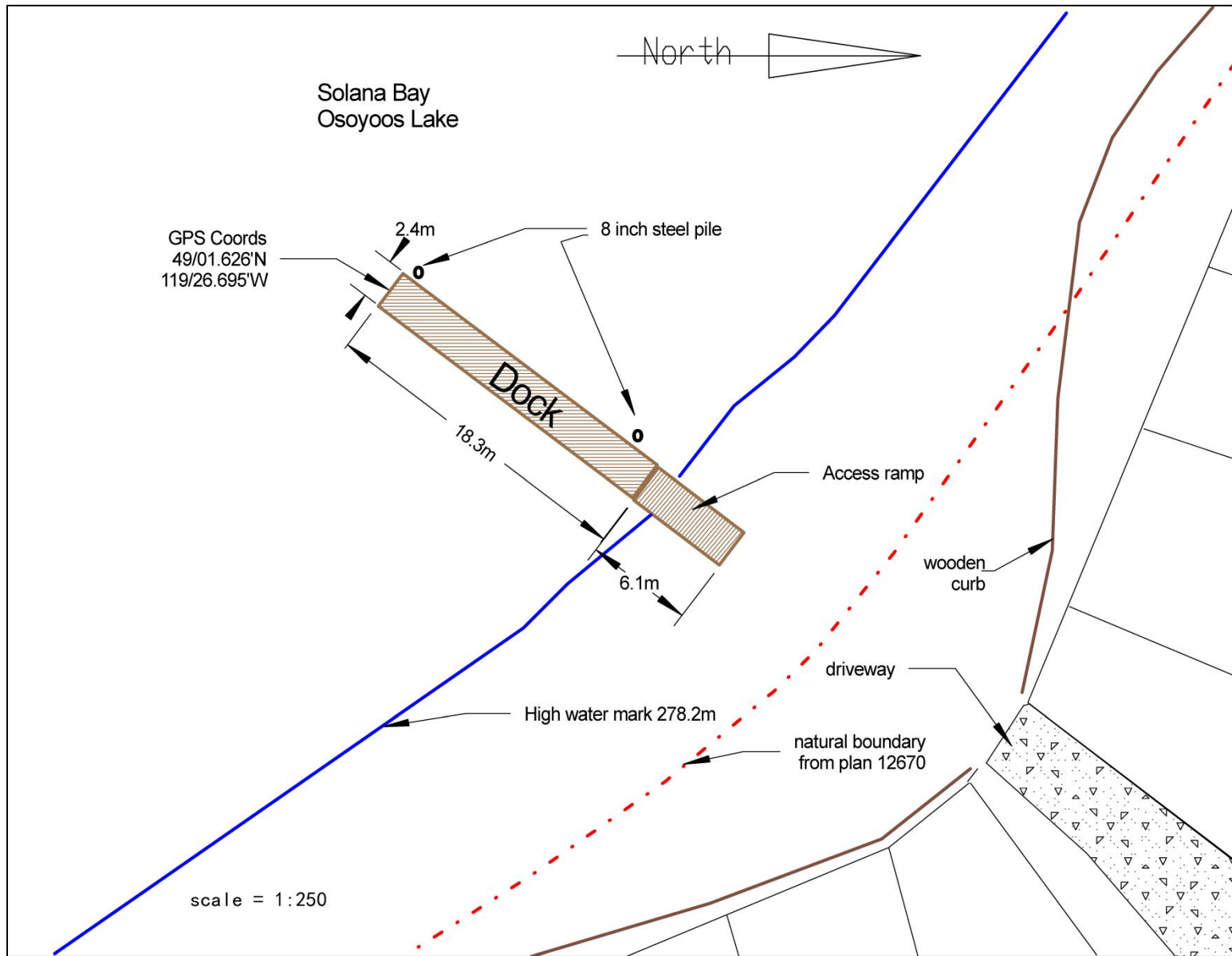


Figure 1. A view of the present dock configuration and location at Paradise Park.

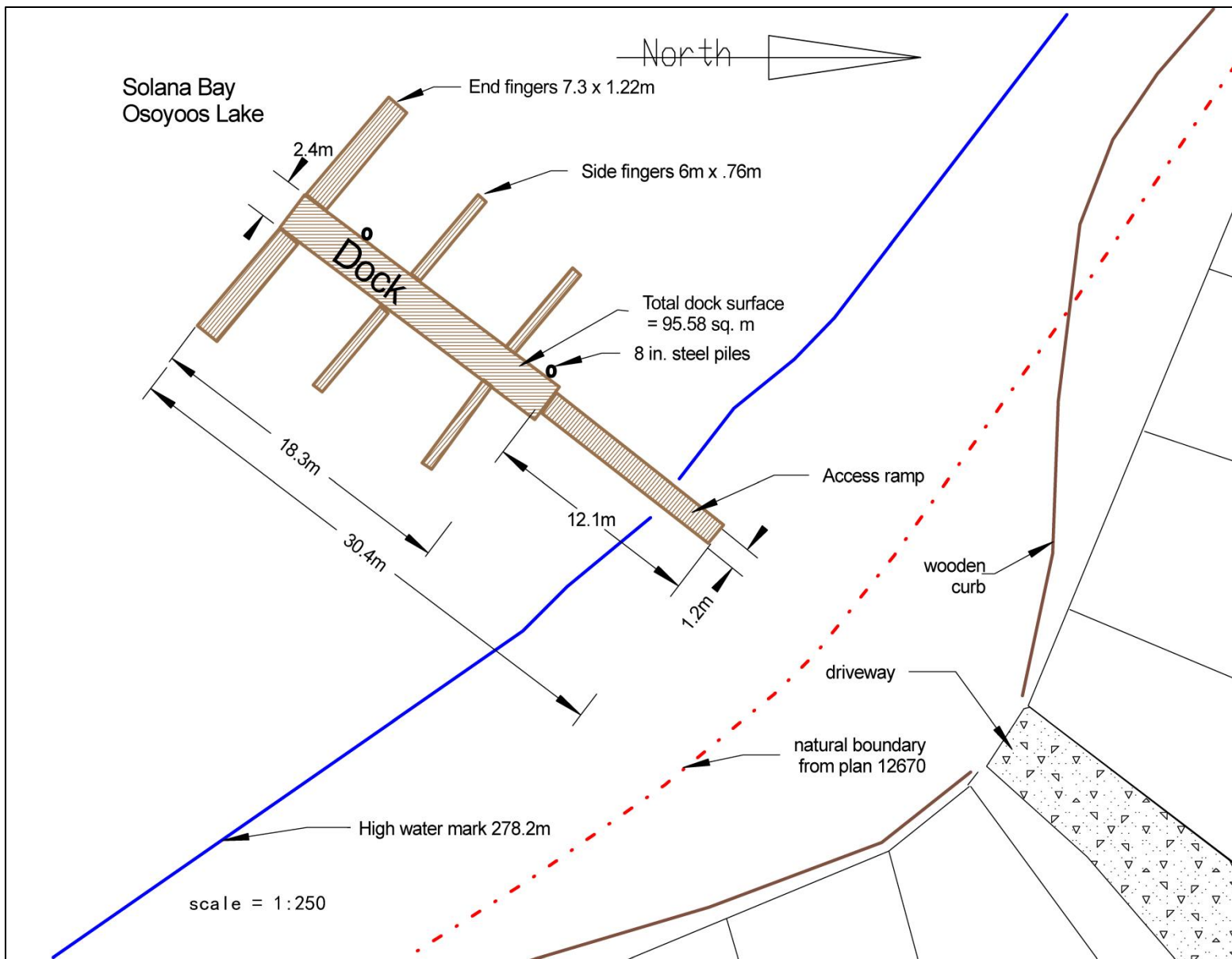


Figure 2. A view of the proposed plan view and dock configuration. Note the extension of the access ramp and relocation into deeper water.

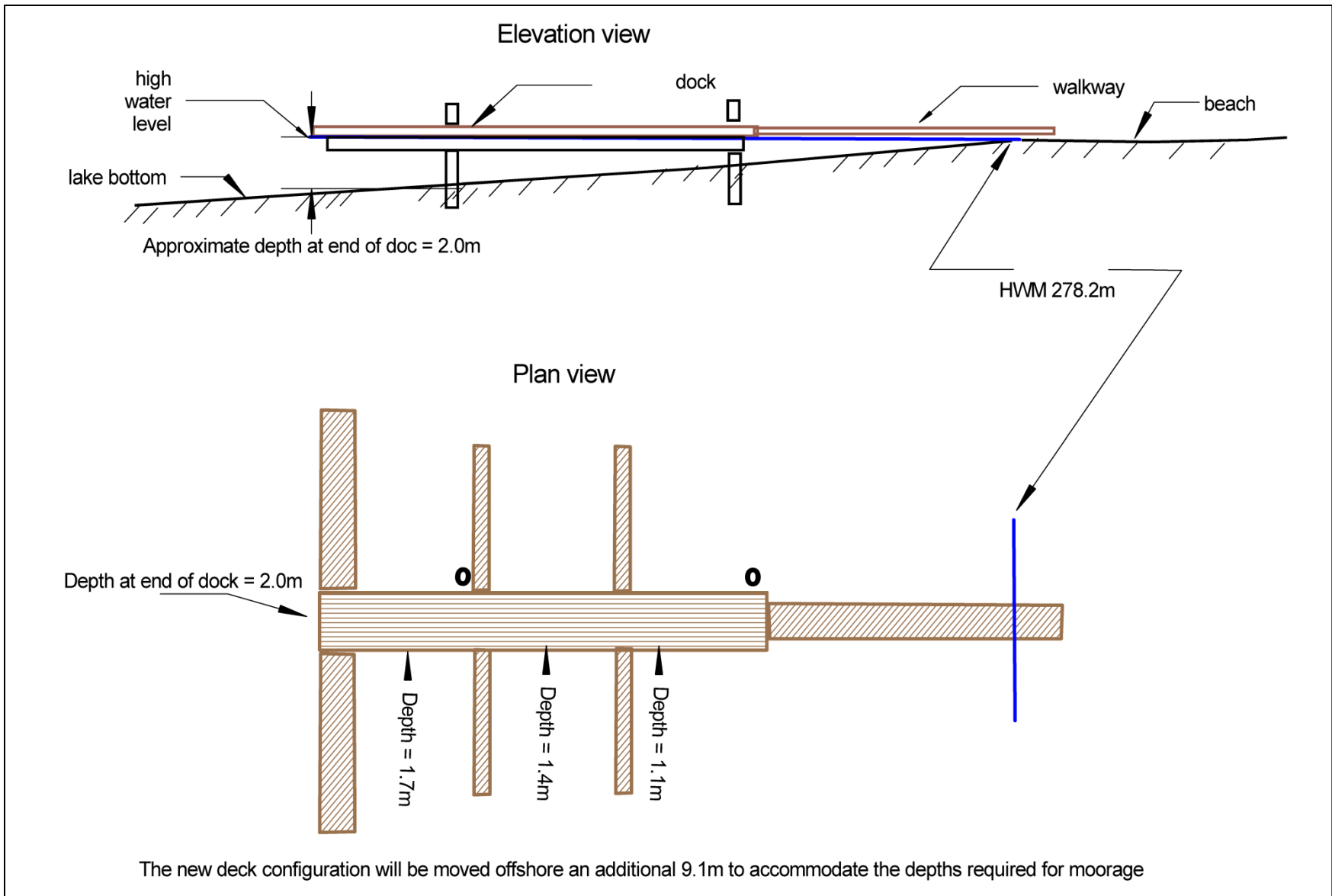


Figure 3. A side elevation view showing the expected lake depths for the operating season.