

PROJECT NUMBER: 3284				DOCUMENT REF: 3284-Part 8 Planning Description – Lissardboola Reservoir			
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## **1 GENERAL DESCRIPTION OF THE PROJECT**

### **1.1 Introduction**

The Kerry Central Regional Water Supply Scheme (CRWSS) is the largest water supply scheme in County Kerry and caters for the water supply requirements of the principal population centres of Tralee and Killarney as well as Castleisland, Castlemaine and an extensive rural area in County Kerry. It serves in excess of 57,000 persons across an area equivalent to 25% of the county (685 km<sup>2</sup>).

The scheme has two Category A1 raw water sources, at Lough Guitane and the Owgarra River, which are located in adjacent catchments of the Flesk River some 5km south east of Killarney.

Water abstracted from the two sources is treated at a plant installation at Lough Guitane where facilities exist for disinfection with Chlorine gas, Fluoridation and pH correction. Treated water is pumped to the main Service Reservoir for the scheme at Sheheree.

From Sheheree, water is transferred to Killarney Town Distribution System and to Coolcorcoran Pumping Station for onward transmission to the rest of the Scheme area. The existing Lissardboola reservoir serves Tralee and the surrounding area. The capacity of this reservoir is 12,500m<sup>3</sup>. In order to give full security of supply to Tralee it is proposed to double the capacity of water storage at the site by construction a second 12,500m<sup>3</sup> capacity tank.

### **1.2 Proposed Building Works**

The existing 12,500m<sup>3</sup> reinforced concrete reservoir at Lissardboola was constructed in 1986 and is in good serviceable condition. It is proposed that the existing tank is retained as part of the upgraded scheme.

There is an existing Kerry County Council storage shed and yard at the western end of the site. It is also proposed to improve vehicular access to this area.

Kerry County Council also wish to construct a hydro electrical turbine on the inlet pipe to the reservoirs, to take advantage of residual pressure in this line to generate electricity for the site.

Therefore, the building works, which are required to be carried out under this part of the scheme, and which form this Part 8 Planning Application, are:

1. Construction of a new 12,500m<sup>3</sup> reinforced concrete reservoir, measuring 60.25m long by 51.85m wide, as shown on the Drawings
2. Interconnecting pipework between the new tank and the existing pipework and valve chamber.
3. A hydro electric turbine building measuring 10.6m wide by 7.05m long on plan, as shown on the Drawings.

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Description of the Project

4. Extension of the existing access road on the site to incorporate a hard standing and storage area at the existing Kerry County Council storage shed.

## 2 DRAWINGS

The following drawings illustrate the nature and extent of the works.

Drawing No.	Drawing Title
3284-2105	Lissardboola Reservoir - Location Map
3284-2106	Lissardboola Reservoir - Existing Site Layout Plan
3284-2107	Lissardboola Reservoir - Proposed Site Layout Plan
3284-2108	Lissardboola Reservoir - Elevations and Sections
3281-2109	Lissardboola Reservoir – Details of Hydro Building

### **3 DESCRIPTION OF PROPOSED STRUCTURE**

#### **3.1 Proposed Service Reservoir**

##### **3.1.1 External Appearance**

The proposed reservoir will be constructed to the same Top Water level (81.60m OD, Poolbeg datum) and the capacity of the tank will be 12,500m<sup>3</sup>. The reservoir will comprise in-situ concrete walls and floors and pre-cast concrete roof slabs. Where the top level of the structure will lie above existing ground level, the reservoir will be surrounded with grassed embankments up to the full height at a maximum slope of 1 vertical to 2 horizontal. Where it is recessed into the hillside, the existing ground adjacent to the reservoir will be sloped off as shown on the Drawings.

A waterproof layer will be provided on the external surface of the reservoir roof, and to minimise maintenance, the entire roof area will be covered with stone chippings.

Along the boundaries of the site the existing perimeter walls and fencing, will be retained or, where necessary, reinstated to match existing and adjacent boundaries. Where required around the top of the reservoir, safety handrailing will be provided and will be of galvanised tubular steel construction.

Drawing No. 3284-2108 shows the elevations and sections of the proposed tank and turbine building.

##### **3.1.2 Landscaping and Boundary Treatment**

The tanks are not visible from the public road. A mature hedgerow running along the eastern boundary of the site adjacent to the public road screens the tanks from passing traffic. This hedgerow will be retained.

The embankments and cuttings formed during the construction of the tank will be finished with topsoil and seeded

##### **3.1.3 Access from the Public Road and Frequency of Visits to the Building**

Access from the public road will remain unchanged. The new tank and improved access/storage area will not increase any maintenance requirements at the site and therefore vehicular movements to the reservoir site will not increase.

## **4 ENVIRONMENTAL CONSIDERATIONS**

- **Human Beings**

The proposed development will meet the long term storage requirements for the Tralee area of the Kerry Central Water Supply Scheme, and will ensure the provision of a secure supply for the hinterland. The supply area serviced through the Lissardboola storage facility serves an existing population of approximately 29,700 people and the proposed development will cater for a future population of approximately 50,000 people in the year 2025. Consequently, the proposed development will have a very beneficial impact due to increased water supply security for residential, commercial, industrial and agricultural uses.

During the construction period there will be an increase in traffic volumes as a result of employees travelling to and from the site and for the delivery and disposal of construction related materials. This will impact on local residents only during working hours but will be temporary in nature. There will be no permanent increase in traffic volumes, as the proposed development is an expansion of an existing facility and future traffic volumes will closely mirror the very low existing levels.

Suitable traffic management measures will be implemented during the construction period to mitigate potential construction related impacts and it is intended that construction related activities will be restricted to normal working hours.

- **Flora and Fauna**

No part of the proposed development is located within any designated Natural Heritage Areas (NHA) or candidate Special Areas of Conservation (cSAC). The boundary of the Slieve Mish SAC is located approximately 700m south of the site, but it is not expected that the construction of the reservoir will have any negative impact on this SAC.

- **Air**

There may be an impact on air quality through the generation of dust during the construction stage. This impact will be temporary in nature and best construction practice will be implemented to mitigate the impact. The proposed reservoir at Lissardboola is an extension of an existing works and there will be no permanent impact on air quality as a result of this development.

- **Noise**

During construction, additional noise will be generated by construction equipment and additional construction traffic. Best practice measures will be implemented to ensure levels remain within acceptable limits. As the proposed reservoir at the site is an extension of an existing facility, there will be no permanent noise impact as a result of this development.

- **Cultural Heritage**

A desktop archaeological assessment of the proposed location has been carried out by the Office of the Kerry County Archaeologist, and an Archaeological Impact Statement Report has been prepared dated July 2007.

No impact on cultural heritage, arising from the proposed development, is anticipated.

- **Water Quality and Fisheries**

There are no streams or rivers in close proximity to the proposed reservoir and there will be no direct impact in streams and rivers from the proposed reservoir. Consequently, it is not anticipated that the proposed development will have any impact on Water Quality and Fisheries.

- **Landscape**

The proposed reservoir will be located adjacent to the existing reservoir on the site. The reservoir structure itself will be screened with grassed embankments which will be placed up to the full height of the reservoir walls and will match the existing adjacent Lissardboola Reservoir. There will be no significant impact on views from the local public road network in the area.