

U02581 Group Design Potable Water Supply

Project Brief 2007-2009

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The Project

As a result of pressure for new housing, it has been decided to open up a hilly area on the edge of the town of North Kilbride for development. This requires the upgrading of water supply. It has been decided to construct a new water treatment facility to replace the existing supply to a population of 30000 and provide for 4000 new homes, plus some light industry.

It is proposed to refurbish and use the existing Buzzardland Reservoir. This is a wide, shallow reservoir with an earth dam, originally constructed to provide water and power to local mining activity, which has long since ceased. A survey of the area has been carried out, including an assessment of the earth dam. No construction records exist for this, but it appears to be stable, and has been so for over 100 years.

A location plan and site details are attached.

Your team has been engaged by the client, Scottish Infrastructure Solutions plc, and is required to provide a design solution for the supply of treated water to the existing and new developments. You are further required to design electricity substations for the provision of domestic and industrial power to the area of new development.

Upgraded supply of water and power to the village of Buzzardland, population 650, should also be designed.

Note that it will be necessary to take account of the Buzzardland Muir Site of Special Scientific Interest (SSSI) in any design proposals. This area has been listed as an SSSI due to its significance for badger breeding.

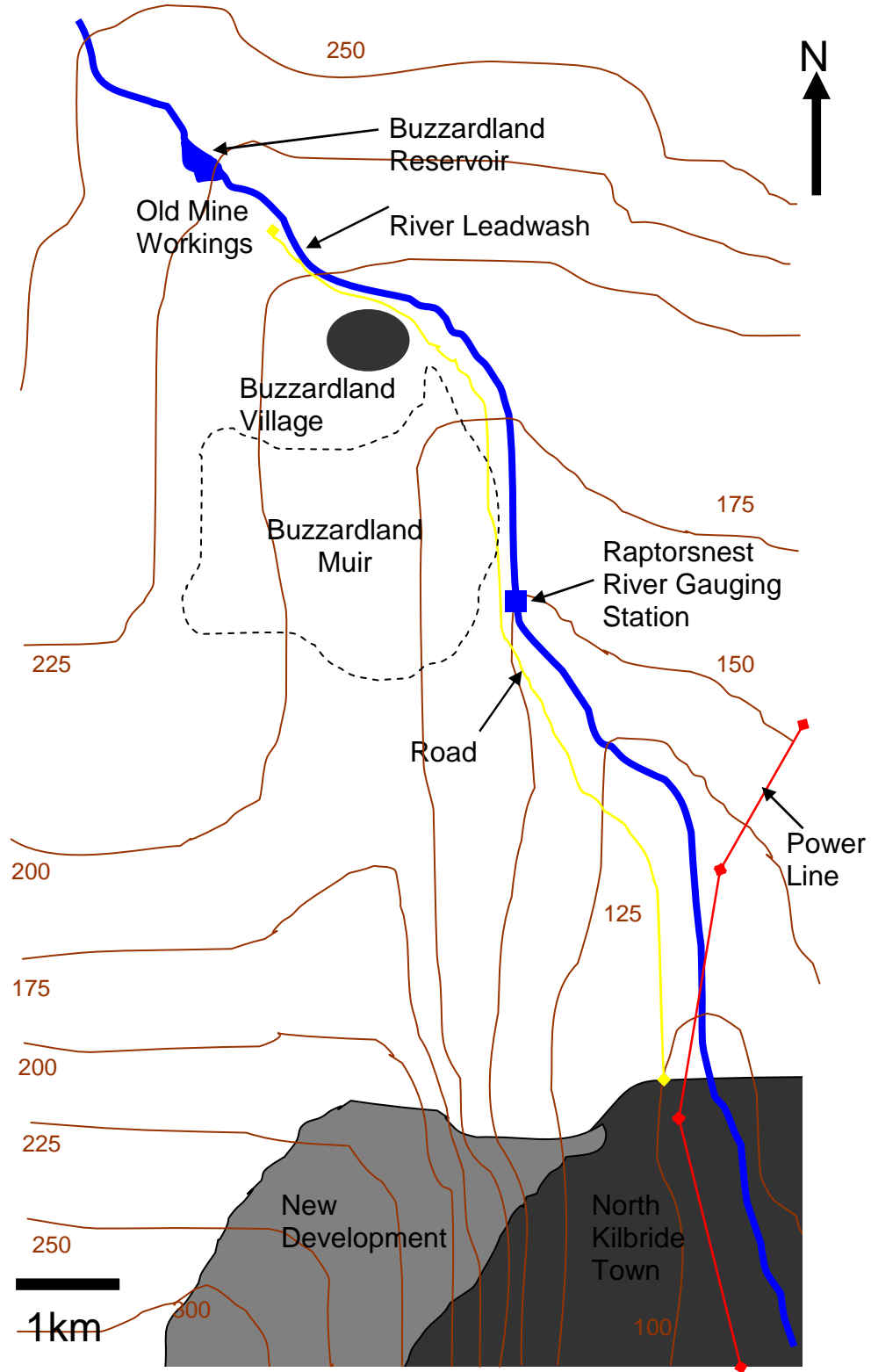
A waste water treatment works of sufficient capacity is available on the opposite side of the town.

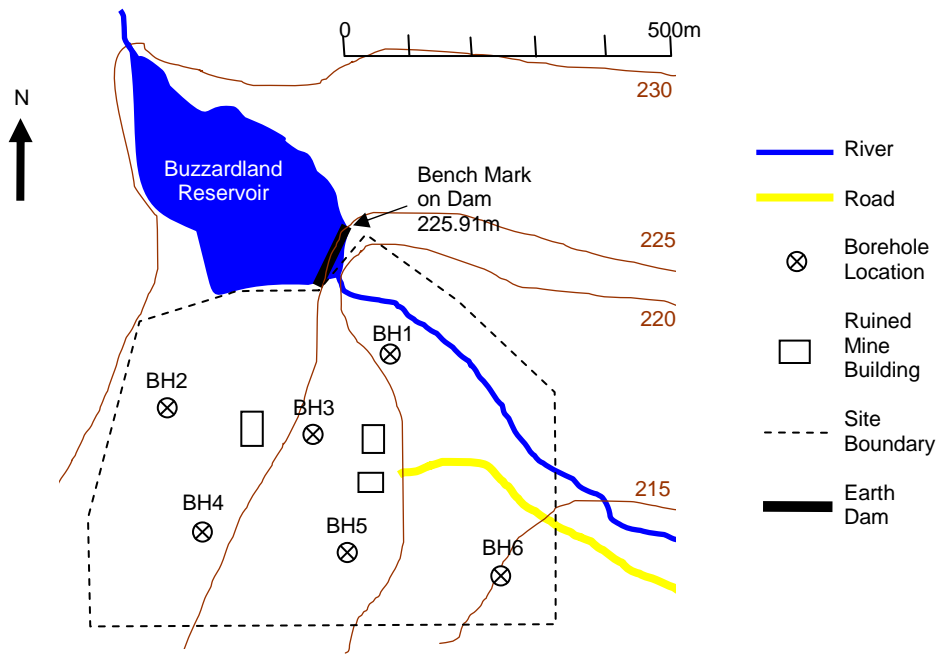
Power supply is available via a transmission line as shown on the map.

The following additional information will be supplied:

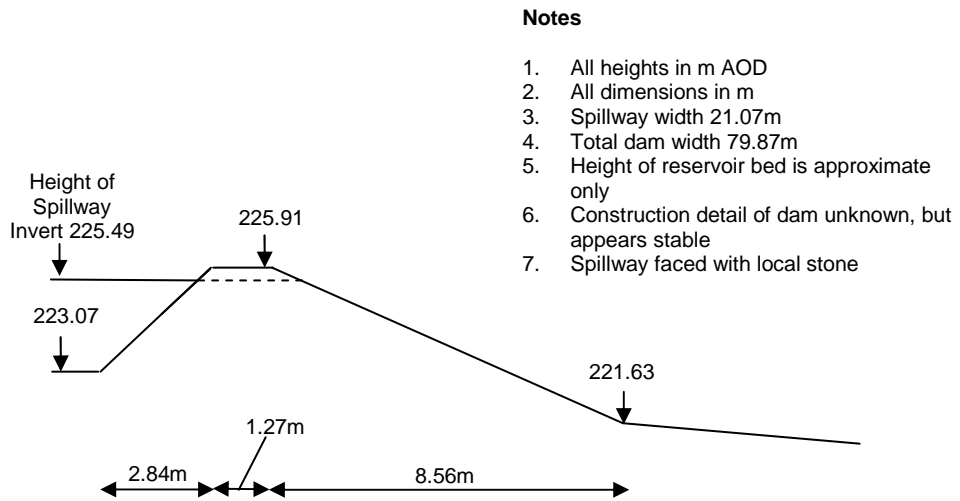
- Flow Data River Leadwash
- Raw water quality data
- Site Investigation Report
- Existing power supply network details

Proposed Buzzardland Water Treatment Works and North Kilbride Location Plan





**Buzzardland Water Treatment Works
Site Plan**



Buzzardland Reservoir Dam Details