

Springerbaai Report No 1 = RAIN HARVESTING
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Proposal for the introduction of rainwater collection gutters for storage in water tanks for houses.

Current Architectural & Building Regulations clauses state the following:

7.9.8 No standard gutters and external visible downpipes are allowed.

7.25 Rainwater Harvesting:

It is permitted to install tanks intended for the harvesting of rainwater only. All rainwater harvesting installations must comply with the following conditions:

7.25.2 Tanks to be used for the harvesting of rainwater may only be located underground.

7.25.3 No piping associated with the tank installation, including downpipes, and pumps, may be visible.

7.25.4 Prior to any work related to the installation of an underground tank, the following information must be presented to and discussed with the Estate Manager / BAC:

7.25.4.1 Tank location. Siting must take account of the soil conditions, bedrock, underground services, traffic over the site.

7.25.4.2 Excavation depth

7.25.4.3 Type and thickness of bedding

7.25.4.4 Water tank connection

7.25.4.5 Backfill and compaction

7.25.4.6 Dressing

7.25.4.7 Replacement of vegetation

7.25.4.8 Overflow / run-off

In view of the probability of continued future scarcity of water & the Ethos/Vision to adopt good principles of sustainability at SB Eco Estate the collection of rainwater, particularly off thatched roofs which are the predominant roof cover for houses on the Estate, is proposed.

Rainwater collected off roofs can then be stored in water tanks on site and the option to locate tanks above ground, rather than only underground, is also proposed.

Both above proposals if accepted are to have specific requirements to be strictly adhered to which include the following:

1. GUTTERS FOR THATCH EAVES:

A specifically designed gutter & support system for application to all thatch roofed houses on the Estate that choose to harvest rainwater is required.

The type of gutter proposed has Architectural historical & vernacular precedence in the Cape & internationally where thatch roofs were and still are used.

The gutter is not intended as a continuous element to the entire thatch eave perimeter but should rather be fitted on straight eave runs & eave corners particularly where roof valleys occur.

In addition to collecting water off thatched roofs the gutter system will provide protection from roof rainwater discharge where access to doors or walkways located under eaves occur.

Refer attached detail:



The gutter proposal comprises an external V-shaped hardwood timber construction with an internal waterproof membrane lining to protect the timber & allow rainwater to more easily discharge to downpipes to be concealed or screened with timber cladding.

Gutters are to be supported off exposed timber rafter poles with steel brackets as shown, rather than off brackets fixed to walls, as shown in the photos below. Brackets to be powder coated or painted black and external surfaces of timber gutters are to be stained as dark as possible to blend in with typical dark grey thatch eave edges.







2. WATER TANKS:

Water tanks above ground are to be suitably screened from view by neighbours or from public areas such as roads.

Various makes & sizes of water tanks are available.

It is proposed that the maximum size tank allowed should be a 5000 Litre tank which is approximately 1800mm dia. x 2040mm high.

The current permitted yard wall height is 2000mm.

Location & designation of gutters will determine where water storage tanks should preferably be located to avoid excessive length of gutters & limit the number of discharge downpipes.

The potential of using water stored in tanks for firefighting purposes in conjunction with a suitably sized high-pressure pump device is another advantage to be gained.

Should a suitable “out of sight” location such as a screened yard not be available or possible then tanks must be screened using timber latte (slats), as prescribed for screening of sheeted pergola roofs, supported by timber posts & fixing rails.

The vertical spacing/centres of latte will be prescribed to ensure the most aesthetic appearance of screens so they do not appear too solid or too open. Height of screens to ensure adequate screening of tanks.

Planting of indigenous shrubs in front of screens is recommended to enhance the overall visual impact.

Refer typical screen photos below.



Homeowners have the option to choose whether they prefer water storage tanks to be located underground, concealed under decks if suitable or above ground as currently permitted. In the event that a tank is to be located above ground the BAC will make recommendations to the Homeowner/Architect for the most suitable location and screening similarly as currently indicated in A & B Regulation items under 7.25.4, where applicable.