KWAZULU-NATAL PROVINCE
HUMAN SETTLEMENTS
REPUBLIC OF SOUTH AFRICA

Policy Communiqué

Circular No. 1/2022

Date: 24 January 2022

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INDEX **PAGE**

REVISED POLICY DIRECTIVE TO DETERMINE DEMOLITION COSTS RELATING TO FORMAL STRUCTURES

Since the initial approval of the Policy Directive to Determine Demolition Costs in 2012, the costs have not been aligned to inflationary changes and current market trends. This has created a challenge for implementing agents and developers to undertake rectification work in the current economic environment. In view thereof, the Revised Policy Directive to Determine the Demolition Costs Relating to Formal Structures was approved by the MEC for Human Settlements with effect from 6 January 2022.

POLICY DIRECTIVE

1. Methodology

Market related costs need to be measured against a scientific norm that can be quantified. Such an approach needs to satisfy the requirements of the Public Finance Management Act in that a specific cost can be measured against a specific task. In view thereof, a market-based approach that identifies key areas to be considered in determining an annual demolition guideline is imperative.

Thus, the costings were based on the following:

a) Plant calculation:

This entails hiring of machinery i.e., tractor-loader-backhoe (TLB), bobcat and truck. The hire rate per each item of machinery, with a further breakdown of the fuel costs to operate the machinery and the approximate number of hours the machinery could be utilized to undertake the demolition.

b) Labour calculation:

This entails hiring qualified drivers to operate the specific machinery with a further breakdown of the costs to operate the machinery measured against the number of hours each driver would be required to undertake the demolition. The costs for Plant hire and Labour are added to total an amount for each demolition based of an 18 m² unit. Concessions are made for possible overheads and maintenance.

2. Determination of Revised Costs

To revise the demolition costs, the basic principles used in the initial directive based on an 18m² unit was used. The Department's quantity surveyor undertook the revision of the costs based on the current average market related prices/costs at an increase of 15%. The revised costs are as calculated in the tables below.

DEMOLITION CALCULATIONS (based on 18m² unit)

PLANT	HIRE RATE (per hour)	FUEL (Cost per Hour)	NO OF HOURS	TOTAL
TLB	R311.00	R207.00	1	R 518.00
Bobcat	R207.00	R138.00	2.5	R 862.50
Truck 10m³ & driver	R403.00		1	R 402.50
Establishment	R59.00		10	R 591.43
PLANT COST				R2373.93

LABOUR	HIRE RATE (per hour)	NO OF HOURS	TOTAL
TLB Driver	R28.80	1	R 28.75
Bobcat Driver	R31.63	2.5	R 79.06
Truck 10m³	Included in Plant Cost above		
Supervision (GF)	R230.00	4.5	R1035.00
LABOUR COST			R1142.81

PLANT COST	R2373.93
LABOUR COST	R1142.81
TOTAL: A	**R3516.75**

Cost Rate per m² for 18 m² unit (Total: A ÷ 18)	**R195.37**

MAINTENANCE ALLOWANCE*	R99.63
OVERHEADS	R351.67
TOTAL: B	**R451.29**

***Market Price for New Machines Used to Calculate Maintenance Allowance**	
Cost TLB New	598 000
Cost Bobcat New	399 970

Cost Rate per m² for 18 m² unit (Total: B ÷ 18)	**R25.07**

GRAND TOTAL: (Total A + Total B)	**R3968.04**
Rate per m²	**R 220.44**

NB: *it is acknowledged that the costs may vary from time to time, hence it is suggested that all submissions of this nature be verified by the Department's quantity surveyors to confirm that the costs are reasonable, based on current market related costs/prices.*

---------END--------

REVISED POLICY DIRECTIVE ON RAINWATER HARVESTING SYSTEMS

In 2011, the KZN Department of Human Settlements issued an interim policy directive in relation to the installation of rainwater harvesting systems in rural housing projects. The lack of standards designs and costings by regulatory bodies resulted in the policy directive being issued on an interim basis as a matter of urgency to help alleviate the water shortage problems experienced by poor rural communities in the province.

Challenges with respect to the unaccounted inflationary increase in the cost of rainwater tanks and the associated installation has resulted in smaller tanks being installed to keep the costs within the maximum amounts provided.

The MEC for Human Settlements approved the Revised Policy Directive on Rainwater Harvesting (RWH) Systems on 06 January 2022. This revised policy directive points to the relevant legislation and regulations, as well as best practices to provide a more structured and informed guide to implement RWH in rural projects.

1. PREAMBLE

Many impoverished rural communities in KwaZulu-Natal experience continuous climate change-induced water scarcity for prolonged periods of time. The implementation of the KZN RWH interim policy directive in 2011 has provided a response mechanism to help alleviate water insecurity issues experienced in these rural areas.

Rainwater in rural areas is often used as a sole source of water supply rather than a supplementary source and has been used for both potable and non-potable purposes. The use of rainwater for potable purposes i.e., drinking and cooking is strongly discouraged, however it has been used in extreme instances where water availability is a bigger issue than water quality. In such cases, strict protocols and preventative measures have to be applied to minimize the potential health risks for end users.

Untreated/unfiltered rainwater poses a potential health risk to consumers. In view of this, end users/beneficiaries are to give written acknowledgement that harvested rainwater is to be used for non-potable purposes only and if used for potable purposes the Department will not be held liable for any losses or damages incurred **(Annexure A)**.The Department will not be held liable for any costs incurred for the distribution of rainwater for indoor use (through a pump) or the maintenance of the rainwater harvesting system once installation is complete. This will be the responsibility of the end user/beneficiary.

Specific Rainwater Harvesting guidelines relating to rural water supply are not readily available in South Africa in which case the more general guidelines relating to water supply must be considered. The RDP Rural Water Supply Design Criteria Guidelines published by the Department of Water Affairs and Forestry (1997) applies. Despite the lack of a clear-cut legal framework, the revised specifications, cost and other important considerations detailed hereto shall apply in the instance of installing a rainwater harvesting system in a rural housing project.

2. RWH SPECIFICATIONS FOR RURAL HOUSING

As per the National Housing Code, Volume 2: Technical guidelines, it is pertinent that the Engineer/Designer for plumbing fittings understand all the various guidelines, policies, standards and best management practices for water supply systems design and plumbing. The following may be used as a guide when installing a rainwater harvesting system in a rural housing project:

2.1 Catchment area

a) Rainwater collection surfaces (roofing) in rural housing projects should be constructed from inert, non-toxic materials like cement, corrugated and galvanised iron.
b) Overhanging trees/branches/vegetation must be removed.

2.2 Conveyance

a) All plumbing fittings including gutters, downspouts and piping to be in accordance with SANS 10252-1:2016 (Edition 3.1).
b) A mandatory coarse screen between the guttering and the delivery pipe must be included (wire mesh) in order to prevent the ingress of large foreign bodies, such as leaves.
c) Installation of a rainwater harvesting system for outdoor use only requires installation of a standard brass tap on the storage tank. It is recommended that a 'demand' tap be installed to prevent wastage.

2.3 Storage tank

a) A minimum tank size of 2500L must be installed in a rural housing project.
b) Water tanks must comply with SANS 1731:2017 which is the national tank standard for water tanks. It is not compulsory for water storage tanks to be SABS approved but must comply with SANS 1731:2017.
c) Tanks must be UV resistant to prevent algae growth.
d) Adequate covering must be used to prevent influence from direct sunlight, human, animal and organic matter from entering the storage system and mosquito breeding. A fine screen between the delivery pipe and the tank and at all openings to the tank will prevent access by insects and rodents.
e) In accordance with SANS 1186-1:2015 for symbolic safety signs, signage must be attached to the rainwater tank to make consumers aware on the danger of drinking untreated rainwater **(Annexure B)**.

2.4 Filtration system

a) A mandatory 'first flush' system must be incorporated into the rainwater collection system for a rural housing project, to remove as much contamination as possible before the storage tank starts to fill. This acts as a contamination barrier that diverts initial surface runoff from the first rainstorms of a season, along with the possible contaminants it carries, away from the tank. The first-flush diverter must be empty when rainfall starts, and consumers must be encouraged to inspect it frequently.

2.5 Post-installation water treatment and maintenance

The following water treatment methods are to be communicated to end users/beneficiaries if water is used for potable purposes from RWH tanks in rural communities once installation is complete:

a) For drinking purposes water must be boiled to kill any harmful bacteria, viruses or protozoa (WHO, 2003). The water can then be cooled and stored in a clean container until use. To improve the taste of boiled water, it must be poured back and forth from one clean container to another, or it should be left to stand for a few hours to increase the dissolved oxygen concentration.

b) Periodic inspection of the RWH system is imperative to preserve quality, reduce contamination and ensure full use of the system. It does not require skilled labour. Cleaning of catchment areas before the start of every rainy season should be a normal practice. Also, annual inspection and cleaning of the storage tank, gutters, down-pipes and filters (3 to 6 months) is sufficient.

3. COST CONSIDERATIONS

3.1 The rainwater storage tank usually represents the biggest capital investment element of a small-scale rooftop rural rainwater harvesting system and therefore require careful design to provide optimal storage capacity while keeping the cost as low as possible.

3.2 Estimates of the cost of installing a complete rainwater harvesting system with installation is approximately **R10 430 (including VAT) for a minimum 2500L tank** including a first-flush diverter. The amount of R10 430 is based on revised calculations obtained from RWH service providers/installers **(Annexure C)**.

3.3 An all-inclusive maximum amount of R10 430 is recommended for a minimum 2500L tank, with all fittings and plinth, subject to NHBRC and municipal approved plans/drawings/specifications, and final costs, post NHBRC approval.

3.4 Departmental quantity surveyors are to give final confirmation prior to any agreement of instruction of works.

4. IMPORTANT CONSIDERATIONS

4.1 All relevant approvals must be sought during the pre-installation stage from a municipality if applicable.

4.2 Advents of new rainwater harvesting technology may be considered subject to SANS accreditation and NHBRC/municipal approval. Market research has shown that advents of new RWH technology are offering improvements over conventional systems in that they fulfil all functionalities, namely: collection, filtration, disinfection, storage and distribution in one aesthetically pleasing solution. There are also more user-friendly systems designed as a fit-and-forget solution, requiring minimal maintenance.

4.3 Installations must be done by a qualified plumber who is registered with a professional body. In addition, there must be a proven track record and experience as well as adherence to standards and by-laws.

ANNEXURE A: DISCLAIMER / ACKNOWLEDGEMENT LETTER TEMPLATE

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REPUBLIC OF SOUTH AFRICA

Private Bag X54367, DURBAN, 4000
Eagle Building, 353-363 Dr Pixley kaSeme Street, Durban, 4001
Tel: 031 336 5300

OFFICE OF THE HOD

PROJECT NAME		**BENEFICIARY ID NO.**	
PROJECT NO.		**BENEFICIARY NAME**	

To whom this letter may concern,

This letter serves to inform you, the beneficiary that the rainwater harvesting system installed on your property should only be considered as a supplementary supply for non-potable (non-drinking) use since it could pose a health risk.

You are advised to seek professional advice from an accredited service provider should you wish to use the harvested rainwater for potable purposes.

The Department will not be held liable for any costs incurred for the distribution of rainwater for indoor use (through a pump) or the maintenance of the rainwater harvesting system once installation is complete. This will be the responsibility of the end user/beneficiary.

The Department is not liable for any consequential damage or loss arising directly or indirectly from such water use.

THUMB PRINT

Signature: _____ **Date:** _____

ISITHASISELO A: INSUSELAKUYO YENCWADI YOKUZIHLANGULA/ YOKUVUMA

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Ucingo: 031 336 5300

IHHOVISI LENHLOKO YOMNYANGO

IGAMA LOMKLAMO		**INOMBOLO KAMAZISI YALOWO OHLOMULAYO**	
INOMBOLO YOMKLAMO		**IGAMA LALOWO OHLOMULAYO**	

Kubhekiswe kulowo eqondene naye

Le ncwadi iyakwazisa wena ohlomulayo ukuthi uhlelo lokudonswa kwamanzi emvula olufakwe endaweni yakho kumele luthathwe ngokuthi lungelokwengeza ukuphakelwa kwamanzi okungewona awokuphuzwa (angaphuzwa) njengalokhu ukuphuza lawa manzi kungabeka impilo engcupheni.

Uyelulekwa ukuba ufune iseluleko sikangoti kumhlinzekimsebenzi ogunyaziwe uma ufisa ukusebenzisa lawa manzi emvula ngenhloso yokuwaphuza.

UMnyango angeke uthweswe icala lanoma yiziphi izindleko ezidaleke ngenkathi kusatshalaliswa amanzi emvula ngamapayipi ngenhloso yokuwasebenzisa ezindlini (ngamaphampu) noma ukunakekelwa kohlelo lokudonswa kwamanzi emvula emva kokuba sekuphothuliwe ukufakwa kwalo. Lokhu kuyokuba ngumthwalo walowo ozowasebenzisa/ lowo ohlomulayo.

UMnyango awunasibopho sanoma yimuphi umonakalo kumbe ukulahlekelwa okuyovela ngqo noma ngenye indlela ngenxa yalokhu kusetshenziswa kwamanzi.

UKUCINDEZELA ISITHUPHA

Isignesha: _____ **Usuku:** _____

ANNEXURE B: OFFICIAL SIGNAGE FOR DISPLAY ON RAINWATER STORAGE TANK (SANS 1186-1:2015 for symbolic safety signs Part 1: Standard signs and general requirements

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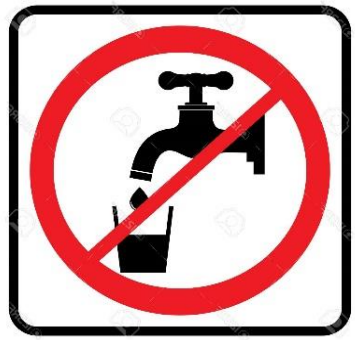

NON-DRINKING WATER IN USE

DO NOT DRINK!

KUSETSHENZISWE AMANZI ANGAKULUNGELE UKUPHUZWA

UNGALOKOTHI UWAPHUZE!

ANNEXURE C: COST BREAKDOWN OF RAINWATER HARVESTING SYSTEM FOR RURAL HOUSING PROJECTS

Description	Qty	Price (incl.vat)
2700 litre vertical plastic tank	1	R4,050.00
First flush diverter	1	R530.00
Concrete base 2500L	1	R2,500.00
Pipework/fittings	1	R800.00
Labour	1	R2,500.00
Signage	1	R50.00
	TOTAL COST	R10,430.00

---------END--------

The detailed Revised Policy Directive to Determine Demolition Costs Relating to Formal Structures and the Revised Policy Directive on Rainwater Harvesting Systems may be accessed on the Department's website on the following link: https://www.kzndhs.gov.za/index.php/features/policy-documents/provincial-policies