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# AMPS Best Practice and Guidelines

for  
**Mobile and portable toilets where  
connection to a sewer is not practical.**

**“BUILDING TOWARDS A SUSTAINABLE SANITATION INDUSTRY  
IN A CLEAN ENVIRONMENT”**

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## 1. INTRODUCTION

This guideline specifically applies to mobile and portable toilets that are not connected to a sewerage system and is a minimum recommendation for standards and requirements within this industry, including pertaining to servicing delivery.

The Best Practice and Guidelines is designed for the industry based on reference made to South African Regulations and Policy documentation available, as well as other international industry specific best practice guidelines.

<u>LEGISLATIVE DOCUMENT</u>	<u>OUTLINE /DESCRIPTION</u>
<b>General</b> National Sanitation Policy 2016	Current used as the guideline for Water and Sanitation <a href="https://www.gov.za/sites/default/files/gcis_document/201706/national-sanitation-policy.pdf">https://www.gov.za/sites/default/files/gcis_document/201706/national-sanitation-policy.pdf</a>
SANS 30500:2019 SANS 30500:2019	Non-sewered sanitation systems Prefabricated integrated treatment units General safety and performance requirements for design and testing
Occupational Health and Safety Act	(Act No. 85 of 1993)
<b>Construction sites</b> SANS 10400:2011	The application of the National Building Regulations Pertaining to Sanitation namely: Part F: Site operations Part Q: The application of the National Building Regulations Part S: Facilities for persons with disabilities
<b>Events</b> Safety at Sports and Recreational Events Act, 2009	Safety at sports and recreational events regulations
SANS 10366:2012	Health and Safety at Events
<b>REFERENCE DOCS</b> European Standard BS EN 16194:2012	Mobile non-sewer-connected toilet cabins

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## 2. SCOPE OF BEST PRACTICE GUIDELINE

It specifies guidelines and minimum quality requirements relating to:

- a) deployment of portable toilets at a given location including:
  - number of units required
  - specifications of unit
  - sanitary products
  - delivery of units
- b) servicing of units including:
  - cleaning and maintenance
  - disposal of waste
  - collection of portable toilets
  - treatment of spillages
- c) quality control and health and safety precautions

### 2.1 Sites identified in this Guideline for placement of portable toilets are, namely:

- a) Events
- b) Construction sites
- c) Informal settlements
- d) And any other sites where portable sanitation may be required e.g., mines, temporary shelters, etc.

### 2.2 The minimum requirement for portable toilets

The requirement for an “adequate and readily accessible” facility feeds into the minimum requirement for the number of portable toilets at a given location and requirement.

## 3. TERMS AND DEFINITIONS

For the purposes of this document, the following terms and definitions apply:

- a) **Mobile and Portable toilets non-sewer connected** - portable, self-contained toilet unit intended to be used by a single person, with a waste tank that is not connected to a sewerage system.
- b) **Sanitary product** – Concentrate with sanitary effect (liquid or solid); antifreeze for the waste tank; scented oils; toilet paper.
- c) **Service** - Planning and advice, delivery of the portable toilet, on-site servicing, waste disposal and collection of the unit.
- d) **On-site servicing** – Specified process of cleaning, replenishment, and maintenance.

## 4. THE DEPLOYMENT OF PORTABLE TOILETS

Considering the following minimum quality requirements:

- a) the number of units to be provided
- b) specifics relating to site service delivery
- c) servicing intervals

**4.1 EVENTS**

Proper planning is the key to successful special events and mass gatherings.

Since visual effects make the greatest impression on attendees, special consideration should be given to quantity, placement, and service.

An unpleasant experience with a portable restroom can affect the user’s attitude toward the event itself. Providing too few units can have a major economic impact on promoters and vendors. Providing too many units can cause an excessive expense for the promoters.

The following chart provides a guideline in determining the number of portable restroom facilities necessary to provide adequate service for your customers:

	<b>No. of users (50 % male and 50 % female)</b>	<b>Minimum number of toilets (for an event of up to 6 hours duration)</b>	<b>Minimum number of toilets (for an event of up to 12 hours duration)</b>
a)	Up to 249	2	3
b)	250 to 499	3	5
c)	500 to 999	6	9
d)	1 000 to 1 999	12	18
e)	2 000 to 2 999	25	38
f)	3 000 to 3 999	38	57
g)	4 000 to 4 999	50	75
h)	5 000 to 5 999	63	95
i)	6 000 to 6 999	75	113
j)	7 000 to 7 999	88	132
k)	8 000 to 8 999	100	150
l)	9 000 to 9 999	113	170
m)	10 000 to 12 499	125	188
n)	12 500 to 14 999	156	234
o)	15 000 to 17 499	188	282
p)	17 500 to 19 999	219	329
q)	20 000	250	375
r)	Over 20 000	Individual calculation required	

**Cleaning recommendation:**

(This section will require individual calculations depending on Event specs.)  
 If an event lasts longer than 6 hours or 12 hours, the portable toilet should be cleaned at intervals of 6 hours or 12 hours.

**4.1.1 Placement of portable toilets**

The location and accessibility of the toilet depends on the type of event and units provided as well as the Customers requirement and job spec.

**Pointers to consider when doing calculations:**

- a) In the event of food and drinks to be served, the number of toilets should be increased owing to a higher frequency of use.
  - An increase of at least 30 % is recommended.
- b) Where separate male and female facilities are to be provided, adequate facilities should be provided for each sex accordingly:
  - if the percentage of female users exceeds 50 %, the number of toilets should be increased.
  - for men, a 50/50 split between urinals and toilets is typically considered ideal.
  - if more than half of the guests will be women, it is advisable to add at least one extra toilet per 50 people.
- c) When taking disability into account, i.e., namely for wheelchair users, a minimum of one wheelchair-accessible toilet should be provided.
- d) Always keep in mind the estimated maximum attendance figures.
  - For events involving comparatively large numbers of people, the industry’s minimum recommended number of toilets per person is usually one toilet per fifty people (1:50).
- e) In addition, bear in mind that:
  - for events involving large crowds, like rock concerts or sports events, organisers often reduce the standard 1:50 ratio, for example to five toilets per one thousand people.
  - for a smaller, more intimate event like a wedding, a ratio as high as 1:15 is more comfortable.

**IMPORTANT NOTE:**

*If you are involved in planning a public event, always ensure you are aware of any local or municipal requirements.*

**4.1.2 Servicing of units**

Toilets should be regularly maintained and serviced throughout the event by using suitably experienced and competent workers to ensure that the toilets are kept safe, clean, and hygienic. Care should be taken to treat any spillage around the portable unit.

**4.2 CONSTRUCTION SITES**

The table below is an indication of how many portable toilets are needed based on the number of employees:

No. of users	No. of Units
1 to 10	1
11 to 20	2
21 to 30	3
31 to 40	4
Over 40	One additional toilet for each 10 additional users

**Cleaning recommendation:**

The portable toilet should be cleaned at least after 7 working days of 8 hours each.

#### 4.2.1 Placement of toilets as per Construction site specific recommendations

Portable toilets are the primary sanitation facility for the construction industry. Contractors realize that when employees must leave the job site or walk too far to use the facility, it costs money. It is thus a recommendation that the unit should be placed at least thirty metres from the workers' central location.

Standard temporary toilets however are to be provided on any construction site in accordance with the Occupational Health and Safety regulations and the Standards applying to Construction sites.

#### 4.2.2 Servicing of units

Sanitary facilities should:

- a) Be positioned as not to be offensive.
- b) at all times be maintained in a clean and hygienic condition.
- c) unless they are of a permanent nature, be removed immediately once such building work has been completed.
- d) once the unit is removed, check whether the area needs to be cleaned and treat for any spillage.

### 4.3 INFORMAL SETTLEMENTS

Recommended no. of users/households	No. of Units
1 -3	1
<b>Recommended cleaning by contractor:</b>	
This will vary based on the type of unit provided, specific site requirements as well as contractual arrangements pertaining to delivery of service or tender spec.	

When providing a portable toilet, the following should be considered:

- a) The provision of portable chemical toilets within informal settlements is intended to replace community self-excavated pit latrines which are not safe and have potential of creating a health hazard.
- b) A toilet should be safe, reliable, environmentally sound, easy to keep clean, provide privacy and protection against the weather, well ventilated, keep smells to a minimum and prevent the entry and exit of flies and other disease-carrying pests.
- c) This service can include VIPs, formal black buckets, containers, and chemical toilets usually provided as a communal service.

#### 4.3.1 Placement of portable toilets

- a) As a guideline, its recommended that one chemical toilet should be shared between a maximum of three households.
- b) When positioning a toilet, both hygiene and safety should be considered with regards to the distance consideration.  
Location of the facility should be located within a safe walking distance, from the household. Not more than 100m away.
- c) The toilet must be placed on the flat ground level for safety and easy usage.

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#### **4.3.2 Servicing of units**

As outlined, this service will vary based on Contractual arrangements and dependent on specific site requirements of delivery outline including type of sanitation facility used.

- a) Chemicals used for the cleaning of toilets should be safe and approved for domestic purposes and ensure compliance with health and safety regulations.

### **5. PRODUCT REQUIREMENTS**

Hereby addressing Service delivery functions and meeting product requirement effectively.

#### **5.1.1 General Requirement**

- a) The toilet and its internal components should be of a quality and design that will provide a safe, clean, and hygienic temporary sanitary facility.
- b) The toilet should be manufactured with materials that are easily cleaned such as any type of plastic or alternative rust proof material such as fiberglass.
- c) The appearance of the portable toilet is important, and should be in good working condition, as it influences the acceptance of the unit by the user.
- d) The name and telephone number i.e., Company Branding of the company providing the portable toilets should be clearly legible on the outside of each unit.

#### **5.1.2 Minimum requirements**

- a) Suitable exterior surfaces should be available for attaching stickers or signs.
- b) The interior width of the unit should be a minimum of 920mm when measured from wall to wall at a height above the seating area.
- c) Internal length of the unit should be a minimum of 920 mm when measured from door to wall at a height above the seating area.
- d) The internal height should be a minimum of 2000mm, when measured from floor to highest point of the cabin.
- e) Adequate light should be provided in the unit, preferably by using an opaque / translucent roof.
- f) When the cabin is closed it should not be possible to see in from outside.
- g) The portable toilet should provide adequate ventilation.
- h) The door shall be lockable from inside.
- i) A holder for adequate toilet paper should be available.
- j) There should be a waste tank inside the portable toilet, with a minimum overall capacity of 180L.
- k) The opening of the tank should be fitted with a toilet seat shape or allow for squatting position.
- l) The tank should have a means of ventilation leading outside of the toilet. The pipe should be minimum 50mm in diameter.
- m) The tank system should be one of the following:
  - Drop tank
  - Re-circulating flush tank with bowl and hand or foot pump
  - Fresh water-flush tank with bowl and hand or foot pump
- n) The skids of the portable toilet should be suitable for transport by a forklift or pallet truck.

#### **5.1.3 Disabled requirement - Wheelchair-accessible portable toilet**



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Adequate provision should be made for persons with disability and application regulation to be applied.

- a) Portable toilets for disabled people should be easily accessible, must be spacious enough and built-in bars for users i.e., there should be a handrail inside the unit to hold onto.
- b) A wheelchair-accessible toilet should be at ground level.
- c) Door opening width should be at least 800mm wide, to allow wheelchair access.
- d) The interior of the cabin should be at least 1500mm x 1500mm with a height of 2000mm.

## **5.2 Product Requirements (trailer based) portable toilets**

### **5.2.1 Internal and external requirements**

- a) The waste tank should have a means of ventilation leading outside.
- b) Both the fresh water and wastewater tank systems should be fixed and safe to transport with no leakages.
- c) The waste storage tank should have a minimum useable capacity of 300L.  
The waste storage tank should have a standard 80mm (3") outlet valve for disposal and extraction.
- d) The freshwater tank will have a minimum usable capacity of 100L.
- e) Fresh water flush toilets will provide a flush of fresh water to the toilet bowl providing a minimum of 200 ml per flush.
- f) The portable toilet should have appropriate stabilizers to keep the trailer level, stable and secure during use.
- g) Where entry to the portable toilet is higher than 300mm, the trailer should have steps leading up to the unit.  
If the trailer is higher than 500m, handrails should be on all ladder steps.  
These ladder steps should be anti-slip and the spacing between each step should be no more than 300mm.
- h) The trailer should comply with all regulations according to the National Road Act 1996 (Act 93 of 1993), or the equivalent for the country of operation.
- i) The trailer should be road worthy and licensed.
- j) If the trailer has a gas or 220V electrical installation, a valid certificate of compliance should be mandatory.

### **5.2.2 Disabled requirement - Wheelchair accessible portable toilet (trailer-based)**

The trailer-based disabled access unit should comply with the SANS standards, including but not limited to the following:

- a) The trailer unit should have a ramp leading up to the toilet.
- b) The ramp should be:
  - at least 1100mm wide
  - have side rails if higher than 600mm from the ground
  - be at a gradient less than 1:12
  - made from an anti-slip material
- c) The ramp should have a landing at the top of at least 1200mm long, clear of any door swing and as wide as the ramp.
- d) The door to the toilet should be at least 800mm wide.
- e) The internal dimensions should be no less than 1800mm x 1800mm.
- f) The internal height should be no less than 2m.

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- g) The toilet seat height should be min 480mm and Max 500mm high.
- h) Grab rails suitable for use by persons with disabilities should be provided at the side and back of the toilet.
- i) Sanitary fixtures and fittings, such as the soap dispenser, hand drier, mirror, coat hooks and toilet paper holder should be easy to use and easily accessible to any person in a wheelchair.
- j) All additional points for trailer-based units from section 5.1 also apply to disabled access toilet trailers.

### 5.3 Supplementary equipment

Any supplementary equipment may include the following, among others:

- a) interior:
  - hand wash basin (should be available inside or outside facility)
  - mirror
  - wash-hand basin
  - soap dispenser
  - hand disinfection dispenser
  - towel dispenser
  - lighting
  - corner shelf
  - female sanitary unit
  - coat hook
- b) exterior:
  - external lock
  - transport devices such as crane hooks
  - signs for men/women
  - "Occupied indicator" on door of toilet

## 6. PROPER SERVICING AND DELIVERY

### 6.1 Delivery of portable toilets

Delivery must be on time as per the agreement between the Customer and the Company and ensuring correct deliverables pertaining to:

- a) product type
- b) correct site
- c) location of toilets convenient for customer and ensuring service accessibility
- d) safe work procedure followed throughout delivery

### 6.2 Sanitary products

#### 6.2.1 Sanitary Chemicals (Additives)

Sanitary concentrates (additives) must be effective under any weather conditions, for at least 7 days, unless for events or twice weekly servicing.

Within this period, the following criteria should be maintained:

- colour
- odour control
- fragrance

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Best practice recommendation is the use of non-formaldehyde chemicals, and it is also recommended that they should include deodorisers.

Products should be environmentally compatible to ensure compliance with the relevant environmental and health and safety regulations.

The chemical product (additive) must include a safety data sheet (SDS) which must be available for each sanitary concentrate /chemical.

Additives should be REACH 1907 certified. If the additive is not REACH 1907 certified, the product Data sheets must be formally submitted to and accepted in writing by the end user (Client) and the relevant water and sanitation treatment plant where the waste is disposed of.

### **6.2.2 Urinal treatment solution**

#### a) Deo Blocks -

These should radiate a pleasant fragrance and should be environmentally compatible.

### **6.2.3 Toilet paper**

Contractors will have to adhere to and comply fully with contractual requirements when dealing with the arrangement for the provision of toilet paper for the convenience of users.

Single ply toilet paper is preferred as it breaks down easier and reduces the risk of mounding.

## **6.3 Servicing the portable toilets**

A toilet is deemed unusable or not available if it is not adequately sanitized and cleaned for use.

Remember, an unsanitary toilet does not meet the requirements for an “adequate and readily accessible” toilet.

To help you meet the minimum requirement:

- a) the regularly servicing of a portable toilet is most important to ensure a sanitary condition.
- b) only clean with approved chemicals and methods that are appropriate for the cleaning of toilets.
- c) ensure sufficient charge load to prevent mounding i.e., a minimum of 20l of water with sanitary concentrate.
- d) Ensure toilet disinfecting.

### **6.3.1 On site cleaning**

The provider is required to “establish and implement a schedule” to ensure that portable toilets are maintained in a clean, sanitary, and serviceable condition.

Servicing should include cleaning at intervals based on requirement (Type: Event/Construction site, etc.):

- a) Use correct PPE equipment as per the health and safety requirement pertaining to the task performed.
- b) Start by filling the toilet with 20 litres of water and one chemical sachet or block.
- c) For flushing models, pump all the air out of the system first, so that the water will cover the strainer in the tank or drum (water will reticulate).
- d) Best practice is to use non-formaldehyde chemicals, sachets, or blocks.
- e) Use one sachet after every service.
- f) Wash hands after handling the chemicals.
- g) Add toilet paper to the roll holders.
- h) Fill the wash hand basin or hand sanitizer.
- i) Portable toilet to be placed on hard stable ground, that is level and has access to the service trucks

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for cleaning and pump-outs.

- j) Use a diluted soap mix to wash or spray inside the portable toilet.
- k) Use a rag or squeegee to dry off the plastic, no boiling water or acid to be used.
- l) If you are using a disinfectant make sure that it is diluted with water and that the surfaces are all wiped off and dry.
- m) Replace any loose rivets/ fittings, check and oil the door hinges and closure spring.
- n) If you are using waste drums, we recommend that you purchase 2 per portable toilet for efficient services and to substitute with one, while the other is being serviced and cleaned.
- o) A damaged or non-functional portable toilet should be repaired on site or replaced.

### **6.3.2 On site cleaning of the portable toilet in particular**

- a) exterior walls including door and roof, as necessary
- b) interior walls and ceiling
- c) inside of door
- d) toilet seat and lid (upper face and underside)
- e) interior walls of the waste tank, as necessary
- f) exposed exterior surfaces of the waste tank
- g) base and floor
- h) ventilation pipe
- i) treat/clean spillage which may have occurred within the immediate area of the toilet

### **6.3.3 Site maintenance**

During progress of the work and upon completion thereof, the portable toilet should be kept clean, and the site left in a safe, clean, and orderly condition.

The Company should be required to store materials and equipment for which it is responsible in an orderly manner and should keep the site free from debris and obstructions.

## **7. DISPOSAL OF WASTE /SEWAGE DUMPING**

The transportation and disposal of the waste should be in accordance with the required regulations as applicable.

The waste should be properly disposed of at the scheduled or assigned waste-water disposal points. as outlined by Local Municipalities, etc.

### **7.1 No sewage should be allowed to be diverted into the environment!**

- a) It is not permissible for waste material simply to be thrown away.
- b) The Company must contact the relevant officials regarding the dumpsites provided and all surplus or unsuitable material should be disposed of on a site provided in a relevant given depot area, within whose boundaries the site is located.

NOTE: This must be an approved site and the dumping must comply with all statutory and municipal regulations.

## **8. COLLECTION OF PORTABLE TOILETS**

- a) Complete pumping out of the contents of the waste tank into the service vehicle as per regulations.
- b) Removal of toilet paper and other consumables.
- c) Remove any loose unsecured items that may dislodge in transit.

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- d) Load and secure the unit onto a truck for transportation.
- e) Use tie-downs to secure your portable toilets in transit and make sure the doors are closed and locked.

## **9. QUALITY CONTROL AND HEALTH AND SAFETY PRECAUTIONS**

Based on the agreed service to be rendered, the onus to produce work that conforms in quality and accuracy of detail to the requirements of the Specifications rests on the Company to institute a quality control system as well as adhering to the Occupational Health and Safety Act (Act No. 85 of 1993).