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## GENERAL NOTICE

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### NOTICE 1665 OF 2005

#### DEPARTMENT OF PUBLIC WORKS

#### SPACE PLANNING NORMS AND STANDARDS FOR OFFICE ACCOMMODATION USED BY ORGANS OF STATE

This document provides updated norms for public office buildings and replaces previous norms in circulation. These norms apply to all office space used by organs of state (as defined in section 239 of the Constitution of the Republic of South Africa, 1996 (Act 108 of 1996)).

### Glossary

**“Cellular offices”** means offices with fixed walls and doors, which can be used to close the office off from other parts of the working environment;

**“Core”** refers to the area given over to the functions that are centrally managed and support the whole organisation or building. It also includes aspects such as circulation and the technical support spaces that are essential for the functioning of the building as a whole;

**“Daylight factor”** under totally overcast sky conditions, means the percentage of light that arrives on a horizontal surface within a building compared to the amount of light arriving on an unshielded horizontal surface outside;

**“Executive Management”** means Political Office Bearers; Directors-General and Chief Operating Officers in national departments and equivalent positions in provincial departments;

**“FTE / Full Time Equivalent”** represents a measure of the occupation of the building. One FTE represents 1 person occupying a workspace for 8 hours a day. An employee who is part-time and only occupies space for 4 hours a day would therefore be a 0.5 FTE;

**“Gross Construction Area”** covers the entire building area and is the total sum of areas measured at each covered floor area over the external walls, including internal parking, ground floor lobbies, corridors, basements, mezzanine floors, stairwells, lift shafts, ducts spaces and plant rooms;

**“Hot-desking”** refers to a situation where a number of employees (who work in a variety of locations) share a single work-station in a particular location;

**“Open-plan”** means a spatial layout in which there is minimal use of cellular offices, where people generally work at workstations divided by movable partitions rather than permanent fixed walls. Cellular offices are provided where required for particular functional reasons, such as privacy, confidentiality, or a need for a quiet working environment;

**“Organ of State”** means any department of state or administration in the national, provincial, or local sphere of government or any other organisation exercising a power or performing a function in terms of the Constitution or a provincial constitution or exercising a public power or performing a public function in terms of any legislation;

**“Senior Management”** means Deputy Directors-General in national departments and equivalent positions in provincial departments:

**“Structure”** refers to the area occupied by the immovable construction elements of the building such as walls, columns, slabs and beams;

**“Workspace”** refers to the area allocated to workstations and their immediate requirements like personal filing; and,

**“Workspace Support Space”** refers to the area allocated to functions that are managed by and support a section or working group, including rest rooms, catering facilities, tearooms, storage, information management, amenities and internal parking.

## 1. INTRODUCTION

This document provides updated norms for public office buildings and replaces previous norms. The norms apply to all office space used by organs of state in South Africa.

The **Background** section provides a summary of the key factors that have influenced the development of the norms. A number of **Principles** are then outlined which should be used to guide space planning and management. The **Overall Space Norms**, which provide a number of critical high-level norms which must be complied with, are set out in Clause 4. The application of the norms is described in Clause 5.

## 2. BACKGROUND

Many office buildings currently used by government in South Africa are not conducive to efficient and effective work processes and suffer from poor environmental conditions and space use. This can lead to poor morale, high staff turnover, low levels of productivity and compromised service delivery.

Internationally there has been increasing interest in understanding how organisational effectiveness and employee productivity in offices can be improved and service costs reduced. Advances in information and communications technology, innovative space planning approaches (often using open-plan layouts) and more efficient space management techniques (including concepts such as hot-desking), have resulted in improved performance, better

environmental conditions and decreasing space-use per occupant. The norms provided in this document are based on an analysis of both international and local trends.

The shift to open-plan accommodation for offices typically results in a saving of approximately 15% to 20% of floor area compared with cellular office space. Open office planning is suitable for a large proportion of functions performed by Government and the private sector. Internationally most office buildings now provide a substantial proportion of work space in open-plan offices supported by separate meeting and group work spaces. Some cellular offices are provided where required from a functional perspective.

Standards and legislation governing the built environment include the national building regulations, standards developed by the South African Bureau of Standards (SABS), and the Occupational Health and Safety Act. These are being continuously improved to reflect local needs and international best practice. Increasing concerns about sustainability are likely to lead to more stringent performance requirements within the areas of water and energy consumption as well as access for people living with disabilities.

The Batho Pele policy sets out standards that government should maintain with regard to service delivery. These standards include value for money, the setting of specific service standards, courtesy, consultation and access. There are clear implications of this policy for the design and management of government offices buildings, including:

- Providing adequate, well designed and clearly signposted reception and public service areas so as to enable the general public to access required services promptly and effectively; and,
- Ensuring all facilities used by the general public can easily be used by everyone, including old people and people with disabilities.

### 3. PRINCIPLES

The following principles must be followed in the planning, procurement and management of office space:

- **Fit:** Care must be taken to ensure that there is a good 'fit' between the organisation, its functions and the office accommodation. Organisations have many characteristics such as size, structure, culture, work patterns, change and internal and external relationships that must be matched with physical aspects of accommodation including size, layout, servicing and location.
- **Standards of Fittings and Finishes:** Government office space must represent effective and efficient use of government resources. Standards must therefore be reasonable and supportive of productive work, but not ostentatious or wasteful. Finishes and fittings must not be luxurious and must be durable and easily maintainable (except for prestige properties and prestige areas of buildings, which may require fittings of a higher standard).

- **Flexibility and Adaptability:** Office buildings must be able to accommodate change easily and inexpensively. This consideration must be reflected in structural design, emergency egress, circulation and services strategies, office layout design and in the selection of furniture. New buildings are to be designed on a column and slab principle so that all walls, except those supporting lift shafts and stairs, can be removed without impeding the structural integrity of the structure.
- **Environmental Quality:** Space must provide good levels of occupant comfort and health. This includes good day lighting (30% of lighting levels to be provided by natural light); external views; low energy consumption (20% of energy to be provided by renewable sources); low water usage (all sanitary fittings to be water efficient units); acceptable indoor air quality and reasonable thermal (18 – 22° C) and acoustic conditions. In achieving these conditions users should be provided with appropriate means to control their local environment and an over-reliance on mechanical systems should be avoided.
- **Lifecycle costs:** The operational costs of maintaining space, such as maintenance, cleaning and energy costs must be carefully considered and where appropriate, minimised.
- **Inclusion:** All offices used by government must be inclusive. This requires office layouts, procurement and management processes to comply with environmental standards that enable a wide diversity of people to visit and work in the building comfortably including old people, parents and children and people with disabilities.
- **Health and Safety:** Accommodation used by government must be fully compliant with the Occupational Health and Safety Act and all current building regulations. Consideration must also be made of the likely future legislative trends, such as increasingly stringent access for people living with disabilities and water and energy consumption standards.
- **Service Delivery:** Where an office building has a component which is open to the general public, care must be taken to ensure that appropriate environmental and service standards are maintained. Guidance provided in the Batho Pele policy must be followed.

#### 4. SPACE NORMS

Table 1 below provides the norms that office buildings used by organs of state are required to comply with. It also provides guidance on what the relative proportions of different types of space in office buildings should be.

Table 1: Space Planning Norms for Office Buildings

<b>A. Overall Space Norms</b>			
<b>A.1 Gross construction area per FTE</b>			
Applicable to: New office buildings procured by government			
<b>Measure</b>		<b>Norm</b>	
Gross construction divided by number of FTEs		Average gross construction area per FTE should not exceed 24m <sup>2</sup>	
<b>A.2 Workspace area per FTE</b>			
Applicable to: All office space used (included leased space) by government			
<b>Measure</b>		<b>Norm</b>	
Workspace area divided by number of FTEs		Average workspace area per FTE should not exceed 12m <sup>2</sup>	
<b>B. Workspace Norms</b>			
<b>B.1 Workspace area per function</b>			
Applicable to: All office space used (included leased space) by government			
<b>Function</b>	<b>Spatial requirements</b>	<b>Norm</b>	<b>Notes</b>
Administration	Open-plan. Some local storage.	Workspace area should be between 6-8m <sup>2</sup>	1. Standard hard wearing modular furniture should be used. 2. All workspaces should have a daylight factor of at least 10%. 3. Refer to definition of "open-plan" in glossary.
Technical & Management	Open-plan. Some layout space and or space for large equipment such as drawing boards.	Workspace area should be between 8-16m <sup>2</sup>	
Senior Management	Open-plan or cellular offices. Requirement for some privacy and space for small meetings.	Workspace area should be between 16-20m <sup>2</sup>	
Executive Management	Cellular offices. Requirement for privacy and space for small meetings.	Workspace area should be between 20-25m <sup>2</sup>	
<b>B.2 Support space per workspace area</b>			
Applicable to: All office space used (included leased space) by government			
<b>Function</b>	<b>Example</b>	<b>Guide</b>	<b>Notes</b>
Workspace support	Meeting rooms, rest rooms, catering, storage, information management, tea rooms, crèches and parking	Support space is usually between 55% to 65% of workspace area	1. Executive management such as Ministers and Director Generals have additional spatial requirements in the form of additional storage and large meeting spaces.
<b>B.3 Core space per workspace area</b>			
Applicable to: All new buildings, either owned or leased by government			
<b>Function</b>	<b>Example</b>	<b>Guide</b>	<b>Notes</b>
Organisation support	Circulation, technical support and facilities management	Core space is usually between 65% to 85% of workspace area	1. Centralised meeting areas: These should be easily accessible to both building users and visitors. They are therefore likely to be near the main entrance and on the ground floor.
<b>B.3 Structural space per internal area (workspace + workspace support + core)</b>			
Applicable to: All office space used (included leased space) by government			
<b>Structure</b>	<b>Example</b>	<b>Guide</b>	<b>Notes</b>
Structure	External walls, internal walls, structural columns	Structural space should not exceed 10% of (workspace + workspace support + core space areas)	1. Building must be designed to enable a range of different office layouts, allowing change to be accommodated.

The concept of open-plan accommodation should, as far as practically possible, be introduced in all situations where departments change their accommodation. However, it will not always be possible to convert existing buildings (and more specifically heritage buildings) into open-plan offices. Each building must nevertheless be analysed in this regard and where practically possible, as well as financially viable, there should be a move towards open-plan offices.

Although open-plan office accommodation provides for free movement within a specific open-plan area, individual workstations should be created for each person by using partitioning, to create an acceptable level of visual and acoustical privacy.

## **5. APPLICATION OF NORMS**

The norms must be applied at particular stages in space planning and management processes of office buildings.

### **5.1 Space Planning of Office Buildings**

A space planning exercise must be undertaken where a government department is planning to occupy an existing building or develop a new building for their accommodation. The norms must be used during this process to determine whether the proposed building or design is suitable.

A space planning exercise would normally follow the following steps:

1. Obtain organisational information: This would include all information that would have a bearing on the selection or design of a building such as size and structure of human resources, strategic objectives, activities, internal and external relationships, culture and work processes.
2. This information must then be used with the Workspace Norms in this document to develop an area schedule that describes the workspace requirement of the different organisational groupings within the organisation.
3. Each of these groupings of workspace usually requires support space such as meeting rooms, auditoria, rest rooms, tea-rooms, kitchens, crèches, storage rooms, equipment space and parking. A guide to the amount of "support space" required is usually 55% – 65% of the workspace. This space can then be added to the schedule as outlined in Table 2 below.
4. All buildings have some core functions such as circulation, technical support and facilities management areas. Examples of these areas are horizontal and vertical circulation, plant rooms and facilities management areas such as physical security, rest rooms, laundries, waste management and building management control rooms. A guide to the amount of this "core-space" required is usually between 65% – 85% of the workspace area. This area can be added to the schedule.



5. Structural elements such as external and internal walls and columns take up area and an allowance of approximately 10% should be provided for this area and added to the schedule.
6. Once this has been completed an overall space planning schedule has been provided for the organisation. This provides the suggested construction area and workspace areas required for the organisation. In selecting a building for the organisation to move into one should match the accommodation available with these two figures as closely as possible. In a new building this schedule provides a key input in the development of a concept design. Throughout the design process checks should be made to ensure that the designs are within the norms required.

*Table 2: Example of a section of space planning schedule (square metres)*

	<b>Workspace</b>	<b>Workspace Support</b>	<b>Core space</b>	<b>Structure space</b>	<b>Totals</b>
<b>Norm</b>	Norm: Space allocated to be in accordance with area norms per functional category	Workspace support area to be based on specific needs (usually between 55% and 65% of workspace)  Use 60% for planning purposes	Core area to be based on specific needs (usually between 65% and 85% of workspace)  Use 75% for planning purposes	Structural space (approximately 10% of workspace, workspace support and core areas combined)  Use 10% for planning purposes	Construction area
<b>Directorate A</b>					
Executive Senior Management (Post 1)	20.00	12.00	15.00	4.70	51.70
Technical (Post 1)	16.00	9.60	12.00	3.76	41.36
Technical (Post 2)	8.00	4.80	6.00	1.88	20.68
Technical (Post 3)	8.00	4.80	6.00	1.88	20.68
Administration (Post 1)	6.00	3.60	4.50	1.41	15.51
Administration (Post 2)	6.00	3.60	4.50	1.41	15.51
Administration (Post 3)	6.00	3.60	4.50	1.41	15.51
<b>Subtotals</b>	<b>78.00</b>	<b>46.80</b>	<b>58.50</b>	<b>18.33</b>	<b>201.63</b>

Once the building has been occupied it is important to check that there is continued compliance with the norms. This is done through space management assessments.

## 5.2 Space management of office buildings

An accounting officer should carry out a space assessment on an annual basis of office buildings used by organs of state. This is carried out in the following steps:

1. Determine the FTE users in the building.
  2. Determine the Gross Construction Area and Workspace of the building
  3. Divide the Gross Construction Areas and Workspace with the number of FTEs.
  4. Compare these figures with the norms.
  5. If these figures are in line with the norm no changes need to be made.
  6. Where these figures are significantly lower or higher than the norm further investigation should be carried out.
  7. If the figures are significantly lower than the norm it is likely that there is overcrowding. This may be solved through strategies to maximise space use such as hot-desking or increased use of ICT. However if these do not appear to solve the problem, and staff are unproductive as a result of the situation, alternative accommodation should be sought and a space planning exercise carried out (see above).
  8. Where the figures are significantly over the norm it is likely that space is being wasted. An investigation should be performed to identify areas where this is occurring and measures taken to address this. If it appears that the organisation, for the foreseeable future, is too small for the building, and strategies for improved space use (such as making space available for other users or tenants) will not work, alternative accommodation should be sought and a space planning exercise as described above should be carried out.
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