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GENERAL NOTICE

NOTICE 621 OF 2001

DEPARTMENT OF HOUSING

FIRST EDITION ENVIRONMENTAL IMPLEMENTATION PLAN (EIP)

NOVEMBER 2000

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**DEPARTMENT OF HOUSING
FIRST EDITION ENVIRONMENTAL IMPLEMENTATION PLAN**

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DEPARTMENT OF HOUSING ENVIRONMENTAL IMPLEMENTATION PLAN EXECUTIVE SUMMARY

CHAPTER ONE : MANDATE AND FUNCTIONS

1.1. Introduction

The National Environmental Management Act (NEMA), 1998 (Act 107 of 1998) sets out to provide for co-operative environmental governance by establishing principles for decision making on matters affecting the environment; institutions that will promote co-operative governance; procedures for co-ordinating environmental functions exercised by organs of state; and to provide for matters connected therewith.

Furthermore NEMA requires that national and provincial departments exercising functions which may affect the environment, in terms of *Schedule 1* of the Act, prepare an Environmental Implementation Plan (EIP) and to monitor and review their implementation on a regular basis. Also that national and provincial departments exercising functions involving the management of the environment, in terms of *Schedule 2* of the Act, must prepare an Environmental Management Plan (EMP). The Department of Housing is listed in *Schedule 1*, and is therefore required to prepare an Environmental Implementation Plan (EIP).

This first edition EIP for the Department of Housing has been prepared in pursuance of the imperatives of the Act and the guidelines provided by the Department of Environmental Affairs and Tourism have been utilised as far as possible taking into account the peculiarities of the housing sector.

1.2. Background

The housing vision is "a nation housed in sustainable human settlements".

1.2.1. Housing as a Process

Housing is defined as a variety of processes through which habitable, stable and sustainable public and private residential environments are created for viable households and communities. The building of an actual housing product is the culmination of many planning processes and legislative requirements which need to be adhered to before the actual housing units are constructed. Land development and the spatial planning system are therefore crucial to the housing process and are the responsibility of the Department of Land Affairs and the various provincial and local authorities. Planning processes and principles to which all development and planning processes need to adhere to include the Chapter 1 Principles of the Development Facilitation Act and the related setting of Land Development Objectives, the Integrated Development Planning Process and the shortened planning approval process as noted in the Less Formal Township Establishment Act.

For housing projects to be approved at provincial level, a developer (can be a local authority or a private developer) must adhere to the prescribed township establishment process (this includes undertaking an Environmental Impact Assessment).

1.2.2. Housing as a Product and Minimum Norms and Standards

Since its introduction in 1994 the Housing Subsidy Scheme is the primary assistance measure of the National Housing Programme. Households with an income of R3 500 or less per month, who have not

owned property previously, and who satisfy a range of other criteria, can apply for a subsidy and use it to get housing, either to own or to rent. The Housing Subsidy (up to a maximum of R16 000) is used to acquire land and the provision of certain basic municipal services (in accordance with the minimum norms and standards) whilst the remainder has to be utilised for the permanent residential structure.

1.2.3. Impact of Housing on the Environment

The Housing Programme impacts on the environment through being the single largest public investment in land development, by contributing to the inefficient use of energy and water resources, by contributing to the loss of topsoil during construction and by polluting the environment through the inappropriate provision of associated services.

Informal settlements (including squatting) have a major impact on the environment. Unplanned, these settlements are often situated on marginal land (such as steep slopes and the flood plains of rivers and streams) and impact heavily on sensitive eco-systems, such as estuaries. Because they are not subjected to proper planning, evaluation and environmental impact assessment, which formal housing projects have to comply with, their negative impacts on the environment are usually significantly more than formal housing development. The national Department of Housing has no control over informal settlements with the onus being on private land owners or the local authority to legally evict people who have settled on privately owned or state land.

Solutions to the reduction of the impact of the housing programme on the environment lie in a range of policies and programmes, administered by a range of government departments, the political will and the administrative and financial capacity to implement them.

1.3. Mandate of the Department of Housing

1.3.1. Habitat Agenda

In 1996, at the United Nations Habitat II Conference on Sustainable Human Settlements in Istanbul, the South African government committed itself to the Habitat Agenda for sustainable human settlement. The goals of the Habitat Agenda are "adequate shelter for all" and "the development of sustainable human settlements". In South Africa the Department of Housing is responsible for promoting the implementation of the Habitat Agenda.

1.3.2. The Urban Development Framework (UDF) (1997)

The UDF (produced by the Department of Housing and approved by Cabinet in 1997) confirms South Africa's commitment to develop sustainable human settlements as expressed in the goals and commitments of the Habitat Agenda and Agenda 21. The Framework provides a consistent urban development policy for sustainable human settlement development and effective urban reconstruction and development and guides the development policies, strategies and actions of all stakeholders in the urban development process.

1.3.3. The Constitution of the Republic of South Africa, 1996 (Act 108 of 1996)

In terms of *Section 26* of the Constitution of the Republic of South Africa, 1996:

- Everyone has the right to have access to adequate housing;
- The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of this right; and
- No one may be evicted from their home, or have their home demolished, without an order of court made after considering all the relevant circumstances. No legislation may permit arbitrary evictions.

1.3.4. The White Paper on Housing

In the White Paper on a New Housing Policy and Strategy for South Africa (1994) it is acknowledged that Government strives for the establishment of viable, socially and economically integrated communities, situated in areas allowing convenient access to economic opportunities as well as health, educational and social amenities, within which all South Africans will have access on a progressive basis, to:

- A permanent residential structure with secure tenure, ensuring privacy and providing adequate protection against the elements; and
- Potable water, adequate sanitary facilities including waste disposal and domestic electricity supply.

1.3.5. The Housing Act, 1997

Flowing from the White Paper the Act expands on the provisions of the Constitution, prescribes general principles for housing development and defines the housing development functions of national, provincial and local governments.

1.3.6. The National Housing Code

National housing policy is contained in a range of reports, debates, laws, legislation and government papers. The National Housing Code seeks to bring together this extensive range of documentation into a single document, so as to facilitate understanding and ensure that all stakeholders work towards a common vision. It is intended for use by political representatives, government officials, financiers, developers, non-governmental organisations, individuals and community stakeholders.

1.3.7. National Norms and Standards for Permanent Residential Structures

The Norms and Standards introduced by the Minister of Housing sets national norms and standards for housing development, to ensure that beneficiaries of housing subsidies receive a product that is of good value in terms of quality and ensures environmental protection by determining the level of service provided (included as Annexure A).

1.4. Core functions of the Department of Housing

1.4.1 Core Functions of the National Housing Department

The Department of Housing's core functions as set out in the Housing Act, 1997 are to establish and facilitate a sustainable national housing development process and to fund the National Housing Programmes.

1.4.2. Core Functions of Provincial Housing Departments

In terms of Schedule 4 of the South African Constitution, 1996, housing is an area of concurrent legislative competence for national and provincial government. This means that provincial government can legislate in respect of housing matters that fall within its provincial boundaries, as long as such legislation does not undermine national legislation.

The functions are undertaken by the Provincial Housing Department under the direction of the Provincial MEC for Housing.

1.4.3. Core Functions of Municipalities / Local Authorities with respect to Housing

Municipalities do not always have a dedicated Housing Department as in the case of national and provincial governments. Housing is often undertaken as part of the functions of the Planning or Engineering Departments.

1.4.4. Financing and Planning of the Housing Programme

1.4.4.1. South African Housing Fund

Every year the National Department of Housing receives an allocation from the national budget for housing development. The Minister of Housing allocates the money for the purposes of financing the implementation of the National Housing Programmes. The allocations to each province are made on the basis of criteria determined by the Minister after consultation with the nine MEC's for Housing.

1.4.4.2. Multi-Year Housing Plans

These plans outline the number and way in which housing will be developed over a three year period.

1.4.5. Public sector procurement procedures in respect of the subsidy scheme

The Housing Subsidy Scheme currently does not provide for a formal tendering process in regard to the provision of engineering services and the construction of dwellings, and as such the provision of procurement procedures is being reviewed.

CHAPTER TWO : INSTITUTIONAL ARRANGEMENTS

2.1. External institutional relationships, mechanisms and procedures with respect to environmental management, between the doh and other departments and spheres of government

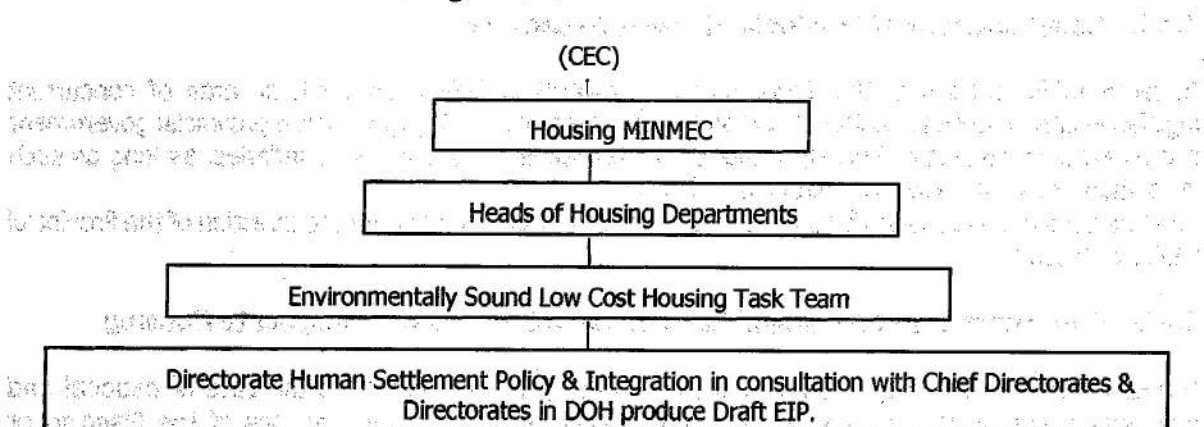
2.1.1. Environmentally Sound Low Cost Housing Task Team

In response to the need for environmentally sound low cost housing the Department of Housing established an inter-departmental Task Team in January 1998. The Task Team is responsible for promoting environmentally sound housing initiatives, developing national policy on environmentally sound housing initiatives, developing national policy on environmentally efficient low cost housing and generally encouraging environmentally sound practices in the housing sector.

2.1.2. Other external institutional relationships

Apart from the Task Team the DOH also actively participates in a number of environmental structures.

2.2 Internal institutional relationships, mechanisms and procedures with respect to environmental management



2.3. Co-operative governance in housing

In the spirit of co-operative governance the Minister of Housing together with the nine Members of Executive Councils (MECs) of the Provinces, Chairpersons of Parliamentary Committees and the Chairperson of the South African Local Government Association meet regularly, as a non-statutory forum, commonly known as "Minmec: Housing" to guide and oversee the formulation and implementation of housing policy and strategy. Similarly, the heads of national and provincial housing departments, as a joint forum, provide technical support to "Minmec: Housing" and use their meetings to co-ordinate activities, share experiences and discuss matters of mutual concern.

2.4. Compliance with environmental legislative provisions

At national level compliance with environmental legislation occurs through the inclusion of environmental considerations in housing legislation and policy. However, housing as with any other land use, has to comply with a range of planning and development related legislation, before an actual housing project is approved by the Provincial Housing Authority.

2.5. The allocated responsibilities and available capacity of the DOH to implement the identified mechanisms, management systems and procedures for co-operative governance

The primary responsibility for the development and implementation of environmental considerations for the DOH rests with the Directorate Human Settlement Policy and Integration in the Chief Directorate: Policy Planning.

CHAPTER THREE : POLICIES, PLANS AND PROGRAMMES

3.1. The National Housing Subsidy Programme

Since its introduction in 1994 the Housing Subsidy Scheme is the primary assistance measure of the National Housing Programme.

3.2. Evaluation of national housing programme in terms of the section 2 principles and norms and standards

3.2.1. Sustainable development

In terms of assessing the Housing Programme in terms of its social, economic and environmental impact, the following should be considered. Since its inception in 1994, the National Housing Subsidy Programme has provided housing and obtained secure tenure and access to improved sanitation and water for more than 4.2 million people who would otherwise have been relegated to informal settlements.. Through it's implementation the housing subsidy programme has also created an enabling environment conducive for the creation of much needed jobs. It has therefore made a significant contribution to sustainable development in social and economic terms. It has however contributed to urban sprawl, the inefficient use of water and energy, the loss of top soil and the inappropriate provision of services in the past.

3.2.2. Integration of environmental considerations into decision-making

Housing project developments in terms of the Housing Programme are subject to the requirements of existing urban development legislation and procedures, including Environmental Impact Assessments (EIAs). At a provincial and local level environmental considerations are

taken into account before a housing project is approved by the provincial Housing Authority. The Housing Act, 1997 in describing general principles applicable to housing development (Part 1) states that national, provincial and local spheres of government must ensure that housing development is based on integrated development planning. The Integrated Development Planning process ensures that all plans (eg. water services plans, housing development plans, EIAs) are considered when developing an area.

3.2.3. Participation, empowerment and transparency

The Housing Subsidy Programme requires that housing projects, unless the MEC agrees otherwise, be based on inclusive agreements (social compacts) between relevant stakeholders. Housing decisions therefore take into account the interests, needs and values of all interested and affected parties. Communities are also empowered through this process and decisions are made in an open and transparent manner. Social compacts in respect of housing projects are a provincial requirement.

The National Housing Policy : Supporting the People's Housing Process was adopted in May 1998. The policy assists people who wish to build or organise the building of their homes themselves by accessing housing subsidies and technical, financial, logistical and administrative support on a basis which is sustainable and affordable. Key principles behind the policy are partnerships, and a people-driven process, skills transfer and community empowerment.

The Development Facilitation Act (DFA), 1995 provides for the establishment in the provinces of development tribunals which have the power to make decisions and resolve conflicts in respect of land development projects. The MEC is responsible for instituting a process to enable the Provincial Housing Authority to evaluate and access project applications to ensure a healthy balance between the priorities and needs of all stakeholders, development priorities and technical expertise.

3.2.4. Environmental justice and equity

The Housing Act, 1997 stipulates that housing development must take due cognisance of the impact of housing development on the natural environment.

Housing subsidies are one of Government's main instruments to address the legacy of poverty and inequality. Currently the housing programme can only meet the needs of households equivalent to its annual allocation of the national budget. The housing backlog including the needs of many informally housed households, cannot be reduced. The continuing negative effects of informal settlements on the environment will therefore also remain.

Owing to the way in which housing subsidy funding has been allocated to provincial housing departments, the bulk of the funding has gone to the more urban provinces. Likewise the more rural provinces have tended to invest more housing subsidies in the larger towns and cities. In addition the rural housing subsidy pertaining to tribal land, where communal ownership applies, has only recently been approved. This means that the housing subsidy programme in rural areas, particularly those areas in which settlement patterns are more dispersed, has not yet made any substantial impact.

3.2.5. Ecological integrity

Informal settlements have a major impact on the environment. Unplanned, these settlements are often situated on marginal land and impact heavily on sensitive eco-systems, such as estuaries. Because they are not subjected to proper planning, evaluation and environmental impact assessment, which formal housing projects have to comply with, their negative impacts on the environment are usually significantly more than formal housing development.

3.2.6. International responsibilities

The Department of Housing is responsible for promoting the Habitat Agenda in South Africa and works closely with the Department of Environmental Affairs and Tourism in promoting Local Agenda 21.

CHAPTER FOUR : RECOMMENDATIONS FOR ENVIRONMENTAL MANAGEMENT**4.1. Plans, procedures and regulations governing priority functions****4.1.1. Encourage environmentally-sustainable land use development**

Current low cost housing projects tend to be located on the urban periphery where land is cheapest, and in so doing perpetuates urban sprawl. Measures need to be introduced to make well situated state land available for low-cost housing development.

4.1.2. Promote integrated development planning

Despite legislation to promote integrated development planning, planning at the local level still occurs sectorally. Housing is currently participating in a Task Team of the Department of Provincial Affairs and Local Government to introduce a planning framework for Local Authorities. Housing development and budgets will be linked with other sector requirements more effectively, with the entire process being streamlined to meet a set of minimum requirements.

4.1.3. Support process to reconsider "land-use change" regulations

DEA&T in consultation with all relevant stakeholders should review the land-use regulations in Government Notice R1182 of 05 September 1997 so that land use change regulations are more clearly defined. This is to ensure that land reform projects and low cost housing development are not unnecessarily burdened by the time and costs involved in conducting EIAs.

4.1.4. Increase national housing budget

The housing budget needs to be increased so that the needs and priorities of people in informal settlements can be addressed.

4.1.5. Promote environmentally sound low cost housing

The Task Team is to promote water and energy efficiency, the use of renewable resources and the planting of trees in low cost housing projects. Furthermore the Task Team is to undertake a study on the effects of asbestos on consumers of low-cost housing, to determine the extent of the use of asbestos products in the Subsidy Programme, to recommend possible remedial measures and to calculate the cost of such measures.

4.2. Proposals for internal environmental management functions**4.2.1. Extend membership and mandate of environmentally sound low cost housing task team**

The extended Task Team will act as the structure for co-operative environmental governance between the national and provincial spheres of government, as well as other stakeholders. This will include ensuring consistency between Provincial EIPs as far as housing is concerned.

ADDENDUM : KEY PERFORMANCE INDICATORS

5.1. Relevant sustainable development indicators (linked to mandate)

The DOH has developed the Housing and Urbanisation Information System (HUIS), a computer based data warehouse which inter alia includes a range of human settlement indicators. These were developed in accordance with the United Nations Centre for Human Settlement's indicator programme (developed for Habitat II in fulfilling the Department's responsibility for promoting the Habitat Agenda in South Africa) using data from the October Household Survey.

5.2. Key Performance Indicators for the Implementation of Eips

As part of the EIP process special attention will be paid to the development of indicators which reflect the state of the environment in human settlements. Among the currently available indicators on HUIS, the following two are considered most important from an environmental aspect:

- Household connection levels to water, electricity, sewage and telephone;
- Households by formal and informal dwellings.

In future, subject to the availability of adequate, suitable, data, further environmental management indicators (linked to the Habitat Agenda indicator requirements) will be considered for testing on a pilot basis in HUIS.

CHAPTER ONE : MANDATE AND FUNCTIONS

1.1. INTRODUCTION

The National Environmental Management Act (NEMA), 1998 (Act 107 of 1998) sets out to provide for co-operative environmental governance by establishing principles for decision making on matters affecting the environment; institutions that will promote co-operative governance; procedures for co-ordinating environmental functions exercised by organs of state; and to provide for matters connected therewith.

Chapter 1, Section 2, of the Act sets out principles for national environmental management which guide the organs of state in executing their environmental management responsibilities. The main principles are that:

- Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably;
- Development must be socially, environmentally and economically sustainable;
- Environmental Management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practical environmental option;
- Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons;
- Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human well being must be pursued;
- Responsibility for the environmental health and safety consequences of a policy, programme, project, process, service or activity exists throughout its life cycle;
- The participation of all interested and affected parties in environmental governance must be promoted;
- Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge;
- Community well being and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience;
- The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated;
- The right of workers to refuse work that is harmful to human health and the environment must be respected and protected;
- Decisions must be taken in an open and transparent manner, and access to information must be provided;
- There must be intergovernmental co-ordination and harmonisation of policies, legislation and action relating to the environment;
- Actual or potential conflicts of interests between organs of state should be resolved through conflict resolution procedures;
- Global and international responsibilities relating to the environment must be discharged in the national interest;
- The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage;
- The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health affects must be paid for by those responsible for harming the environment;
- The vital role of women and youth in environmental management and development must be recognised and their full participation therein must be promoted; and that
- Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands

and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.

Furthermore NEMA requires that national and provincial departments exercising functions which may affect the environment, in terms of *Schedule 1* of the Act, prepare an Environmental Implementation Plan (EIP) and to monitor and review their implementation on a regular basis. Also that national and provincial departments exercising functions involving the management of the environment, in terms of *Schedule 2* of the Act, must prepare an Environmental Management Plan (EMP). The Department of Housing is listed in *Schedule 1*, and is therefore required to prepare an Environmental Implementation Plan (EIP).

The primary purpose of EIPs and EMPs is to co-ordinate and harmonise the environmental policies, plans, programmes and decisions of the various national departments that exercise functions that may affect the environment or are entrusted with powers and duties aimed at the achievement, promotion and protection of a sustainable environment, and of provincial and local spheres of government in order to minimise the duplication of procedures and functions and to promote consistency in the exercise of functions that may affect the environment. Also to give effect to Chapter 3 of the Constitution, to secure the protection of the environment across the country as a whole, prevent unreasonable actions by provinces in respect of the environment and to enable the Minister of Environmental Affairs and Tourism to monitor the achievement, promotion and protection of a sustainable environment.

Within the framework of principles the Act also spells out the content of Departmental Environmental Implementation Plans. These include :

- A description of Departmental policies and plans which significantly affect the environment;
- A description of the manner in which that Department will ensure that the policies and plans comply to the principles;
- A description of the manner in which that Department will ensure that its functions are exercised so as to ensure compliance with the relevant legislative provisions and principles; and;
- Recommendations for the promotion of the objectives and plans for the implementation of the procedures and regulations.

To assist in unpacking the abovementioned Environmental Implementation Planning process, the Department of Environmental Affairs and Tourism (DEA&T) issued a set of guidelines for the preparation of the First Edition EIPs and EMPs. These include a proposed structure for such plans to ensure consistency between Departments.

This first edition EIP for the Department of Housing has been prepared in pursuance of the imperatives of the Act and the guidelines provided by the DEA&T have been utilised as far as possible taking into account the peculiarities of the housing sector.

1.2. BACKGROUND

At the "Earth Summit" (the United Nations Conference on Environment and Development (UNCED) held in 1992 in Rio de Janeiro) the international community agreed on a framework for global sustainable development. Here, Agenda 21 was adopted as the global plan of action for integrating environmental, economic and social issues into development. NEMA reinforces this by stating that "sustainable development requires the integration of social, economic and environmental factors in the planning, implementation and evaluation of decisions to ensure that development serves present and future generations".

Given South Africa's relatively recent transition to democracy, we have been in the privileged position of having new policy which reflects contemporary development thinking such as Agenda 21. The Housing vision is "a nation housed in sustainable human settlements".

1.2.1. Housing as a Process

Housing is defined as a variety of processes through which habitable, stable and sustainable public and private residential environments are created for viable households and communities. This recognises that the environment within which a house is situated is as important as the house itself in satisfying the needs and requirements of the occupants. Environmental issues are inherently linked with quality of life. Environmentally sound human settlements, where air quality is good, housing is well located and is energy and water efficient and planting provides green 'lungs' or even food security, may be seen as healthy, sustainable settlements which provide quality living environments.

It must therefore be recognised that housing is both a process and a product. The building of an actual housing product is the culmination of many planning processes and legislative requirements which need to be adhered to before the actual housing units are constructed. Land development and the spatial planning system are crucial to the housing process (or any other land use for that matter) and are the responsibility of the Department of Land Affairs and the various provincial and local authorities.

The National Department of Land Affairs is responsible for policy and legislation on land development planning and land management, and to provide support to provincial and local government in their implementation of national policy and legislation. In fulfilling this function, the Department of Land Affairs, together with the Department of Housing, passed the Development Facilitation Act, 1995 (DFA). The DFA Chapter 1 principles apply to all land development and spatial planning in South Africa. They represent an outright rejection of the low density, sprawling, fragmented and largely mono-functional forms of development which resulted under apartheid in both urban and rural areas. They call for more compact, integrated and mixed-use settlement forms. The principles require that there is a harmonious relationship between settlements and the natural environment and emphasise the importance of environmental sustainability. They promote security of tenure, the use of land development to promote human development; the maximum use of public participation and conflict resolution. The DFA prescribes the current requirements for spatial planning, which can be separated into land development objectives (plans which set objectives and targets for development and which inform the spatial and developmental imperatives of an area) and land development management.

Furthermore, the Local Government Transition Act, 1993 (LGTA) requires local authorities to prepare Integrated Development Plans (IDPs). Although the LGTA itself focuses on financial and strategic planning, the Department of Provincial Affairs and Local Government have encouraged local authorities to integrate all other forms of planning such as setting of land development objectives in terms of the Development Facilitation Act, 1995 (DFA), transport plans, water services plans, housing development plans etc. into single integrated development plans.

Some provinces have reformulated their planning and development legislation in accordance with the DFA and have set up development tribunals. Any proposed development (including housing projects) would have to be assessed by a development tribunal, in terms of meeting DFA principles, before it was approved. However, developers can choose whether or not to use the DFA tribunals, or to follow other legislative routes for approval of a development application. Other routes for development approval include using certain laws such as the Less Formal Township Establishment Act (LEFTEA). LEFTEA empowers the responsible MEC in the province, rather than an independent body such as a tribunal or local council, to make decisions on proposed development.

For housing projects to be approved at provincial level, a developer (can be a local authority or a private developer) must adhere to the prescribed township establishment process. In this regard:

- The developer must undertake all the necessary geo-technical and environmental studies and investigations in order to establish the suitability and sustainability of the project. This includes

an Environmental Impact Assessment (EIA) as prescribed in the regulations to the Environmental Conservation Act, 1989.

- The developer also has to obtain a certificate from the municipality that essential services such as water and sanitation can be provided by the local authority; thus ensuring protection against possible environmental degradation resulting from the development.
- All persons / institutions affected by the development have an opportunity to comment on the proposal. Where an objection has been raised during the process of township establishment, the developer must inform the Provincial Authority of the objection and file details pertaining thereto. Objectors also have the right to a hearing before decisions are finalised.

Once these processes have been complied with, the building of housing projects can begin. Housing as a process therefore has to adhere to numerous environmental requirements (see specific legislation in section 2.4). In order to align and simplify township establishment and planning processes the National Development Planning Commission have drafted the "Green Paper on Development and Planning", which is the responsibility of the Department of Land Affairs to take further.

1.2.2. Housing as a Product and Minimum Norms and Standards

Early in the new policy era, it was recognised that the majority of households who most needed shelter were not able to afford adequate housing. Influenced by the basic needs approach of the Reconstruction and Development Programme, a cornerstone of housing policy is to fund the housing sector through the widest possible spread of relatively small capital grants, or subsidies, enabling the maximum possible number of poor and previously disadvantaged households to benefit. Of particular relevance are the subsidies that apply to housing, infrastructure and land.

Since its introduction in 1994 the Housing Subsidy Scheme is the primary assistance measure of the National Housing Programme. Households with an income of R3 500 or less per month, who have not owned property previously, and who satisfy a range of other criteria, can apply for the subsidy and use it to get housing, either to own or to rent. The Housing Subsidy (up to a maximum amount of R16 000) is used to acquire land and the provision of certain basic municipal services, whilst the remainder has to be utilised for the permanent residential structure. The internal reticulation services that may be subsidised with the housing subsidy are limited to water, sanitation, roads, stormwater and street lighting, subject to a funding limit of a maximum amount of R7 500 for the provision of the services and the acquisition of land (including township establishment). To ensure environmental protection, the level of service supplied by the contractors must comply with the Minimum National Norms and Standards as indicated in the table below.

| Type of Service | Minimum Level |
|-----------------|---|
| Water | Single standpipe per erf (metred) |
| Sanitation | VIP per erf |
| Roads | Access to each erf with graded or paved roads |
| Stormwater | Lined open channels |
| Street lighting | Highmast security lighting for residential purposes where this is feasible and practical, on condition that such street lighting is not funded from the Consolidated Municipal Infrastructure Programme (CMIP) initiative or funding available from other resources |

The responsibility to provide bulk and connector services rests with the municipality. These services may be funded in terms of the Consolidated Municipal Infrastructure Programme (CMIP). A Provincial Housing Authority will not approve a housing development project unless the municipality certifies that the necessary bulk and connector services are provided or will be provided to the development. Policy in respect of bulk infrastructure standards is dealt with by the Departments of Water Affairs and Forestry, Transport, Mineral and Energy Affairs and Provincial Affairs and Local Government.

Guidelines for housing construction and engineering standards are found in three different sources.

- The National Home Builders Registration Council (NHBRC) Technical Requirements, published in the NHBRC's Home Building Manual, set design and construction standards for NHBRC registered builders to follow. The manual also provides guidelines to assist in achieving good quality construction and performance on site.
- The National Building Regulations, relating to health and safety standards, are set out in the National Building Regulations and Building Standards Act, 1977.
- The Guidelines for Engineering Services and Amenities in Residential Township Development (commonly known as the Red Book) provides information and guidance on the various options available to planners and developers in developing residential towns (published by the Council for Scientific and Industrial Research (CSIR), Pretoria). The Red Book covers the following categories:
 - ⇒ planning method and participation;
 - ⇒ a philosophical approach to settlement making;
 - ⇒ guidelines relating to settlement making;
 - ⇒ planning guidelines;
 - ⇒ stormwater management;
 - ⇒ roads: geometric design and layout planning;
 - ⇒ roads: materials and construction;
 - ⇒ water supply;
 - ⇒ sanitation;
 - ⇒ solid waste management; and
 - ⇒ energy.

1.2.3. Impact of Housing on the Environment

The Housing Programme impacts on the environment through being the single largest public investment in land development, by contributing to the inefficient use of energy and water resources, by contributing to the loss of topsoil during construction and by polluting the environment through the inappropriate provision of associated services. Solutions to the reduction of the impact of the housing programme on the environment lie in a range of policies and programmes, administered by a range of government departments, the political will and the administrative and financial capacity to implement them.

Informal settlements (including squatting) have a major impact on the environment. Unplanned, these settlements are often situated on marginal land (such as steep slopes and the flood plains of rivers and streams) and impact heavily on sensitive eco-systems, such as estuaries. Because they are not subjected to proper planning, evaluation and environmental impact assessment, which formal housing projects have to comply with, their negative impacts on the environment are usually significantly more than formal housing development. The national Department of Housing has no control over informal settlements with the onus being on private land owners or the local authority to legally evict people who have settled on privately owned or state land. In terms of the Interim Protection of Informal Land Rights Act, 1996

(IPIIRA), the Extension of Security of Tenure Act, 1998 (ESTA) and the Land Reform Labour Tenants Act, 1996 (LTA) occupiers of land who have the consent of the owner to be on the land are given rights in land. Arbitrary and illegal evictions are made a criminal offense. Legal evictions can still occur, mostly where suitable alternative accommodation is available. More attention needs to be placed on identifying and making available suitable land for low cost housing development.

Taking into account our limited resources (current budget provides for the construction of about 200 000 housing units per annum) and large housing backlog (between 1.5 and 3.7 million) it is clear that we will not be able to solve all the environmental challenges in human settlements in the short term. However by giving more attention to environmental issues, the housing programme can make a difference to our environmental well-being. This is illustrated in the following sections.

1.3. MANDATE OF THE DEPARTMENT OF HOUSING

In accordance with the guidelines of the DEA&T this section sets out the international commitments as well as the national legal and policy mandate of the National Department of Housing.¹

1.3.1. Habitat Agenda

In 1996, at the United Nations Habitat II Conference on Sustainable Human Settlements in Istanbul, the South African government, along with other United Nation members, committed itself to the Habitat Agenda for sustainable human settlement. The Habitat Agenda is a global call to action at all levels. It offers, within a framework of goals, principles and commitments, a positive vision of sustainable human settlements - where all have adequate shelter, **a healthy and safe environment**, basic services, and productive and freely chosen employment. The goals of the Habitat Agenda, as adopted at Istanbul are "adequate shelter for all" and "the development of sustainable human settlements".

The Habitat Agenda is closely linked to Agenda 21, the outcome of the Earth Summit which took place in Rio de Janeiro in 1992. In the Habitat Agenda adequate shelter for all, is to be achieved through an enabling approach to the development and improvement of shelter that is **environmentally sound** by committing to the following objectives:

- Ensuring consistency and co-ordination of national development programmes and urban policies to support resource mobilisation and employment generation;
- Providing legal security of tenure and equal access to land for all people;
- Promoting access for all people to safe drinking water, sanitation and other basic services, facilities and amenities;
- Promoting locally available, appropriate, affordable, safe, efficient and **environmentally sound construction methods and technologies**;
- Providing access to housing finance;
- Increasing the supply of affordable housing;
- Promoting and upgrading existing housing stock;
- Eradicating and ensuring legal protection from discrimination in access to shelter and basic services;
- Helping the family in its supporting, educating and nurturing roles in recognising their important contribution to social integration;
- Promoting shelter and supporting basic services for the vulnerable and disadvantaged groups;
- Protecting people from forced evictions; and

¹ Reference to environmental issues are highlighted for convenience

- Providing international support for refugees.

The Habitat Agenda also confirms that sustainable human settlement development ensures economic development, employment opportunities and social progress, **in harmony with the environment**. Urban settlements, properly planned and managed, hold the promise for human development and **the protection of the world's natural resources** through their ability to support large numbers of people while **limiting their impact on the natural environment**. This is to be achieved by striving for the following goals:

- Promoting socially integrated and accessible human settlements;
- Creating an enabling environment for economic and social development and **environmental protection**;
- Integrating urban planning and management in relation to housing, transport, employment opportunities, **environmental conditions** and community facilities;
- Providing adequate and integrated **environmental infrastructure facilities** in all settlements;
- Promoting integrated **water use planning**;
- Acknowledging, harnessing and enhancing the efforts and potential of productive informal and private sectors;
- Promoting the **upgrading of informal settlements**;
- Promoting the development of more balanced and sustainable human settlements;
- Promoting the creation of a geographically balanced settlement structure;
- Giving priority attention to human settlement programmes and policies to **reduce urban pollution**;
- Encourage participation in the production of a "resource balance-sheet";
- Improving access to work, goods, services and amenities;
- Promoting energy efficient technology and **alternative/ renewable energy** for human settlements;
- Promoting **optimal use of productive land and protecting fragile ecosystems**;
- Addressing population issues affecting human settlements;
- Protecting and maintaining the historic, cultural and **natural heritage**;
- Promoting the redevelopment and re-use of already serviced but poorly utilised commercial and residential land;
- Promote education about, and training on, environmentally sound technologies, materials and products;
- Formulating and implementing programmes that contribute to maintaining and strengthening of rural areas; and
- Ensuring the **importance of coastal areas and to ensure their sustainable use**.

It is clear that the international agreement and directives as reflected in the Habitat Agenda closely mirror the principles of NEMA. In South Africa the Department of Housing is responsible for promoting the implementation of the Habitat Agenda. The key initiative in this regard has been the publication of the Urban Development Framework (UDF). Based on the premise that "people build cities" and that socio-economic forces ultimately shape the city, the national government's role is to promote a collective vision of what our cities and towns should strive to become, to set goals and a framework for urban development and actively support these programmes aimed at achieving the vision. However actual implementation of the programmes takes place at the local and provincial sphere.

1.3.2. The Urban Development Framework (1997)

Prepared in response to an imperative in the Reconstruction and Development Programme (RDP), the Urban Development Framework (UDF) was approved by Cabinet and published as national urban

development policy by the Department of Housing in 1997.

The Framework confirms South Africa's commitment to develop sustainable human settlements as expressed in the goals and commitments of the Habitat Agenda and Agenda 21. It emphasises the current and future importance of South Africa's cities and towns in meeting the needs of our growing population for shelter, economic and social development in a manner that minimises the impact on the environment. The Framework provides a consistent urban development policy for effective urban reconstruction and development and guides the development policies, strategies and actions of all stakeholders in the urban development process. It envisages that sustainable urban environments are to be achieved through the implementation of four key programmes:

- **Integrating the city** aims to negate apartheid induced segregation, fragmentation and inequality. The focus is on integrated planning, rebuilding and upgrading neighbourhoods and informal settlements, planning for higher density land-use and developments, reforming the urban land and planning system, urban transportation and environmental management;
- **Improving housing and infrastructure** involves upgrading and the construction of housing, restoring and extending infrastructure, alleviating environmental health hazards, encouraging investment and increasing access to finance, social development, designing and building habitable and safe communities and maintaining safety and security;
- **Promoting urban economic development** aims to enhance the capacity of urban areas to build on local strengths to generate greater local economic activity, to achieve sustainability, to alleviate urban poverty, to increase access to informal economic opportunities and to maximise the direct employment opportunities and multiplier effect from implementing development programmes; and
- **Creating institutions for delivery** requires significant transformation and capacity building of government at all levels and clarity on roles and responsibilities of the different government spheres. This will also encompass a range of institutions, including civil society and the private sector, and require significant co-operation and co-ordination among all of these.

1.3.3. The Constitution of the Republic of South Africa, 1996 (Act 108 of 1996)

In terms of *Section 26* of the Constitution of the Republic of South Africa, 1996:

- Everyone has the right to have access to adequate housing;
- The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of this right; and
- No one may be evicted from their home, or have their home demolished, without an order of court made after considering all the relevant circumstances. No legislation may permit arbitrary evictions.

A provincial legislature has concurrent competence with parliament for making laws for the province with regard to all matters that fall within the functional areas defined in schedule 4 of the Constitution. These include housing, as well as areas relevant to housing, such as consumer protection, public transport, regional planning and development, and urban and rural development. The critical policy challenge for housing is to facilitate the maximum devolution of functions and powers to provincial and local government, while at the same time, ensuring that national processes and policies essential to an effective and equitable housing sector are in place.

1.3.4. The White Paper on Housing

In the White Paper on a New Housing Policy and Strategy for South Africa, published in Government Gazette 16178 of 23 December 1994 (*Notice 1376 of 1994*), it is acknowledged that Government strives

for the establishment of viable, socially and economically integrated communities, situated in areas allowing convenient access to economic opportunities as well as health, educational and social amenities, within which all South Africans will have access on a progressive basis, to:

- A permanent residential structure with secure tenure, ensuring privacy and providing adequate protection against the elements; and
- **Potable water, adequate sanitary facilities including waste disposal and domestic electricity supply.**

The White Paper is based on seven key strategies:

- **Stabilising the Housing Environment** in order to ensure maximum benefit of state housing expenditure and to facilitate the mobilisation of private sector investment.
- **Mobilising Housing Credit** and private savings (whether by individuals or collectively) at scale on a sustainable basis and simultaneously ensuring adequate protection for consumers.
- **Providing Subsidy Assistance** to disadvantaged households to assist them to gain access to housing.
- **Supporting the People's Housing Process** entailing a support programme to assist people who wish to build or organise the building of their homes themselves.
- **Rationalising Institutional Capacities** in the housing sector within a sustainable long term institutional framework.
- **Facilitating the Speedy Release and Servicing of Land.**
- **Co-ordinating and Integrating Public Sector Investment** and intervention on a multi functional basis.

1.3.5. The Housing Act, 1997 (Act No. 107, 1997)

Flowing from the White Paper the Act expands on the provisions of the Constitution, prescribes general principles for housing development and defines the housing development functions of national, provincial and local governments. Accordingly, Government, at the national, provincial and local spheres, renews its commitment to a democratic, sustainable process of housing development that:

- Gives priority to the needs of the poor;
- Involves meaningful consultation with affected individuals and communities;
- Ensures as wide a choice of housing and tenure options as is reasonably possible;
- Is economically, fiscally, socially and financially affordable and sustainable;
- Is based on integrated development planning;
- Is administered in a transparent, accountable and equitable manner;
- Upholds the practice of good governance;
- Encourages and supports individuals and communities in their efforts to fulfil their own housing needs by assisting them in accessing land, services and technical assistance in a way that leads to the transfer of skills to, and empowerment of, the community;
- Promotes:
 - education and consumer protection;
 - conditions in which everyone meets their housing obligations;
 - the establishment, development and maintenance of socially and economically viable communities and of **safe and healthy living conditions to ensure the elimination and prevention of slums and slum conditions;**
 - the process of racial, social, economic and physical integration in urban and rural areas;
 - the effective functioning of the housing market while levelling the playing fields and taking steps to achieve equitable access for all to that market;

- measures to prohibit unfair discrimination on the grounds of gender and other forms of unfair discrimination by all actors in the housing development process;
- **higher density to ensure the economical utilisation of land and services;**
- the meeting of special housing needs, including, but not limited to, the needs of the disabled;
- the provision of community and recreational facilities in residential areas;
- the housing needs of marginalised women and other groups disadvantaged by unfair discrimination, and
- the expression of cultural identity and diversity in housing development;
- **Takes due cognisance of the impact of housing development on the natural environment; and**
- Does not inhibit housing development in rural or urban areas.

Furthermore, governments must in the administration of any matter relating to housing development:

- Respect, protect, promote and fulfil the rights in the Bill of Rights in Chapter 2 of the Constitution;
- Observe and adhere to the principles of cooperative government and intergovernmental relations referred to in *Section 41(1)* of the Constitution;
- Comply with all other applicable provisions of the Constitution;
- Achieve consensus in regard to the policies of the respective spheres of government in respect of housing development;
- Observe and adhere to the principles in *Chapter 1 of the Development Facilitation Act, 1995 (Act 67 of 1995)*, in respect of housing development which includes the following principles relating to the environment;
- **Encourage environmentally-sustainable land use development practices and processes by generating as many as possible of the inputs required in settlements within, or close to, the settlement; making the greatest possible use of renewable resources and instituting practices which allow them to be renewed; clearly identifying primeval, rural and urban landscapes and ensuring that interference from one to the other is minimised; avoiding settlements in places of hazard or high risk; avoiding settlements on unique habitats of flora and fauna; avoiding actions which irrevocably interfere with self-regulating ecological processes; controlling air and water pollution at source; recycling wastes, wherever possible productively, in forms that can be re-absorbed into the natural environment; and by promoting biodiversity.**
- Use public money available for housing development in a manner which stimulates private investment in, and the contributions of individuals to, housing development;
- Facilitate active participation of all relevant stakeholders in housing development, and
- Observe and adhere to the principles prescribed for housing development.

It is clear that the Housing Act, 1997 closely mirrors the principles of NEMA as set out in the Introduction (Paragraph 1.1) of this document. All permanent housing that is built in terms of the housing subsidy scheme, must be built in accordance with the principles embodied in the Housing Act.

1.3.6. The National Housing Code

National housing policy is contained in a range of reports, debates, laws, legislation and government papers. The National Housing Code, prepared in terms of Part 2 section 4 of the Housing Act, 1997, seeks to bring together this extensive range of documentation into a single document, so as to facilitate understanding and ensure that all stakeholders work towards a common vision. The Code does not

replace key legislation and laws relating to National Housing policy, but is rather a statement of present policy, providing an overview and confirmation of the existing policy that is in place. It is intended for use by political representatives, government officials, financiers, developers, non-governmental organisations, individuals and community stakeholders and is available on the housing website : www.housing.gov.za.

1.3.7. National Norms and Standards for Permanent Residential Structures

The Norms and Standards introduced by the Minister of Housing sets national norms and standards for housing development, to ensure that beneficiaries of housing subsidies receive a product that is of good value in terms of quality and the level of service provided (included as Annexure A). This includes the following:

- A maximum amount of R7 500 of the subsidy allocation may be used for land acquisition, the provision of municipal services including water, sanitation, roads and stormwater drainage and township establishment;
- The minimum level of services specified per stand is a single standpipe for water, VIP sanitation, access by means of a graded or gravel paved road, lined open stormwater channel and high mast security lighting for residential purposes where this is feasible and not financed from another source; and that
- The built top structure (house) must be a minimum of 30m² gross floor area (which may be reduced if the Member of the Executive Council (MEC) for Housing deems it to be warranted due to local circumstances).

Norms and Standards for environmentally efficient housing are included, but are not mandatory. These include standards for water supply and thermal efficiency.

1.4. CORE FUNCTIONS OF THE DEPARTMENT OF HOUSING

1.4.1 Core Functions of the National Housing Department

The Department of Housing's core functions as set out in the Housing Act, 1997 are to establish and facilitate a sustainable national housing development process and to fund the National Housing Programmes. This requires that the Minister, through the National Housing Department, determines national housing and urban development policy, including national norms and standards, in respect of housing development.

To achieve this national government must:

- Develop national housing policy.
- Prepare and maintain a multi-year national plan, that sets broad national housing delivery and budgetary goals.
- Establish a funding framework for housing development and negotiate and secure allocation from the state budget for housing. Allocate from the South African housing Fund to provincial governments, municipalities and other national institutions so that national programmes are implemented.
- Monitor the performance of the national and provincial governments and municipalities with reference to the delivery goals and funding allocations.
- Assist provincial governments and municipalities to develop their administrative capacity in respect of housing development.
- Promote consultation on matters regarding housing development within government and between government and all other stakeholders.
- Develop national norms and standards.

- Develop a national housing code.
- Facilitate the formation of a South African Housing Development Board.
- Compile and maintain a national housing data bank and information system.
- Phase out subsidies instituted in terms of previous housing legislation.

1.4.2. Core Functions of Provincial Housing Departments

In terms of Schedule 4 of the South African Constitution, 1996, housing is an area of concurrent legislative competence for national and provincial government. This means that provincial government can legislate in respect of housing matters that fall within its provincial boundaries, as long as such legislation does not undermine national legislation. In the framework of the Constitution the Housing Act, 1997 sets out the following functions for provincial housing authorities:

- To develop provincial housing policy and legislation.
- To co-ordinate housing development in the province.
- To prepare and maintain a multi-year plan detailing the implementation in the province of national and provincial housing programmes.
- To support and strengthen the capacity of municipalities in respect of housing development.
- When a municipality cannot or does not perform its duties in terms of the Housing Act, to take appropriate steps to ensure that such duties are performed.
- To assess applications received from municipalities to be accredited to administer national housing programmes and to monitor the performance of accredited municipalities.
- To report to the provincial legislature annually on the activities of the provincial housing development board and the accreditation of municipalities.

These functions are undertaken by the Provincial Housing Department under the direction of the Provincial MEC for Housing.

On 29 May 2000, MinMec Housing approved that:

- All Provincial Housing Development Boards established in terms of section 8 of the Housing Act, 1997, be abolished.
- The Housing Act be amended to allow the MEC to administer all national housing programmes through the approval of projects and the financing thereof from funds from within the Provincial Housing Development Fund.
- The MEC is to determine housing development priorities.
- Each MEC is to institute a process to enable the Provincial Housing Departments to evaluate and access project applications to ensure a healthy balance between the priorities and needs of all stakeholders, development priorities and technical expertise.
- Provincial Housing Departments to, in terms of the provisions of provincial legislation, facilitate active participation of all relevant stakeholders in housing development.
- Amend section 8 (13) of the Housing Act to make provision for the transfer of the assets of the Provincial Housing Board to the Provincial Government.
- Each MEC is to establish a mechanism in the Provincial Housing Department to administer these housing assets.
- The MEC may appoint a panel of experts to advise the MEC on request on any matter relating to housing development in the Province.

The National Department of Housing has initiated a process to amend housing legislation and will advise Provincial Housing Departments so that national and provincial legislation are amended simultaneously.

1.4.3. Core Functions of Municipalities / Local Authorities with respect to Housing

The Housing Act, 1997 sets out the functions of municipalities / local authorities as follows:

- To initiate, plan, co-ordinate and facilitate appropriate housing development within its boundaries. This can be undertaken either by promoting developers to undertake projects or by the municipality itself undertaking the role of developer.
- Prepare a local housing strategy and set housing delivery goals.
- Set aside, plan and manage land for housing development.
- Create a financial and socially viable environment conducive to housing development.
- Facilitate the resolution of conflicts.
- Provide bulk engineering services where there are no service providers.
- Administer any national housing programme in respect of its area of jurisdiction if accredited to do so.
- Expropriate land for housing development if the land cannot be acquired through other means. In this regard the permission of the MEC for Housing must be obtained and the expropriation must occur in terms of the requirements set down in the Expropriation Act, 1975.

Municipalities do not always have a dedicated Housing Department as in the case of national and provincial governments. Housing is often undertaken as part of the functions of the Planning or Engineering Departments.

1.4.4. Financing and Planning of the Housing Programme

1.4.4.1. South African Housing Fund

Every year the National Department of Housing receives an allocation from the national budget for housing development. These funds are deposited in the South African Housing Fund (the Fund) established in terms of the Housing Arrangements Act of 1993 and continues to exist in terms of Part 5 of the Housing Act, 1997.

The Minister of Housing allocates the money in the Fund for the purposes of financing the implementation of the National Housing Programmes. The allocations to each province are made on the basis of criteria determined by the Minister after consultation with the nine MEC's for Housing. The existing criteria for allocations to the provinces are:

- The housing backlog in the province.
- The number of households in the various subsidy bands.
- Ratio of rural to urban areas.
- The performance of the provincial government.

Funds allocated to the provincial government are paid into the Provincial Housing Development Fund on a cash flow basis, in that only the amount required in a particular month is transferred. This requires the Provincial Housing Departments to estimate how much expenditure will occur in a particular month and then to requisition the funds from the South African Housing Fund.

1.4.4.2. Multi-Year Housing Plans

The multi-year plan is a financial planning tool required of national and provincial government in the Housing Act. The multi-year plan is linked to the concept of a multi-year budget, which was introduced by the Ministry of Finance in December 1997. The state budget for 1998/ 1999 reflects this concept to the extent that the budget for the year is the first part of a three year spending plan (known as the Medium Term Expenditure Framework). To this end Provincial governments are required to develop multi-year

housing plans. These plans outline the number and way in which housing will be developed over a three year period. The plans are based on estimated housing demand and supply. The Minister then prepares a national multi-year housing plan on the basis of multi-year plans produced by the provincial governments. This will be done on the basis of co-operative governance. In terms of the Medium Term Expenditure Framework allocation for the next three years, it will only be possible to provide approximately 200 000 units annually.

1.4.5. Public sector procurement procedures in respect of the subsidy scheme

The Housing Subsidy Scheme currently does not provide for a formal tendering process in regard to the provision of engineering services and the construction of dwellings. The mechanism provided for currently in the Housing Subsidy Scheme whereby developers obtain access to state funding to develop serviced sites and to build houses for beneficiaries has been criticised, and as such the provision of procurement procedures is being reviewed.

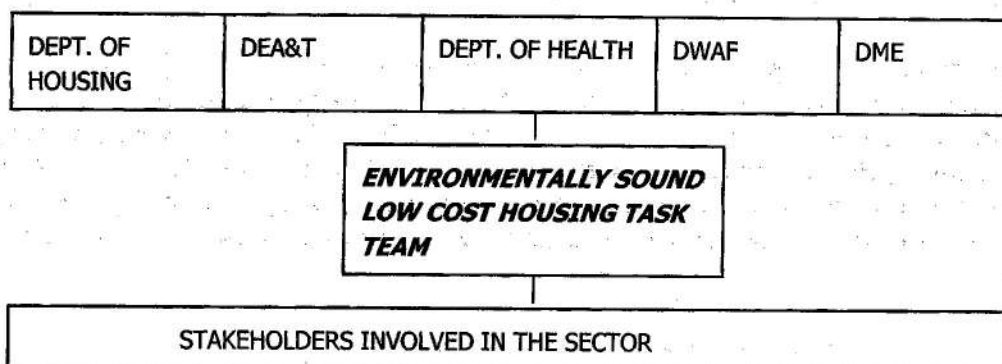
The proposals formulated for the reform of the Housing Subsidy Scheme to create procurement compliance are focussed on the process of land identification, the selection of land, sites or units for projects to be funded with the housing subsidy and the selection of contract strategies to achieve compliant development of infrastructure and housing units to meet targeted procurement obligations. The fundamental departure point of the proposals is that the Housing Subsidy Scheme should make a clear distinction between the identification of land and the development of land.

CHAPTER TWO : INSTITUTIONAL ARRANGEMENTS

2.1. EXTERNAL INSTITUTIONAL RELATIONSHIPS, MECHANISMS AND PROCEDURES WITH RESPECT TO ENVIRONMENTAL MANAGEMENT, BETWEEN THE DOH AND OTHER DEPARTMENTS AND SPHERES OF GOVERNMENT

2.1.1. Environmentally Sound Low Cost Housing Task Team

In response to the need for environmentally sound low cost housing the Department of Housing established an inter-departmental Task Team in January 1998. The Task Team is responsible for promoting environmentally sound housing initiatives, developing national policy on environmentally sound housing initiatives, developing national policy on environmentally efficient low cost housing and generally encouraging environmentally sound practices in the housing sector. The Task Team is composed of a core group of officials representing the Departments of Environmental Affairs and Tourism, Minerals and Energy, Health, Housing and Water Affairs and Forestry. The Task Team has also established links with a range of stakeholders, other organs of state, NGO's and the private sector. As a result it serves as a focal point for any stakeholders active in the sector and plays a co-ordinating role in this regard.



Note: See glossary for an explanation of acronyms used

The Task Team has made progress in the following areas:

2.1.1.1. Guidelines for implementation

At the outset, the Task Team developed a set of guidelines for environmentally sound low cost housing. The aims being to:

- Reach a common understanding of environmentally sound housing;
- Define the areas of focus for the work of the Task Team; and
- Provide inputs for the development of standards relating to environmentally sound housing.

The guidelines document focusses on energy efficiency, water efficiency and urban greening. It makes recommendations on building materials, practices and technologies which promote environmental efficiency and environmental health. The document also provides information on dangerous practices such as the use of asbestos and indoor air pollution. Finally, it details some good practices in South Africa, and provides the contact details of various organisations which are active in the field of environmentally sustainable housing development.

2.1.1.2. Standards for Environmentally Sound Housing

As a result of the Task Team's inputs, the following standards have been included in the Department of Housing's National Norms and Standards in respect of Permanent Residential Structures which came into effect in April 1999.

2.1.1.2.1. *Water Supply*

The design of the water supply and the specification of devices such as taps, showers and toilets must be in accordance with the aims of the National Water Conservation Campaign. This will not only reduce the householder's use of a scarce resource, it will also reduce the monthly bill for water used thus enhancing the ability of the consumer to pay for the recurrent costs of services. Reference should be made to the document entitled "A to Z of Water Saving Devices" published by the South African Bureau of Standards (SABS) and the Joint Acceptance Scheme for water Installation Components (JASWIC), for information on appropriate devices such as water conserving taps, low flow rate shower-heads and dual flush toilet cisterns.

2.1.1.2.2. *Thermal Efficiency*

Designs for affordable housing must take cognisance of the need for the resultant dwellings to be thermally efficient. The cost constraints imposed by the subsidy scheme make it difficult to meet this requirement. However there are many no or low cost options such as the orientation of the home (longer axis of the dwelling should be orientated so that it runs as near east / west as possible), rooms that are used most should be north facing with the biggest windows to allow for solar heating in winter months, extending roof overhangs on the northern side to shade windows from the midday sunshine and installing a ceiling.

2.1.1.2.3. *Financing for Environmentally Sound Housing*

At present, no additional subsidy is available for financing environmentally sound low cost housing improvements. Recognising that the lack of credit financing mechanisms represents a key constraint to the implementation of environmentally sound practices in the housing sector, the Department of Housing is commissioning a feasibility study on a micro-financing mechanism for environmentally sound interventions. This study also includes research on "green bonds." In addition, PEER Africa (an international housing consultancy) has been able to access funding from the International Finance Corporation (IFC) and the Global Environmental Facility (GEF) for the purposes of providing bridging finance to housing developers for environmentally sound housing projects.

2.1.1.2.4. *Awareness Raising and Housing Consumer Education*

In order to communicate the benefits of environmentally efficient housing, the Department of Housing has commissioned a report on the cost savings which can be made through environmentally sustainable housing development. The study will focus on energy-efficiency and will quantify savings to individual households, savings to local authorities, and savings to the country (in terms of the National Health Bill for example).

2.1.1.2.5. *Networking activities*

Recognising that many of the activities relating to the promotion of environmentally sound housing take place outside of the public sector, the Task Team collaborates with a range of NGOs to offer support to projects which promote environmental efficiency in the housing sector. These include:

2.1.1.2.5.1. The Sustainable Homes Initiative (SHI)

A programme managed by the International Institute for Energy Conservation (IIEC)-Africa and funded by ESKOM, Department For International Development (DFID), and United States Agency for International Development (USAID). The SHI has three areas of focus:

- **Technical Assistance:** A Green Professionals programme funds a pool of 'green' built environment professionals for use by housing developers, local authorities or communities.
- **Sustainable Homes Network:** the programme has developed a network of housing practitioners to share successful experiences and lessons learned in order to achieve healthier and more environmentally sound low-cost housing in South Africa. By providing information and direct support to project developers and individual builders, the Initiative creates a forum to share knowledge on sustainable homes between builders, developers, and other key housing stakeholders.
- **Training:** An emerging contractors curriculum is being developed, and will be available for use by any institution wishing to include modules on energy efficiency in their contractor training programmes.

2.1.1.2.5.2. The Sustainable Energy, Environment and Development Programme (SEED)

The Energy and Development Group (EDG) and the Energy and Development Research Centre (EDRC) have accessed funding from Danish Co-operation for Energy and Development (DANCED) for this programme which trains and places energy advisors in order to promote energy efficiency in housing development. The programme currently operates in Cape Town, Durban and Midrand, with energy advisors working within local authorities and NGOs in each area. The SEED programme also involves training and awareness raising initiatives.

2.1.1.2.5.3. Trees for Homes

Funded by USAID, Trees for Africa (an NGO) is managing a national urban greening programme which aims to plant 50 000 trees with new subsidised houses in the first year. The programme is intended to be developed into a national greening fund which will be managed by the Department of Water Affairs and Forestry (DWAF) to ensure the ongoing greening of human settlements.

2.1.1.2.5.4. The Efficient Lighting Initiative (ELI)

ESKOM, with the support of the Global Environmental Facility (GEF) has embarked on a major national programme to promote the use of energy efficient lighting (Compact Fluorescent Lights - CFLs).

2.1.1.2.5.5. The Thermal Insulation Association of SA (TIASA)

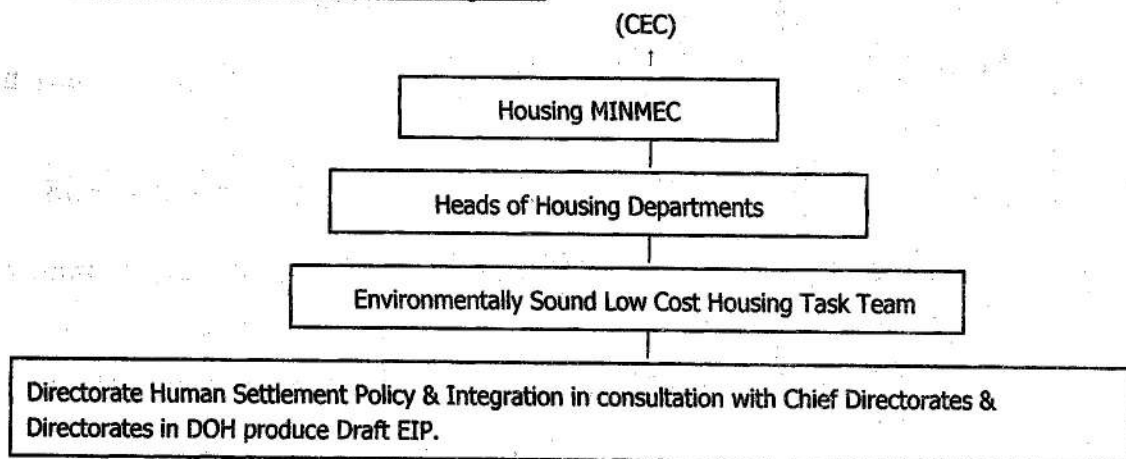
Established as an industry association representing the thermal insulation industry, TIASA aims to promote the benefits of thermal insulation in all sectors, including the housing sector.

2.1.2. Other external institutional relationships

Apart from the Task Team the DOH also actively participates in a number of environmental structures, including the Committee for Environmental Coordination, the Committee for Climate Change and the Disaster Management Committee. It has also been involved in the drafting of NEMA, the activities of the Inter-departmental Committee on Asbestos, and preparations for State of the Environment Reporting, as well as inputs to the Country Reports on Sustainable Development.

2.2 INTERNAL INSTITUTIONAL RELATIONSHIPS, MECHANISMS AND PROCEDURES WITH RESPECT TO ENVIRONMENTAL MANAGEMENT

Diagram of internal institutional arrangement



2.3. CO-OPERATIVE GOVERNANCE IN HOUSING

In the spirit of co-operative governance the Minister of Housing together with the nine Members of Executive Councils (MECs) of the Provinces, Chairpersons of Parliamentary Committees and the Chairperson of the South African Local Government Association meet regularly, as a non-statutory forum, commonly known as "MinMec: Housing" to guide and oversee the formulation and implementation of housing policy and strategy. Similarly, the heads of national and provincial housing departments, as a joint forum, provide technical support to "MinMec : Housing" and use their meetings to co-ordinate activities, share experiences and discuss matters of mutual concern.

2.4. COMPLIANCE WITH ENVIRONMENTAL LEGISLATIVE PROVISIONS

At national level compliance with environmental legislation occurs through the inclusion of environmental considerations in housing legislation and policy. This is reflected in Chapter 1 under the mandate and function of the Department of Housing. The following legislation, policy documents and guidelines set environmental standards with which all planning and development (including housing) has to adhere to before development approval is granted:

- **Environmental Conservation Act, 1989 (Act No. 73 of 1989)** : This Act provides for effective protection and controlled utilisation of the environment and for that purpose sets aside certain areas for special use.
- **Government Gazette of 5 September 1997** : Environmental Impact Assessment (EIA) regulations were published in the government gazette regarding activities which may have a substantial affect on the environment, in terms of section 21, 22 and 26 of the Environmental Conservation Act.
- **National Water Act, 1998 (Act 36 of 1998)** : this Act provides for the fundamental reform of the law relating to water resources. The insertion of 20-year and 50-year flood lines on certain township plans is an example.
- **Water Services Act, 1997 (Act No. 108 of 1997)** : This Act provides for the rights of access to basic water supply and sanitation, to provide for the setting of national standards and of norms and standards for tariffs, to provide for water services development plans, to provide a regulatory framework for water services institutions and water services intermediaries, to provide for the establishment and disestablishment of water services boards and water service committees and their powers and duties, to provide for the monitoring of water services and intervention by the

- Minister or by the relevant province, and to provide for financial assistance to water services institutions.
- **Health Act, 1977 (Act No 63 of 1977)** : This Act deals with health matters but also makes certain provisions impacting on standards.
 - **Local Government Transition Second Amendment Act, 1996 (Act 97 of 1996)** : This Act provides for the formulation and integration of Integrated Development Plans (IDPs) by local government bodies.
 - **Development Facilitation Act (DFA) (Act 67 of 1995)** : This Act has as its objective the speeding up of land development processes by establishing nationally uniform norms and standards in relation to development, by establishing legislation parallel to provincial legislation as a more appropriate mechanism for rapid land delivery, to provide early tenure registration and to provide for the setting of Land Development Objectives (LDO's).
 - **The Municipal Systems Bill, 1999** gives effect to the country's vision of "developmental local government" as envisaged in the local Government White paper. Building on the Constitution's provisions for basic development rights, the governance and developmental objectives of local government and the principles of a people orientated public administration, amongst others, the Bill elaborates the core principles, mechanisms and processes that are necessary to enable municipalities to move progressively towards the social and economic upliftment of communities and ensure universal access to quality services that are affordable to all.
 - **The Less Formal Township Establishment Act (LEFTEA), 1991 (Act No 113 of 1991)** : LEFTEA provides for shortened procedures for the designation, provision and development of land, and the establishment of townships, for less formal forms of residential settlement; to regulate the use of land by tribal communities for communal forms of residential settlement.
 - **Provincial ordinances** which govern township development and should be covered in their EIP process.
 - **The National Heritage Resources Act, 1999** which introduces an integrated and interactive system for the management of national heritage resources, including places, buildings, structures and equipment of cultural significance; historical settlements and townscapes; landscapes and natural features of cultural significance; and graves and burial grounds.
 - **Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983)** : To provide for the control over the utilisation of the natural agricultural resources in the Republic in order to promote the conservation of soil, the water resources and the vegetation and the combatting of weeds and invader plants.
 - **Atmospheric Pollution Prevention Act, 1965 (Act 45 of 1965)** : To provide for the prevention of pollution of the atmosphere.
 - **National Roads Act, 1971 (Act 54 of 1971)** : This Act provides for the planning, design and construction of national roads and the prohibition of the division of land.
 - **Minerals Act, 1991 (ct 50 of 1991)** : Specific issues relating to the Environmental Management Programme are relevant.
 - **Physical Planning Act, 1991 (Act 125 of 1991)** ; This Act promotes the orderly physical development of the Republic, and for that purpose divides the republic into regions. It provides for the preparation of national development plans, regional development plans, regional structure plans and urban structure plans by the various authorities responsible for physical planning.
 - Interim guidelines on safety in relation to floods.
 - Guideline for groundwater protection for the community water supply and sanitation programme, 1995.
 - Conservation of wetlands and reports to the Ramsar Convention.

The following legislation, policy documents and guidelines sets standards to provide for sustainable human settlements:

- **The Housing Act, 1997 (Act No. 107, 1997)** : Flowing from the White Paper on Housing the Act expands on the provisions of the Constitution and prescribes general principles for sustainable

- housing development (refer to section 1.3.5).
- **National Norms and Standards for Permanent Residential Properties** : The rationale for the development of these standards emanated from the fact that much of the housing subsidy was initially being absorbed by unaffordable and unsustainable levels of municipal services, which left very little money for an adequate permanent residential structure. The norms and standards set minimum levels of service and standards for low cost housing delivery.
- **Housing Consumers Protection Measures Act, 1998 (Act No 95 of 1998)** : This act regulates home builders to ensure structurally sound homes.
- **National Building Regulations and Building Standards Act, 1977 (Act 103 of 1997)** : This Act provides for regulations and standards relating to safety and health in building, including homes.
- **SABS 0400** : Contains both the National Building Regulations and a set of deemed-to-satisfy rules.
- **Guidelines for Human Settlement Planning and Design (commonly known as the Red Book)** : provides a guiding vision for South African settlement formation (economically, physically, environmentally, and socially integrated and sustainable built environments) addressing the qualities that should be sought after in our human settlements, and provides guidance for how these can be achieved.
- **Urban Development Framework** : contains Government's vision for sustainable urban settlements, as well as guidelines and programmes for the achievement of that vision.
- **Environmentally Sound Low Cost Housing : Draft Guidelines for Implementation** : This document includes general recommendations for energy efficient housing, water-efficiency techniques and urban greening, which can be implemented by developers or individuals building houses under the Housing Subsidy Programme.

For housing projects to be approved at provincial level, a developer (can be a local authority or a private developer) must adhere to the prescribed township establishment process. In this regard:

- The developer must undertake all the necessary geo-technical and environmental studies and investigations in order to establish the suitability and sustainability of the project. This includes an Environmental Impact Assessment (EIA) as prescribed in the regulations to the Environmental Conservation Act, 1989.
- The developer also has to obtain a certificate from the municipality that essential services such as water and sanitation can be provided by the local authority; thus ensuring protection against possible environmental degradation resulting from the development.
- All persons / institutions affected by the development have an opportunity to comment on the proposal. Where an objection has been raised during the process of township establishment, the developer must inform the Provincial Authority of the objection and file details pertaining thereto. Objectors also have the right to a hearing before decisions are finalised.

Finally the Provincial Housing Authority judges the project application on the basis of how the project meets the principles of housing development as set out in Chapter 1.

2.5. THE ALLOCATED RESPONSIBILITIES AND AVAILABLE CAPACITY OF THE DOH TO IMPLEMENT THE IDENTIFIED MECHANISMS, MANAGEMENT SYSTEMS AND PROCEDURES FOR CO-OPERATIVE GOVERNANCE

The primary responsibility for the development and implementation of environmental considerations for the DOH rests with the Directorate Human Settlement Policy and Integration in the Chief Directorate: Policy Planning.

The Sub-Directorate Policy Co-ordination and Integration is responsible for facilitating co-operative

governance in terms of the Department of Housing's EIP. This Directorate is also responsible for co-ordinating the Environmentally Sound Low Cost Housing Task Team. The current capacity within this Sub-Directorate consists of a Chief Town and Regional Planner assisted by one Town and Regional Planner. Future extension of this capacity is envisaged by an additional two Town and Regional Planners.

CHAPTER THREE : POLICIES, PLANS AND PROGRAMMES

3.1. THE NATIONAL HOUSING SUBSIDY PROGRAMME

Since its introduction in 1994 the Housing Subsidy Scheme is the primary assistance measure of the National Housing Programme. Households with an income of R3 500 or less per month, who have not owned property previously, and who satisfy a range of other criteria, can apply for the subsidy and use it to get housing, either to own or to rent.¹ There are six subsidy mechanisms that together comprise the housing subsidy scheme, project-linked, individual, consolidation, institutional, relocation assistance and the rural subsidy. The table below shows the subsidy amount for which households are eligible, depending on their income and the subsidy mechanism.

| Monthly Household Income | Project, Individual, Rural and Relocation Subsidies | Consolidation Subsidy | Institutional Subsidy |
|--------------------------|---|-----------------------|-----------------------|
| R0 - R1 500 | R16 000 | R8 500 | R16 000 |
| R1 501 -R2 500 | R10 000 | 0 | R16 000 |
| R2 501- R3 500 | R5 500 | 0 | R16 000 |

The housing subsidy is intended to help households access housing with secure tenure, at a cost they can afford, and of a standard that satisfies the norms and standards determined by the Minister of Housing. In each case the subsidy is intended to facilitate access to a wide range of residential property, including:

- newly constructed, bondable, single housing units;
- units in newly constructed multiple unit complexes, including flats;
- units in reconditioned or refurbished buildings;

¹

As defined in the Housing White Paper:

"Informal housing" is defined as any housing unit over which tenure is held, with access to at least basic services (water, sanitation and access routes). Accommodation would generally consist of an informal house which is upgraded over time.

"Squatter housing" is any housing unit over which no formal tenure is held. Such housing is generally of a poor standard, with minimal or no access to basic services.

For purposes of gaining access to a housing subsidy no distinction is made between the two.

"Formal housing" is any housing unit over which formal tenure is held and is estimated to have a life span of 20 years or longer.

- existing housing of any type; in situ upgrade of existing unserviced or minimally serviced settlements;
- incremental housing schemes, where a serviced site is provided as the first stage, with the residual of subsidies being used for home building purposes.

The subsidy amount can be increased by an amount not exceeding 15% of the full subsidy amount to compensate for abnormal development costs arising from locational, geo-technical or topographical conditions. Further, special provision is made for the needs of disabled people. Guidelines exist for the design or adaptation of housing to cater for the special housing needs of the disabled and additional subsidy amounts are available to implement basic changes (amounting to a maximum 11% of the subsidy depending on the nature of the disability).

The individual application process for each of the subsidies varies. Generally, the developer or estate agent selling the house assists the household to apply for the subsidy. In other cases the household can approach the Provincial Housing Authority directly. Most housing subsidies received are project-linked. Project-linked subsidies provide for the allocation of housing subsidy funding, to developers to enable them to undertake approved housing development projects and to sell the residential properties so created, to qualifying beneficiaries. A "developer" initiates, manages and executes housing projects. A developer can be an organisation in the private sector, a public sector institution, a non-governmental or community based organisation. Furthermore, developers may comprise joint ventures between a variety of role players or other arrangements.

Once a developer identifies a piece of land and a potential market (beneficiaries) for a project, the developer needs to follow a series of steps before undertaking the development. These involve:

- **Eligibility and other Conditions** : making sure that the project site and approach they have chosen fits within the overall policy for how the subsidy can be used.
- **Application**: preparing a project application and submitting it to the Provincial Housing Authority;
- **After approval** : following approval of the project, agreeing with the Provincial housing Authority on how the subsidy will be paid out to facilitate the development process.

3.2. EVALUATION OF NATIONAL HOUSING PROGRAMME IN TERMS OF THE SECTION 2 PRINCIPLES AND NORMS AND STANDARDS

3.2.1. Sustainable development

Development must be socially, environmentally and economically sustainable.

The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated.

In assessing the Housing Programme in terms of its social, economic and environmental impact the following should be considered. In terms of social development the National Housing Subsidy Programme, since its inception in 1994, has approved 1 113 573 housing subsidies, constructed 983 943 housing units, cost more than R12 billion and obtained secure tenure and access to improved sanitation and water for more than 4.2 million people who would otherwise have been relegated to informal settlements. Economically the housing subsidy programme has created an enabling environment conducive for the creation of much needed jobs (in terms of the construction and related industries as well as increasing employment opportunities as people have access to electricity and water). It has therefore contributed significantly to improving the lives of people.

The Housing Subsidy Programme impacts on the environment through being the single largest public investment in land development, by contributing to the inefficient use of energy and water resources, by

adding to the loss of top soil during construction and by polluting the environment through the inappropriate provision of associated services. This is because the major portion of housing provided through the programme has been on the basis of a single household per erf which has had a considerable impact on the land and surrounding environment as it has perpetuated urban sprawl. This relatively low density urban expansion has occurred notwithstanding policies for the densification of cities. Various socio-economic forces, such as the high cost of centrally located land, social preferences, the Not In My Backyard (NIMBY) syndrome and the unaffordability of recurrent service costs have mitigated against the achievement of higher densities. To redress this the Housing Subsidy Programme has introduced locational incentives of up to 15% of the housing subsidy amount to encourage high density development on well located land.

3.2.2. Integration of environmental considerations into decision-making

Environmental Management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practical environmental option.

Housing project developments in terms of the Housing Programme are subject to the requirements of existing urban development legislation and procedures, including Environmental Impact Assessments (EIAs) as required in terms regulations of the Environmental Conservation Act (ECA), 1989 (Act No. 73 of 1989). Environmental Impact Assessments (EIAs) of housing project development are a provincial and local responsibility and should be addressed in provincial EIPs. However it should be noted that EIA regulations have imposed delays and additional costs for low-cost housing development. Environmental protection has therefore been placed above social and economic development.

The Integrated Development Planning process as required by the Local Government Transition Act, 1993 encourages local authorities to integrate all other forms of planning such as the setting of Land Development Objectives (LDOs), transport plans, water services plans, housing development plans etc., linking social, economic and environmental development into single integrated development plans.

There must be intergovernmental co-ordination and harmonisation of policies, legislation and action relating to the environment.

The White Paper on Local Government provides for developmental local government which is characterised by:

- A maximisation of social development and economic growth;
- Integration and co-ordination;
- Democratisation and development, empowerment and redistribution; and
- A leading and learning approach.

The White Paper also highlights three key developmental outcomes of local government namely:

- Provision of household infrastructure and services;
- Creation of liveable, integrated cities, towns and rural areas; and
- Local Economic Development.

The Municipal Systems Bill elaborates the core principles, mechanisms and processes that are necessary to enable municipalities to move progressively towards the social and economic upliftment of communities and ensure universal access to quality services which are affordable to all. Integrated Development Planning (IDP) represents a participatory process to integrate economic, sectoral, spatial, social, institutional, environmental and fiscal strategies in order to support the optimal allocation of scarce

resources between sectors and geographical areas and across the population, in a manner that provides sustainable growth, equity and empowerment of the poor and marginalised.

IDP therefore recognises that municipalities need to understand the various dynamics operating within their area, develop a concrete vision for the area and strategies for realising and financing that vision in partnership with other stakeholders. IDPs should empower municipalities to prioritise and strategically focus their activities and resources incrementally.

The Housing Act, 1997 in describing general principles applicable to housing development (Part 1) states that national, provincial and local spheres of government must ensure that housing development is based on integrated development planning. Part 4 of the Act stipulates that every municipality must as part of the municipality's process of Integrated Development Planning, take all reasonable and necessary steps within the framework of national and provincial housing legislation and policy to achieve housing functions as listed in section 1.4.3.

However, a recent review of the implementation of the Housing Subsidy Scheme identified three reasons as to why housing is not meeting the requirements of integrated development planning, namely:

- Provincial Housing Departments carry no accountability or responsibility for putting Land Development Objectives (LDOs) into effect in respect of housing development;
- No legislative link to Integrated Development Planning (IDP) exists to locate municipal budget responsibilities under the IDPs; and
- The current process of project submissions leaves Provincial Housing Departments as passive participants in the development process, with no mechanism for pro-actively effecting integrated development.

A new procurement programme for the selection of land and projects will be introduced by the Department of Housing by 1 April 2001. Where IDPs have not yet been approved, it is recommended that as an exception municipal business plans with proper identification and quantification of housing needs to be used, and where the later arrangement is not possible, the present system of proposal calls may be used temporarily. Such exceptions should, however, in every instance be approved by the MEC.

3.2.3. Participation, empowerment and transparency

The participation of all interested and affected parties in environmental governance must be promoted.

Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge.

Decisions must be taken in an open and transparent manner, and access to information must be provided.

In meeting the above three principles, the Housing Subsidy Programme requires that housing projects, unless the MEC agrees otherwise, be based on inclusive agreements (social compacts) between relevant stakeholders. Of particular importance is that beneficiary communities, suppliers of infrastructure, services, housing products and finance on a specific project, are parties to such an agreement. Housing decisions therefore take into account the interests, needs and values of all interested and affected parties. Communities are also empowered through this process. Decisions are also made in an open and transparent manner. All these comply with section 2 principles. Social compacts in respect of housing projects are a provincial requirement.

Community well being and empowerment must be promoted through environmental

education, the raising of environmental awareness, the sharing of knowledge and experience.

The National Housing Policy : Supporting the People's Housing Process was adopted in May 1998. The policy assists people who wish to build or organise the building of their homes themselves by accessing housing subsidies and technical, financial, logistical and administrative support on a basis which is sustainable and affordable. Key principles behind the policy are partnerships, and a people-driven process, skills transfer and community empowerment.

The People's Housing Partnership Trust was established to implement government's national capacitation programme in support of the People's Housing Process. The partnership arises from an initiative between the Department of Housing, the United Nations Development Programme (UNDP), the United Nations Centre for Human Settlements (UNCHS) and the United States Agency for International Development (USAID). While it co-ordinates the programme at national level, its support activities are carried out at a provincial and local level.

Actual or potential conflicts of interests between organs of state should be resolved through conflict resolution procedures.

The Development Facilitation Act (DFA), 1995 provides for the establishment in the provinces of development tribunals which have the power to make decisions and resolve conflicts in respect of land development projects.

The MEC is responsible for instituting a process to enable the Provincial Housing Departments to evaluate and access project applications to ensure a healthy balance between the priorities and needs of all stakeholders, development priorities and technical expertise.

The vital role of women and youth in environmental management and development must be recognised and their full participation therein must be promoted.

The Department of Housing is in the process of commissioning an in depth study into gender issues in human settlements, which we envisage will result in amendments to our settlement policy and programmes. Presently about 39% of housing subsidies have been allocated to women-headed households and in provinces such as the eastern cape and the Northern province the gender balance is even more significant.

3.2.4. Environmental justice and equity

Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.

Housing subsidies are one of Government's main instruments to address the legacy of poverty and inequality. Furthermore as recognised in section 26 of the Constitution:

- Housing, as adequate shelter, fulfils a basic human need;
- Housing is both a product and a process;
- Housing is a product of human endeavour and enterprise;
- Housing is a vital part of integrated development planning;
- Housing is a key sector of the national economy;
- Housing is vital to the socio-economic well-being of the nation.

The Housing Programme recognises that adequate shelter means more than a roof over one's head. It

also means adequate privacy; adequate space; physical accessibility; adequate security; security of tenure; structural stability and durability; adequate lighting; heating and ventilation; adequate basic infrastructure such as water supply, sanitation and waste-management facilities; suitable environmental quality and health related factors; and adequate and accessible location with regard to work and basic facilities: all of which should be available at an affordable cost. The South African housing policy is therefore strong in its commitment to achieve a holistic concept of environmental management as indicated in the NEMA principle indicated above.

The Guidelines for Human Settlement Planning and Design (*The Red Book*) reinforces more integrated (socially, economically and environmentally) forms of settlement which encapsulate qualities of efficiency of resource use, opportunity generation, convenience, choice, equality of access, quality of place, sensory qualities and sustainability. Environments reflecting these qualities have the following physical characteristics.

- They are scaled to the pedestrian;
- They are compact, having relatively high building densities;
- Their elements are integrated and the composite parts reinforce each other;
- They have a strong spatial feel, with well defined public spaces; and
- Their spatial structures are complex, offering choices in terms of intensity of interaction, privacy of living conditions, life styles, housing options and movement systems.

Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human well being must be pursued.

According to the information available from Statistics South Africa some 7,1% of the population currently reside in informal settlements. The housing backlog estimates vary from 1,5 million to 3,7 million units depending on the definition used. Annual increases in housing needs, calculated in terms of new household formation in the subsidy category, is approximately 200 000. This means that currently the housing programme can only meet the needs of households equivalent to its annual allocation of the national budget. The housing backlog, including the needs of many informally housed households, cannot be reduced. The continuing negative effects on the environment will therefore also remain.

Owing to the way in which housing subsidy funding has been allocated to provincial housing departments, the bulk of the funding has gone to the more urban provinces. Likewise the more rural provinces have tended to invest more housing subsidies in the larger towns and cities. In addition the rural housing subsidy pertaining to tribal land, where communal ownership applies, has only recently been approved. This means that the housing subsidy programme in rural areas, particularly those areas in which settlement patterns are more dispersed, has not yet made any substantial impact.

However it is in the areas of water supply and sanitation that the housing subsidy programme can make a significant improvement in environmental management in rural areas. The availability of adequate potable groundwater is a key concern for rural communities. In many cases this supply has been threatened by inappropriate sanitation arrangements, such as pit latrines and a lack of solid waste removal, which contaminate the ground water. In some rural housing developments inappropriately high sanitation standards and associated costs (such as waterborne sewerage systems) have caused the breakdown of such systems. The inability of local communities to manage and maintain these systems as well as the absence of support from a local authority, have highlighted the need for a realistic minimum standard for sanitation in rural areas. The introduction of VIP chemical latrines (the minimum standard set by the Department of Housing), as the housing programme expands into rural areas, is expected to have a positive effect on the quality of ground water. The absence of effective solid waste management will in many areas continue to impact negatively on the environment and adversely affect the health of those living within the environment.

Many rural areas suffer from overcrowding and a resultant severe depletion of natural resources which render them increasingly unsustainable. The approval of housing projects in such areas must be considered with utmost circumspection, be carefully evaluated in terms of their sustainability and the possible effects of their development on an already over stressed natural environment.

Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.

The majority of funds budgeted to finance capital housing projects are utilised for housing subsidies which are available to all people earning less than R3 500 per month who have not yet received a Government subsidy.

Apart from the successful subsidy allocation figures, most evidence suggests that targeting of the housing subsidy has been fairly effective. Firstly most subsidies have gone to the lowest income band that the subsidy caters for. Over 92% of subsidies granted have gone to households earning less than R1 500 per month. Secondly about 39% of subsidies were allocated to female headed households.

The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage.

As indicated in section 1.3.5. The Housing Act, 1997 stipulated that housing development must take due cognisance of the impact of housing development on the natural environment. Also that housing development must encourage environmentally-sustainable land use development practices and processes by generating as many as possible of the inputs required in settlements within, or close to, the settlement; making the greatest possible use of renewable resources and instituting practices which allow them to be renewed; clearly identifying primeval, rural and urban landscapes and ensuring that interference from one to the other is minimised; avoiding settlements in places of hazard or high risk; avoiding settlements on unique habitats of flora and fauna; avoiding actions which irrevocably interfere with self-regulating ecological processes; controlling air and water pollution at source; recycling wastes, wherever possible productively, in forms that can be re-absorbed into the natural environment; and by promoting biodiversity.

Responsibility for the environmental health and safety consequences of a policy, programme, project, process, service or activity exists throughout its life cycle.

As discussed in section 2.1.1 people's needs and rights to a healthy environment are being catered for through the policy interventions being developed by the Environmentally Sound Low Cost Housing Task Team.

The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health affects must be paid for by those responsible for harming the environment.

There are always cost implications for the setting of infrastructure standards. As a general rule, the higher or more restrictive the standard, the higher the cost to the community as a whole. Sensitivity to regional variation is also important and there may be instances where, in the responsiveness to such variation, alternative standards may have to be considered on a case by case basis. Generally, there are two types of standards that apply to infrastructure and housing development : physical or engineering standards and environmental standards. While many of the standards in terms of these two categories are governed by various departments and bodies other than the Department of Housing, they must still be adhered to in all housing development initiatives.

The right of workers to refuse work that is harmful to human health and the environment must be respected and protected.

3.2.5. Ecological integrity

Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.

Owing to limited budgets the housing subsidy programme has only been able to address the needs of about 200 000 households annually. The backlog (estimated at between 1.5 and 3.7 million houses), consisting of large informal settlements (which impact negatively on the environment in a number of ways) and mixed informal and formal and rural settlements, largely remains. Informal settlements have a major impact on the environment. Unplanned, these settlements are often situated on marginal land (such as steep slopes and the flood plains of rivers and streams) and impact heavily on sensitive eco-systems, such as estuaries. Because they are not subjected to proper planning, evaluation and environmental impact assessment, which formal housing projects have to comply with, their negative impacts on the environment are usually significantly more than formal housing development. These include pollution of run-off water and underground water due to inadequate sanitation and waste collection, the destruction of surrounding forests by residents in search of building materials and fire-wood, air pollution owing to the burning of fossil fuels for all heating, cooking and lighting purposes. Other impacts include mud slides and erosion due to the deforestation of slopes. From an environmental point of view it may make sense to house those people in more ecologically sensitive areas first. However this could also be used as a means of "jumping the queue" with people actively seeking out ecologically sensitive areas. More attention should rather be given to releasing suitable land for low cost housing development.

3.2.6. International responsibilities

Global and international responsibilities relating to the environment must be discharged in the national interest.

The influences of international policy and programmes such as the Habitat Agenda and Local Agenda 21, combined with a growing regional awareness of sustainable urban development, led to the Department of Housing and the Department of Environmental Affairs and Tourism co-hosting an African Regional Conference on Sustainable Urban Development in March 2000. The Conference was aimed at sharing first hand African experiences and to stimulate interaction on best practices in sustainable urban development, to raise awareness of the Habitat Agenda and Local Agenda 21 and to develop an African regional input to the Global Urban 21 Conference to be held in Berlin in July 2000. In accordance with the goals of the Habitat Agenda (environmental aspects highlighted in section 1. 3.1.) the Department of Housing produced the Urban Development Framework which contains the South African Government's vision for sustainable urban settlements, as well as guidelines and programmes for the achievement of the vision.

CHAPTER FOUR : RECOMMENDATIONS FOR ENVIRONMENTAL MANAGEMENT

4.1. PLANS, PROCEDURES AND REGULATIONS GOVERNING PRIORITY FUNCTIONS

4.1.1. Encourage environmentally-sustainable land use development

Current low cost housing projects tend to be located on the urban periphery where land is cheapest, and in so doing perpetuates urban sprawl. Densification and urban infill need to be more actively encouraged. Measures need to be introduced to make well situated state land available for low-cost housing development. The Department of Housing is in the process of introducing a new procurement regime for the selection of land and projects.

4.1.2. Promote integrated development planning

Despite legislation to promote integrated development planning, planning at the local level still occurs sectorally. Local Authorities are often overwhelmed by the various requirements of the different national and provincial departments. Housing is currently participating in a Task Team of the Department of Provincial Affairs and local Government to introduce a planning framework for Local Authorities. Housing development and budgets will be linked with other sector requirements more effectively, with the entire process being streamlined to meet a set of minimum requirements.

4.1.3. Support process to reconsider "land-use change" regulations

The Department of Environmental Affairs and Tourism in consultation with all relevant stakeholders should review the land-use regulations in Government Notice R1182 of 05 September 1997 so that land use change regulations are more clearly defined. This is to ensure that socio-economic development projects such as land reform and low cost housing development are not unnecessarily burdened by the time and costs involved in conducting EIAs.

4.1.4. Increase national housing budget

The housing budget needs to be increased so that the needs and priorities of people in informal settlements can be addressed.

4.1.5. Promote environmentally sound low cost housing

Promote water and energy efficiency, the use of renewable resources and the planting of trees in low cost housing projects. The Environmentally Sound Low Cost Housing Task Team is to undertake a study on the effects of asbestos on consumers of low-cost housing, to determine the extent of the use of asbestos products in the Subsidy Programme, to recommend possible remedial measures and to calculate the cost of such measures.

4.2. PROPOSALS FOR INTERNAL ENVIRONMENTAL MANAGEMENT FUNCTIONS

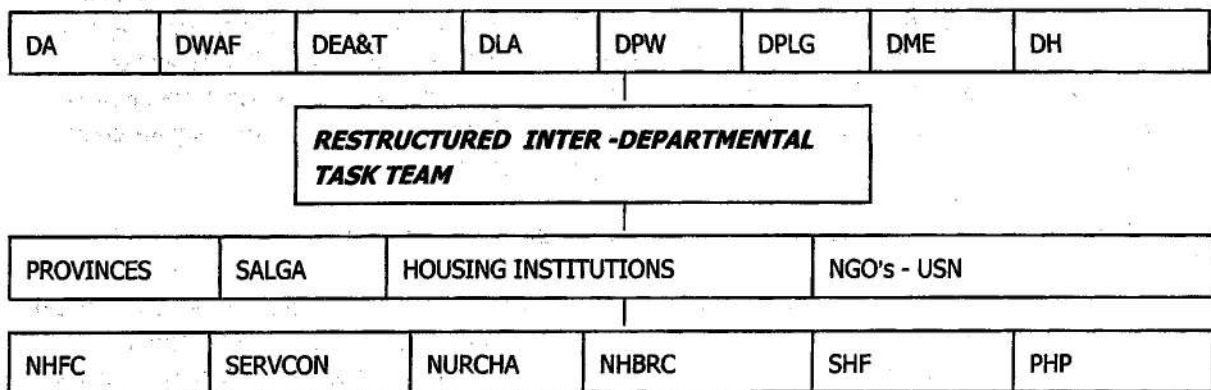
4.2.1. Extend membership and mandate of environmentally sound low cost housing task team

To comply with the obligations in NEMA for cooperative governance regarding environmental affairs it is proposed that the activities of the Environmentally Sound Low Cost Housing Task Team be extended to include advice to Housing MINMEC on the National Housing EIP and the Provincial Housing EIPs. To

ensure involvement of all the relevant stakeholders the membership of the Task Team will be extended to include the following additional members:

- National Departments:
 - Agriculture;
 - Land Affairs;
 - Provincial and Local Government; and
 - Public Works
- Provincial Housing Departments;
- Housing institutions (NHFC, Servcon, Nurcha, NHBRC, Social Housing Foundation, People's Housing Partnership Trust, Rural Housing Loan Fund);
- NGOs (Urban Sector Network); and the
- South African Local Government Association (SALGA)

Diagram of proposed external institutional arrangements for cooperative environmental governance in the housing sector at national level



Note: See glossary for an explanation of acronyms used

The extended Inter-Departmental Environmentally Sound Low Cost Housing Task Team (the Task Team) will act as the structure for co-operative environmental governance for housing, between the national and provincial spheres of government, as well as other stakeholders. This will include ensuring consistency between Provincial EIPs as far as housing is concerned.

ADDENDUM : KEY PERFORMANCE INDICATORS

5.1. RELEVANT SUSTAINABLE DEVELOPMENT INDICATORS (LINKED TO MANDATE)

Information and reporting is of central importance in terms of monitoring the national housing policy and ensuring that funds are effectively and efficiently spend. Accordingly, the Housing Act requires that information is gathered and reporting occurs. There are five different information systems operating at national level. They are:

- **Housing and Urbanisation Information System (HUIS)** : This system is currently the main data warehouse with all of the other systems, namely the Housing Subsidy Scheme, Nomvula and the Integrated Development Information System, feeding into it. This information system will have features that will allow it to be used for monitoring the performance of housing development and urbanisation, and for decision making.
- **National Housing Subsidy Data Base (NHSDB)** : The purpose of this database is to prevent households from receiving more than one subsidy allocation. The database includes information

on all historical and current subsidies granted to individuals. The information is recorded in terms of the ID number of each individual.

- **Housing Subsidy System (HSS)** : This information system records progress of subsidy allocations made in terms of the various subsidy programmes. The information is provided by the provincial housing departments and transferred to the national department. On the basis of this system government is able to monitor the number of subsidies allocated.
- **Nomvula Information System** : This information system tracks progress on housing projects that receive the Housing Subsidy. The data is recorded in terms of the achievement of certain milestones such as township establishment, sales administration processes, land servicing processes and building operation. On the basis of this system national government is able to determine funds spent and the progress of projects.
- **Integrated Development Information System (IDIS)** : This system is being developed by the Council for Scientific and Industrial Research (CSIR) and will provide analysts with grassroots information for research on housing development via the Housing and Urbanisation Information System.
- **Geographic Information System (GIS)** : This system facilitates the integration, manipulation, analysis and display of geographically referenced data, as included in each of the above systems. Using the GIS, the Department of Housing will be able to determine the spatial distribution of housing development using government housing funds.

The Housing and Urbanisation Information System (HUIS) currently includes a range of human settlement indicators (see Annexure B). These were developed in accordance with the United Nations Centre for Human Settlement's indicator programme (developed for Habitat II in fulfilling the Department's responsibility for promoting the Habitat Agenda in South Africa) using data from the October Household Survey.

Owing to a paucity of data it was only possible to develop 12 core indicators on a magisterial district basis. Data are not consistently available at city level. Currently the core indicators only provide a "once-off snapshot" of socio-economic conditions and no trend analysis is possible.

It is envisaged that a second phase of indicators will be developed during this year in an attempt to provide a more detailed picture at city/settlement level. This is subject to the availability of suitable data. Please refer to Annexure B for a detailed list of the indicators developed.

While it is the Director-General's responsibility to ensure sound information systems, it is the responsibility of provincial government and municipalities to accurately provide the information necessary on a regular basis.

5.2. KEY PERFORMANCE INDICATORS FOR THE IMPLEMENTATION OF EIPS

As part of the EIP process special attention will be paid to the development of indicators which reflect the state of the environment in human settlements. Among the currently available indicators on the HUIS system the following two are considered most important from an environmental aspect:

- Household connection levels to water, electricity, sewage and telephone;
- Households by formal and informal dwellings.

In future, subject to the availability of adequate, suitable, data, the following environmental management indicators (linked to the Habitat Agenda indicator requirements) are considered appropriate for testing on a pilot basis in HUIS.

- Urban population growth

- Water consumption
- Price of water
- Air pollution
- Wastewater treated
- Solid waste disposal
- Disaster prevention and mitigation instruments
- Travel time
- Transport modes
- Local environmental plans

It is further envisaged that environmental efficiency statistics be included in the Housing Subsidy System or Nomvula Information System so that trends can be established. These include:

- Percentage of subsidy housing units with correct orientation;
- Percentage of subsidy housing units with fitted ceilings;
- Percentage of subsidy housing units fitted with water / energy saving devices;
- Percentage of subsidy housing units with roof overhangs extended;
- Percentage of subsidy housing units with a deciduous tree planted on the northern side;
- Percentage of subsidy housing units with prepaid water / electricity metres; and
- Percentage of subsidy housing units where services have collapsed.

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DEPARTMENT OF HOUSING ENVIRONMENTAL IMPLEMENTATION PLAN : TABULAR SUMMARY

MANDATE AND ENVIRONMENTAL REQUIREMENTS

Habitat Agenda, The Urban Development Framework, The Constitution, The White Paper on Housing, The Housing Act, the National Housing Code and National Norms and Standards for Permanent Residential Structures all comply with environmental requirements as indicated in NEMA.

PRIORITY PROGRAMME OR FUNCTION

The core function of the national Department of Housing is to establish and facilitate a sustainable national housing development process and to fund the National Housing Programmes.

| NEMA PRINCIPLES | DESCRIPTION OF RELEVANT PRINCIPLES OR LAW | CURRENT STATUS IRO COMPLIANCE WITH PRINCIPLES OR LAWS & REASON | ACTIVITY TO ACHIEVE TARGETS | KPI / SUSTAINABLE DEVELOPMENT INDICATORS | CO-OPERATIVE GOVERNANCE PARTNERS |
|--|--|---|---|---|--|
| Sustainable Development | Social, economic and environmental development; Waste/ pollution; Disturbance of landscapes; Renewable resources; Non-renewable resources; Risk averse & cautious approach; Negative impacts to be anticipated | Housing programme constructed almost 1 million housing units and provided access to basic services for more than 4.2 million people and has led to job creation, but added to urban sprawl, inefficient use of water and energy, loss of top soil, and damaged environment in terms of inappropriate levels of service in the past. | In terms of development, before a housing project is approved, a developer undertakes township development procedures (includes EIA). Provincial Housing Authority approval; housing development plans included in IDP process, norms and standards, Red Book, Housing Code | Household connection levels to water, electricity, sewage and telephone; Households by formal and informal dwellings | Other spheres of government, Housing MinMec |
| Integration of environmental considerations into decision-making | Environmental management to be integrated; Impacts to be assessed; Responsibility throughout life cycle | Housing programme subject to urban development legislation, including EIAs and included in IDPs. | Housing Act; UDF, IDP, DFA. | | Other spheres of government, Housing MinMec, Department of Provincial Affairs and Local Govt, Department of Land Affairs |

| DEPARTMENT OF HOUSING ENVIRONMENTAL IMPLEMENTATION PLAN : TABULAR SUMMARY | | | | | |
|---|---|---|---|---|---|
| NEMA PRINCIPLES | DESCRIPTION OF RELEVANT PRINCIPLES OR LAW | CURRENT STATUS IRO COMPLIANCE WITH PRINCIPLES OR LAWS & REASON | ACTIVITY TO ACHIEVE TARGETS | KPI / SUSTAINABLE DEVELOPMENT INDICATORS | CO-OPERATIVE GOVERNANCE PARTNERS |
| Participation, empowerment, transparency | Participation of IAPS; Consider interests, needs, values; Community well-being / empowerment; Transparent decisions; Access to information; Role of women and youth; Environment held in public trust and resources serve public interest | Social compacts; People's Housing Process; Development tribunals i.t.o. the DFA; Provincial Housing Authority's ensure balance between priorities and needs of all stakeholders. | Housing Subsidy programme;PHPT; UDF; Housing Act | | Other spheres of government, UNDP, UNCHS, USAID and Housing MinMec. |
| Environmental justice and equity | People's needs at forefront; Impacts not to unfairly affect anyone; Equitable access to environmental resources to meet basic needs; Workers right to refuse environmentally hazardous work; Polluter pays. | Housing Programme addresses poverty and inequality; Targets poorest of the poor. | Housing Subsidy programme; Housing Act; Environmentally Sound Low Cost Housing Task Team; Multi-year Development Plan | No. of Housing Subsidies accessed by gender | Other spheres of government; members of Environmentally Sound Low Cost Housing Task Team; Housing MinMec. |
| Ecological integrity | Disturbance of ecosystem / loss of biodiversity; Specific management for vulnerable ecosystems. | Informal settlements often situated in ecologically sensitive areas; Inappropriate services for rural areas. | Housing Subsidy Programme; township establishment procedures, norms and standards | Household connection levels to water, electricity, sewage and telephone; Households by formal and informal dwellings | Other spheres of government; Housing MinMec. |
| International responsibilities | To be discharged in the public interest | Habitat Agenda, UDF, Local Agenda 21 | Habitat Agenda, African Solutions Conference | UNCHS indicators | DEA&T (Local Agenda 21), Department of Foreign Affairs. |

GLOSSARY

| | |
|---------|---|
| CCC | Committee for Climate Change |
| CEC | Committee on Environmental Co-ordination |
| CFL | Compact Fluorescent Lights |
| DA | Department of Agriculture |
| DANCED | Danish Co-operation for Energy and Development |
| DEA&T | Department of Environment Affairs and Tourism |
| DFA | Development Facilitation Act (Act 67 of 1995) |
| DFID | Department For International Development |
| DH | Department of Health |
| DLA | Department of Land Affairs |
| DME | Department of Minerals and Energy |
| DOH | Department of Housing |
| DPLG | Department of Provincial and Local Government |
| DPW | Department of Public Works |
| DWAF | Department of Water Affairs |
| ECA | Environmental Conservation Act (Act 73 of 1989) |
| EDG | Energy and Development Group |
| EDRC | Energy and Development Research Centre |
| EIA | Environmental Impact Assessment |
| EIP | Environmental Implementation Plan |
| EMP | Environmental Management Plan |
| ELI | Efficient Lighting Initiative |
| ESKOM | National electricity utility |
| GEF | Global Environmental Facility |
| HPF | Homeless People's Federation |
| HUIS | Housing and Urbanisation Information System |
| IDP | Integrated Development Planning |
| IFC | International Finance Corporation |
| IIEC | International Institute for Energy Conservation |
| JASWIC | Joint Acceptance Scheme for Water Installation Components |
| LDO | Local Development Objectives |
| LEFTEA | Less Formal Township Establishment Act |
| NEMA | National Environmental Management Act (Act 107 of 1998) |
| NGOs | Non Governmental Organisations |
| NHBRC | National Home Builders Registration Council |
| NHFC | National Housing Finance Corporation |
| NIMBY | Not In My Back Yard |
| NURCHA | National Urban Reconstruction & Housing Agency |
| PHP | People's Housing Process/Partnership |
| RDP | Reconstruction & Development Programme |
| SABS | South African Bureau of Standards |
| SALGA | South African Local Government Association |
| SEED | Sustainable Energy, Environment & Development |
| SERVCON | Servcon Housing Solutions |
| SHF | Social Housing Foundation |
| SHI | Sustainable Homes Initiative |
| TIASA | The Thermal Insulation Association of South Africa |
| UDF | Urban Development Framework (1997) |
| USAID | United States Agency for International Development |
| USN | Urban Sector Network |

ANNEXURE A
PRESS RELEASE BY THE MINISTER OF HOUSING:
3 DECEMBER 1998

DETERMINATION OF NATIONAL NORMS AND STANDARDS IN RESPECT OF PERMANENT RESIDENTIAL STRUCTURES BASED ON THE INCREASED SUBSIDIES WITH EFFECT FROM 1 APRIL 1999

1. Background

- 1.1** Section 3(2)(a) of the Housing Act, 1997 provides for the following:

The Minister of Housing must determine national policy, including national norms and standards, in respect of housing development.

- 1.2** Section 3(3) determines that for the purposes of subsection (2)(a) "national norms and standards" includes norms and standards in respect of permanent residential structures, but are not limited thereto.

The rationale for this provision in the Act emanates from the fact that it is no longer feasible for the housing subsidy to be absorbed by unaffordable and unsustainable levels of municipal services, which leave very little money for an adequate permanent residential structure. This is particularly relevant in the light of the fact that approximately 80% of households qualifying for housing subsidies, have a monthly household income of R1 500 or less and generally only have the maximum subsidy of R16 000 (with effect from 1 April 1999) to provide for their housing needs (The minimum subsistence level is currently calculated at R1 130 per household).

- 1.3** I have therefore instructed the Department of Housing to determine basic services that may be financed from the subsidy and to quantify the average cost thereof. This is a prerequisite to provide a basis to determine what average amount of a subsidy remains for the provision of an adequate top structure to enable the Minister of Housing to determine minimum national norms and standards in respect of permanent residential structures.

- 1.4** The concept of housing development which forms the golden thread in the Housing Act, 1997 is pertinent and reads as follows:

- "(vi) **"housing development"** means the establishment and maintenance of habitable, stable and sustainable public and private residential environments to ensure viable households and communities in areas allowing convenient access to economic opportunities, and to health, educational and social amenities in which all citizens and permanent residents of the Republic will, on a progressive basis, have access to-

- (a) permanent residential structures with secure tenure, ensuring internal and external privacy and providing adequate protection against the elements; and
- (b) potable water, adequate sanitary facilities and domestic energy supply; "

1.5 I today take pleasure in announcing that the Housing MINMEC at its meeting of 30 November 1998 approved the norms and standards as indicated below.

2. Norms and standards

2.1 Municipal services

2.1.1. The internal reticulation services that may be subsidised with the housing subsidy are limited to water, sanitation, roads, stormwater and street lighting, subject to a funding limit of a maximum amount of R7 500,00 for the provision of the services and the acquisition of land. To the extent that a basic level of services is regarded justified by the MEC for Housing of the Province concerned, to spend the maximum amount on the permanent residential structure, the level of service must at least comply with the level indicated in the following table.

| Type of Service | Minimum Level |
|-----------------|--|
| Water | Single standpipe per erf (metered) |
| Sanitation | VIP per erf |
| Roads | Access to each erf with graded or gravel paved road; |
| Stormwater: | Lined open channels |
| Street lighting | Highmast security lighting for residential purposes where this is feasible and practicable, on condition that such street lighting is not funded from the CMIP initiative or funding available from other resources. |

2.1.2 The maximum 15% variation of the full subsidy amount (R16 000) which amounts to R2 400,00 to cater for abnormal development costs arising from locational, geotechnical and topographical conditions may be applied for the construction of the services or on the basis of a combination of the services and the permanent residential structure depending on the requirements of the situation and should generally be sufficient.

2.1.3 Where the conditions are so adverse that the R 2 400,00 is insufficient to address abnormal development costs, the MEC may in respect of the area concerned, at his or her discretion, approve the following maximum additional amounts based on the table as contained in Appendix 1, namely:

| | | |
|----|------------------|------------|
| a) | Excessive slopes | R 1 025,00 |
| b) | Sandy soil | R 900,00 |
| c) | Medium dolomite | R 1 950,00 |

2.2 Norms and standards in respect of permanent residential structures

2.2.1 The minimum size of permanent residential structures to be provided by means of the balance of the housing subsidy after the provision for basic services, as contemplated in 2.1.1 above, is 30 square metres, (gross floor area) on condition that the Member of the Executive Council responsible for housing, may approve:

2.2.1.1 the increase of the minimum size where it is feasible to cap the amount in respect of services at a lower level than R 7 500,00 or where construction costs in areas make it practicable; or

2.2.1.2 the reduction of the minimum size of top structures to 27 square metres in the instance where an additional allowance is deemed necessary in respect of excessive slopes and sandy soil as contemplated in paragraph 2.1.3. The MEC may further reduce the minimum size of the permanent residential structure to 24 square metres in instances where the additional allowance in respect of medium dolomite has been approved as contemplated in paragraph 2.1.3.

2.2.1.3 The engineering norms and specifications regarding permanent residential structures as contained in Appendix 2 are to form part of the norms and standards regarding permanent residential structures to ensure quality.

2.2.2 The norms and standards in respect of permanent residential structures will also apply in respect of beneficiaries qualifying for subsidies of R10 000 or R5 500,00, given the fact that these beneficiaries are able to access external finance to enhance their subsidies.

2.2.3 The National Norms and Standards will not be mandatory in respect of dwellings and or projects that are developed in terms of the Rural Housing Subsidy Instrument, given the fact that rural housing are subsidies of last resort where it may not be possible to implement the standard subsidies such as project linked subsidies, individual subsidies and institutional subsidies. Accordingly Rural subsidies may be used for any purpose which, in the discretion of the Provincial Housing Board (PHDB), amount to housing purposes. Given the peculiar nature of the *in situ* upgrading of informal settlements where people have settled on land where township establishment and the installation of engineering services have not yet taken place, the minimum norms and standards will also not be mandatory.

3. The norms and standards will be implemented with effect from 1 April 1999.

4. MINMEC has further mandated the Department of Housing to further investigate the determination and costing of detailed norms and standards policy in respect of housing development as prescribed in section 3(2)(a) of the Housing Act, 1997 (Act No. 107 of 1997).

APPENDIX 1

FURTHER VARIATION IN RESPECT OF SEVERE GEO-PHYSICAL CONDITIONS

| Item | Excessive Slopes | Sandy Soil | Medium Dolomite * | Ampunt per House |
|--|-------------------|-------------------|-------------------|------------------|
| Larger stands | X | | | R 250,00 |
| Precautions for services | | X | X | R 1 000,00 |
| Cutting and fill | X | | | R 500,00 |
| Retaining Structure | X | | | R 500,00 |
| Reinforced strip foundation | X | | | R 500,00 |
| Engineered foundation | | | X | R 1 200,00 |
| Sealed road | X | X | | R 1 000,00 |
| Storm water control measures | X | X | X | R 600,00 |
| Concrete apron | | X | X | R 400,00 |
| Subsurface drainage | | X | | R 300,00 |
| Dolomitic survey | | | X | R 40,00 |
| Less stands available | X | | X | R 75,00 |
| Flexible service connections | | | X | R 150,00 |
| Articulated top structure | | | X | R 480,00 |
| Pre compaction of stands | | | X | R 360,00 |
| Totals | R 3 425,00 | R 3 300,00 | R 4 305,00 | |
| Extra over the R 2 400,00 | R 1 025,00 | R 900,00 | R 1 950,00 | |
| Reduction in area of house @ R333/sq meter | 3 | 3 | 6 | |
| Size of house in problem areas | 27 | 27 | 24 | |

* As far as normal dolomitic conditions are concerned, the variation of 15 % will suffice, while it is not at all feasible and affordable to undertake subsidised housing development in areas with excessive dolomitic conditions

APPENDIX 2

DEPARTMENT OF HOUSING

**NATIONAL NORMS AND STANDARDS IN RESPECT OF
PERMANENT RESIDENTIAL STRUCTURES****PART 1: PREAMBLE****1.1 GENERAL**

Any specification or definition of norms and standards for affordable housing, should ideally be performance based. This encourages innovation by allowing any building systems, materials or techniques to be combined to meet the performance requirements that are set out.

While there are many technologies that can be used to produce a house that will meet a performance specification, it is essential that the resulting structure is acceptable to the community members who are the potential buyers of the housing.

It is advisable that the acceptability of the proposed building system is tested at the earliest possible opportunity on any development, and certainly before the construction contract relating to the superstructure of the dwellings is placed.

A major portion of the success of sustainable development is to achieve a balance between what is affordable and what is acceptable. There is no point in building housing that is affordable if the community rejects it or sees it as "inferior". At the same time it is obviously impossible to build what the community deems to be acceptable to it, if that is patently unaffordable.

In striving for the aforementioned balance, competition and densification are encouraged.

1.2 RELEVANCE OF THE NATIONAL BUILDING REGULATIONS (NBR) TO AFFORDABLE HOUSING

The NBR published in the Government Gazette is the "law of the land" as far as building is concerned. The regulations apply equally to affordable housing and to luxurious apartment buildings. They consist of short straightforward statements, setting out the performance that a building must achieve. Most importantly, the regulations do not prescribe how this must be done.

SABS publication **SABS 0400: *The application of the building regulations*** contains both the NBR and a set of ***Deemed-to-satisfy rules***. The rules are

provided to assist designers to meet the performance requirements set out in the regulations. The rules deal with conventional construction only. The rules are not regulations, nor do they have the force of law of the NBR. For example:

Deemed-to-satisfy rule HH2.4 requires that the width of any continuous strip foundation shall be not less than 600mm in the case of a foundation to a load-bearing or free standing masonry wall

There is no need to comply with this rule if in the opinion of an engineer:

- * *ground conditions are so poor that more complicated foundations must be used or,*
- * *the combination of building load and founding conditions is such that the strip foundation can be reduced in width, or omitted altogether.*

On presenting either alternative to the municipality, it will be accepted as complying with the relevant building regulation, if it is shown to be the result of a rational design by an appropriately qualified, competent person.

1.3 PROOF OF COMPLIANCE WITH THE NBR

There are in fact, several methods of persuading a municipality that a particular design complies with the requirements of the NBR, namely that the building will be constructed in accordance with:

- * a design that conforms in all respects with the Deemed-to-satisfy rules set out in SABS 0400;
- * a certificate issued by the Board of Agrément SA, that is,
 - an Agrément Certificate, or
 - a MANTAG Certificate;
- * a rational design prepared by a competent person.

As discussed in Section 1.2 above, the Deemed-to-satisfy rules cover only conventional building methods. Unconventional building methods, building systems or building components, are covered by an Agrément Certificate. This provides an assurance of fitness for purpose of non-standardised building and construction products and systems, by evaluating these against prescribed performance criteria.

A MANTAG Certificate is a distinct type of Agrément Certificate as described below.

"MANTAGs are based on acceptable safety and health criteria for houses and related out-buildings, non-residential schools and primary health care centres in areas where the local authority is of the opinion that the type of construction is appropriate, given that in these areas it is of paramount importance that the buildings be erected at the lowest possible cost."

Rational designs are normally presented in relation to the *Structural strength and stability* of a dwelling and much less frequently, in relation to:

- * *Resistance to rainwater penetration*
- * *Damp proofing*
- * *Fire protection*
- * *Lighting and ventilation*
- * *Drainage.*

However there is a tendency for regulatory authorities that are presented with a rational design, to assume that it covers all aspects of the work. For this reason the Department of Housing insists that the competent person must:

- * clearly identify those aspects of the works that are the subject of the rational design;
- * inspect for compliance with the rational design;
- * assume full professional responsibility for the subsequent performance of the subjects covered by the rational design.

All aspects of the work that are not the subject of the rational design, must comply with the Deemed-to-satisfy rules of SABS 0400 or be covered by a Certificate issued by the Board of Agrément SA.

1.4 FORMAT OF THE NORMS AND STANDARDS

The format of the norms and standards set out in Part 2 of this document, is as follows:

- * **The norms and standards that must be achieved are set out in bold type.**
- * *Where necessary, guidelines or suggestions, that relate to achieving compliance with these norms and standards, are set out in italics, for the consideration by the designer.*

1.5 DOCUMENT DETAILING GOOD BUILDING PRACTICE

The Department of Housing will in due course, provide a document on good building practice to support the norms and standards that are set out in Part 2 of this document.

PART 2: NORMS AND STANDARDS

2.1 GENERAL

Permanent housing that is covered by this document, must be built in accordance with the principles embodied in the Housing Act, 1997(Act No 107 of 1997).

Building plans and specifications must be prepared and handed over to the home owner and be lodged with the relevant municipality.

The buildings and their services must comply with the requirements of the NBR and with the relevant SABS codes of practice, in accordance with the requirements set out in Section 1.3 of Part 1 of this document.

2.2 FORM

The buildings must be simple in form and straightforward to construct.

It is essential to contain costs, reduce or simplify maintenance requirements and to create opportunities for the emerging contractors to take part in the building process.

2.3 STRUCTURAL DESIGN

Any building and any structural element or component thereof must be designed to provide strength, stability, serviceability and durability for the life of the structure, in accordance with accepted principles of engineering design and construction practice.

2.4 MATERIALS AND COMPONENTS

All materials and components used in the dwelling and in any associated structures must be:

 durable and suitable for the purpose for which they are used,

 installed or used, in accordance with the manufacturers' instructions.

2.5 DIMENSIONS

The minimum size of the completed structure shall be not less than thirty square metres.

Any Provincial Housing Development Board may, with the concurrence of the MEC for housing in the province concerned, increase this minimum, if local conditions are conducive to this.

Similarly in areas where adverse geotechnical and/or topographical conditions require the expenditure of a disproportionately large amount of the subsidy on engineering services and the dwelling, the minimum size of dwelling may be reduced.

Any room or space must have dimensions that will ensure that such room or space is fit for the purpose for which it is intended.

2.6 THE SITE AND SITE PREPARATION

Before finally approving the site a geological survey must be conducted to determine the suitability of the founding conditions.

If the ground conditions present serious problems either with regard to the founding conditions or to the provision of infrastructure, within the cost norms prescribed, consideration must be given to moving the project to another more suitable site.

The site works must be compatible with the aim of producing affordable housing within the cost constraints imposed by the subsidy scheme. The ground in the vicinity of the building must be levelled before construction commences. This must be done with due attention to the need to control and dispose of rainwater runoff.

Where practical, the site should be levelled and the soil disposed of in preference to cutting and filling. This allows the foundations to be placed in natural ground, reduces the height of the foundation walls and reduces the need for fill with its usually neglected requirement of adequate compaction. It also removes the temptation to construct the foundations in filled ground.

Retaining structures should be provided on the site, rather than building high foundation walls to the dwellings. It is in many cases more practical to form a level site by retaining the earth near to the building by means of retaining block walls, than to provide high foundation walls to the building.

The finished ground levels must direct water away from the building.

In areas where termite infestation is known to be a problem, the soil within the site must be treated in accordance with the recommendations set out in SABS 0124 - *Application of certain soil insecticides for the protection of buildings*.

2.7 THE FOUNDATIONS

The foundation of any building must be designed to safely transmit all the loads from the building to the ground without causing or being subjected to excessive movements.

In favourable ground conditions the foundations must be designed to reduce as far as practically possible, the depth of excavation, the height of the foundation walls and the cost of unnecessarily large footings.

Any variation from the foundations required by the Deemed-to-satisfy rules of the NBR must be the subject of a rational design by a Professional Engineer.

In problematic ground conditions a Professional Engineer must design the foundations and advise on the articulation of the superstructure, if this is deemed necessary.

It is important that the Engineer keeps his design straightforward and that the performance of the design is not dependent on any peculiar long-term maintenance measures that are unlikely to be carried out.

2.8 CONCRETE

Concrete must be of the grade specified or of a higher grade.

2.9 CEMENT

The correct cement for the purpose intended must be clearly specified and it must comply with the requirements of SABS ENV 197-1 *common cements* and SABS 413-1 *Masonry Cements*.

Masonry cement must not be used in concrete.

Masonry cement MC 22,5X must not be used in shell bedding mortar.

Cement for use in concrete, mortar or plaster shall be chosen in accordance with Table 1.

It is important that the cement manufacturer's mix guidelines be followed.

The types of cement and the uses specified in Table 1 are those adopted by the National Home Builders Registration Council and by the Board of Agrément SA. Detailed information relating to the choice of cements and their appropriate use will be included in the document detailing good building practice, referred to in Section 1.5 of Part 1 of this document.

2.10 FLOORS

Any floor of any building shall be:

- ☐ **strong enough to support its own weight and any loads to which it is likely to be subjected without undue distortion or distress;**
- ☐ **water resistant in the case of the floor of any kitchen, shower room, bathroom or room containing a WC;**
- ☐ **provided with adequate under-floor ventilation in the case of a suspended timber floor;**
- ☐ **so constructed that any moisture present in the ground or filling is prevented from penetrating the slab in the case of a concrete floor slab that is supported on ground or filling.**

The latter requirement needs no action on dry sites but becomes particularly important on wet sites (see SABS 021: Waterproofing of buildings, for the definition of a wet site).

2.11 DAMP PROOF COURSES (DPC) AND MEMBRANES (DPM)

These items must be provided and installed in accordance with SABS 021: Waterproofing of buildings.

The horizontal DPC must be installed at not less than 150mm above the level of the surrounding ground.

The horizontal DPC must not be plastered over.

2.12 WALLS

Any wall shall be:

- ☐ **capable of safely sustaining any loads to which it is likely to be subjected and in the case of a structural wall, shall be capable of safely transferring these loads to the supporting foundations;**
- ☐ **so constructed that it will adequately resist the penetration of water**

into any part of the building where it would be detrimental to the health of the occupants or to the durability of the building;

- ☐ provided with the means to fix any roof truss, rafter or beam to the wall in a secure manner that will ensure that any forces to which the roof may normally be subjected will be transmitted to the wall supporting it; and
- ☐ of combustibility and fire resistance characteristics appropriate to the use of the wall.

Air bricks should not be used needlessly. There is no statutory requirement that demands the use of air bricks.

The foundation walls below the horizontal DPC should not be plastered unless special precautions are taken to prevent failure of the plaster.

2.12 ROOFS

The roof of any building shall:

- ☐ be so constructed that it will resist any forces to which it is likely to be subjected;
- ☐ be durable and waterproof;
- ☐ not allow the accumulation of any rainwater upon its surface;
- ☐ be constructed to provide adequate height in any room immediately beneath the roof/ceiling assembly; and
- ☐ have a fire resistance appropriate to its use.

Wherever possible a pitched roof (more than 6 degrees) should be used in preference to a flat roof (refer to Section 2.18.2 below).

The roof shape should be as simple as possible.

The use of parapet walls should be avoided.

Experience has shown that the designer should specify, detail and check:

- ☐ the size and grade of timber to be used;
- ☐ the method of anchoring the roof to the walls;

- ☐ any roof bracing that is required;
- ☐ the fixing of roof purlins or tiling battens to the trusses; and
- ☐ the size, types and number of nails at each fixing.

2.13 DOORS

The correct type and quality of doors must be specified, supplied and properly hung in the appropriate opening.

Problems encountered include:

- ☐ the use of hollow core doors when solid core doors have been specified;
- ☐ the use of internal quality doors when external quality is required and has been specified; and
- ☐ framed, ledged and braced doors hung upside down.

2.14 GLAZING

Any glazing shall be of glass or plastics and be fixed in a manner and position that will ensure that it will:

- ☐ safely sustain any wind loads to which it is likely to be subjected; and
- ☐ not allow the penetration of water to the interior of the building.

2.15 LIGHTING AND VENTILATION

Any habitable room, bathroom, shower-room and room containing a WC shall be provided with a means of lighting and ventilation which will enable such room to be used, without detriment to health and safety or causing any nuisance, for the purpose for which it is designed.

All dwellings shall be provided with the means of ventilation and natural lighting set out in Table 2.

2.16 DRAINAGE AND SANITATION

Drainage installations shall be:

- ☐ designed and constructed so that the installation is capable of carrying the hydraulic design load and of discharging it into a

- common drain, connecting sewer or sewer provided to accept such discharge;
- ☐ watertight;
- ☐ capable of sustaining the loads and forces that it may normally be subjected to;
- ☐ protected against any damage wherever this is necessary; and
- ☐ capable of being cleaned and maintained through the means of access provided.

Drains shall be laid strictly in accordance with the requirements of the municipality.

French drains and septic tanks shall be constructed to a size and design approved by the municipality.

Non waterborne means of sanitation must comply with the requirements of Section 7.4 of SABS 0252-2: *Water supply and drainage of buildings; Part 2: Drainage Installations for buildings*, all to the requirements of the municipality.

Where waterborne sewage disposal is not available, no person shall construct a pit latrine without the permission of the municipality.

2.17 STORM WATER

The design shall provide for suitable means for the control and disposal of accumulated storm water.

Storm water drains shall comply with the requirements of the municipality.

2.18 ENVIRONMENTALLY EFFICIENT HOUSING

2.18.1 Water Supply

The design of the water supply and the specification of devices such as taps, showers and toilets must be in accordance with the aims of the *National Water Conservation Campaign*.

This will not only reduce the householder's use of a scarce resource, it will also reduce the monthly bill for water used.

*Reference should be made to the document entitled **A to Z of Water***

Saving Devices published by the SABS and JASWIC, for information on appropriate devices such as:

- ☐ water conserving taps;
- ☐ low flow rate shower-heads; and
- ☐ dual flush toilet cisterns.

Special attention should be paid to the water saving potential of toilet suites that are designed as a unit, to operate efficiently and safely on a standard flush of 4,5 litres instead of the current norm of 9 litres. Those suites that are covered by an Agrément Certificate can be specified with confidence.

Before specifying water saving devices such as low-flow showerheads, the designer must satisfy himself that they will function satisfactorily with the available water pressure.

Water saving measures that are undertaken, must be compatible with imperatives that the water supply and the sewerage disposal systems must be safe and hygienic, and be capable of operating efficiently with only normal and reasonable maintenance.

2.18.2 Thermal efficiency

Designs for affordable housing must take cognisance of the need for the resultant dwellings to be thermally efficient.

The cost constraints imposed by the subsidy scheme make it difficult to meet this requirement. However, there are several principles that, if followed, will enhance the thermal efficiency of the dwelling at minimal cost. These are:

- ☐ The longer axis of the dwelling should be orientated so that it runs as near east/west as possible.
- ☐ The dwelling should be compact in plan with the rooms that are used most and the major areas of glazing placed on the northern side of the building to allow solar heat to penetrate the glazing during the winter months.
- ☐ The roof overhang to the northern wall should be sufficient to shade the windows from midday summer sunshine.
- ☐ Windows facing east and west should be limited in number and confined in area to the minimum required for daylight and

ventilation.

Of the additional measures that can be taken to improve the thermal efficiency of a dwelling, the most cost effective measure is to install a ceiling. A further improvement may be obtained by the addition of a layer of insulation above and in direct contact with the ceiling.

3. RELEVANCE OF THE ABOVE NORMS AND STANDARDS TO THE PEOPLE'S HOUSING PROCESS

The Norms and Standards contained in this document also apply in respect of permanent residential structures constructed in terms of the People's Housing Process.

In this regard Provincial Housing Development Boards may consider a degree of flexibility to accommodate innovative approaches, provided that the permanent residential structures so constructed are consistent with the Norms and Standards contained in this document.

4. RURAL HOUSING SUBSIDIES AND INFORMAL SETTLEMENTS

The National Norms and Standards will not be mandatory in respect of dwellings and/or projects that are developed in terms of the Rural Housing Subsidy Instrument or to the in situ upgrading of informal settlements where township establishment and the installation of engineering services have not yet taken place.

ANNEXURE B**HUMAN SETTLEMENT INDICATORS ACCEPTANCE CRITERIA****Housing & Urbanisation Information System**

HUMAN SETTLEMENT INDICATOR PROGRAMME PHASE ONE KEY INDICATORS THAT HAVE BEEN DEFINED

This document describes the different Human Settlement indicators for Phase 2 of the HUIS system. Die indicator is defined with a reference number, a definition, the data requirements, the formula, the data source and the level of data as well as the unit and base and the acceptance criteria.

The Housing Indicator Pilot Project is the initiative of the Department of Housing to monitor sustainable human settlement development in South Africa in line with the United Nations Centre for Human Settlement Indicator Programme. Various key indicators were identified for phase I of the pilot project. The identified key indicators from the pilot study will form part of phase II of the development of the Housing and Urbanisation Information System.

In this document the identified human settlement key indicators for phase one of the pilot project have been analysed according to the following criteria:

1. The definition of the key indicator;
2. The formula to determine the indicator;
3. The source of the data;
4. The frequency level of the available data. This should be considered along with the level of place available according to the sources time in order to determine the accessibility of the data;
5. The unit of the indicator;
6. The base year to consider the indicator as a time series.
7. Comments on the feasibility of the indicator; comments on the definition; etc.

Most of the indicators can be determined from data from the Central Statistical Services (CSS). Nine of the indicators can be determined if the following data from the CSS is obtained:

1. October Household Survey 1995 (OHS 1995);
2. Income and Expenditure Survey 1995;
3. Although the two surveys are not significant on town level, it is possible to determine significant statistics on magisterial district level and to differentiate between urban and rural areas. It is, however, more significant to use the data on provincial level. In order to do time series analysis, data from the OHS 1996 and the OHS 1997 should be obtained as soon as it is available. Indicators like the fertility rate, life expectancy at birth, are difficult to determine, but are already available in calculated format from the CSS.

It is statistically not significant to use the 1991 OHS data because of the following reasons;

1. The TBVC states were not included;
2. The statistical regions, magisterial districts and enumerator areas changed in 1994 and can not

- be compared with the later surveys. It can be done, but a lot of it will be thumb-sucking;
3. The 1991 counts had been adjusted upwards to match a demographic model. In this model, the 1970 OHS was taken as the starting point for population growth rate projections for Africans, while 1980 was taken as the starting point for projections for the other population groups. These historical projections were taken as definitive in 1991, even though there was uncertainty about key variables in the model, notably fertility and mortality. By contrast, in 1996 the actual OHS count on the ground plus a post-enumeration survey adjustment were taken into consideration. Assumptions for under-count were made regarding fertility and mortality rates, and net migration, which may prove to be wrong. The 1980 fertility rates used in the 1991 OHS were too high on the basis of a Demographic Health Survey conducted between 1987 and 1989, and they were already adjusted downwards for the 1991 model.

NOTE:

- All the values displayed in the pie charts as the 0.00% format have been changed to the 0% format.
- Inserted dotted grid lines in all bar charts

HUMAN SETTLEMENT INDICATORS FOR PHASE II

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|------|---|--|--|-------------------------------------|--|----------|------|------|---|
| I01a | 1. Households below poverty line 02.02.01.05 11.01.01 01.02.01 | Total households by gender below poverty line as % of total households (UNCHS, 1995) | Minimum Living Level (MLL) per household (a) Total # of households with a monthly income below the MLL (b) Total # of female headed households with a monthly income below the MLL (c) Total # of male headed households with a monthly income below the MLL (d) Total # of households (e) | $b/e*100$ $c/e*100$ $d/e*100$ | B M R - Report 215 1995 CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | No official poverty indicator exists in SA according to CSS. An average Minimum Living Level (MLL) for the country will be used instead. Household information is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. Households below MLL <i>Change grid lines</i> ACCEPTED |
| I01b | 1. Households by gender below poverty line 02.02.01.05 01.02.08 11.01.02 11.01.01 01.02.01 | Total households by gender below poverty line as % of total households by gender (UNCHS, 1995) | Minimum Living Level (MLL) per household (a) Total # of female headed households with a monthly income below the MLL (b) Total # of male headed households with a monthly income below the MLL (c) Total # of female headed households (d) Total # of male headed households (e) | $b/d*100$ $c/e*100$ | B M R - Report 215 1995 CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | No official poverty indicator exists in SA according to CSS. An average Minimum Living Level (MLL) for the country will be used instead. Household information is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. Households below MLL by Gender <i>Change grid lines</i> ACCEPTED |
| I01c | 1. White households below poverty line | Total white households by gender below poverty line as % of total white households (UNCHS, 1995) | Minimum Living Level (MLL) per household (a) Total # of white households with a monthly income below the MLL (b) | $b/e*100$ $c/e*100$ $d/e*100$ | B M R - Report 215 1995 CSS - OHS | Annually | % | 1997 | No official poverty indicator exists in SA according to CSS. An average Minimum Living Level (MLL) for the country will be used instead. |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|------|---|--|--|-------------------------------------|--|----------|------|------|---|
| | 02.02.01.05 11.01.01 01.02.01 | 1995) | Total # of white female headed households with a monthly income below the MLL (c) Total # of white male headed households with a monthly income below the MLL (d) Total # of white households (e) | | 1995 OHS 1996 OHS 1997 | | | | Household information is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. White Households below MLL <i>Change grid lines</i> ACCEPTED |
| I01d | 1. White households by gender below poverty line 02.02.01.05 11.01.01 01.02.01 | Total white households by gender below poverty line as % of total white households by gender (UNCHS, 1995) | Minimum Living Level (MLL) per household (a) Total # of white female headed households with a monthly income below the MLL (b) Total # of white male headed households with a monthly income below the MLL (c) Total # of white female headed households (d) Total # of white male headed households (e) | $b/d*100$ $c/e*100$ | B M R - Report 215 1995 CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | No official poverty indicator exists in SA according to CSS. An average Minimum Living Level (MLL) for the country will be used instead. Household information is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. White Households below MLL by Gender <i>Change grid lines</i> ACCEPTED |
| I01e | 1. Black households below poverty line | Total black households by gender below poverty line as % of total black households (UNCHS, 1995) | Minimum Living Level (MLL) per household (a) Total # of black households with a monthly income below the MLL (b) Total # of black female headed households with a monthly income below the MLL (c) Total # of black male headed households with | $b/e*100$ $c/e*100$ $d/e*100$ | B M R - Report 215 1995 CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | No official poverty indicator exists in SA according to CSS. An average Minimum Living Level (MLL) for the country will be used instead. Household information is only available on magisterial district level (urban, semi-urban, rural). |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|------|--|--|--|-------------------------------------|--|----------|------|------|---|
| | 11.01.01 01.02.01 02.02.01.05 | | a monthly income below the MLL (d) Total # of black households (e) | | | | | | Indicators will be calculated on metro level as soon as metro boundaries are determined. Black Households below MLL <i>Change grid lines</i> ACCEPTED |
| I01f | 1 . B l a c k households by gender below poverty line 11.01.01 01.02.01 02.02.01.05 | Total black households by gender below poverty line as % of total black households by gender (UNCHS, 1995) | Minimum Living Level (MLL) per household (a) Total # of black female headed households with a monthly income below the MLL (b) Total # of black male headed households with a monthly income below the MLL (c) Total # of black female headed households (d) Total # of black male headed households (e) | $b/d*100$ $c/e*100$ | B M R - Report 215 1995 CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | No official poverty indicator exists in SA according to CSS. An average Minimum Living Level (MLL) for the country will be used instead. Household information is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. Black Households below MLL by Gender <i>Change grid lines</i> ACCEPTED |
| I01g | 1 . C o l o u r e d households below poverty line | Total coloured households by gender below poverty line as % of total coloured households (UNCHS, 1995) | Minimum Living Level (MLL) per household (a) Total # of coloured households with a monthly income below the MLL (b) Total # of coloured female headed households with a monthly income below the MLL (c) Total # of coloured male headed households with a monthly income below the MLL (d) Total # of coloured households (e) | $b/e*100$ $c/e*100$ $d/e*100$ | B M R - Report 215 1995 CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | No official poverty indicator exists in SA according to CSS. An average Minimum Living Level (MLL) for the country will be used instead. Household information is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|------|--|--|---|-------------------------------------|--|----------|------|------|--|
| | 11.01.01 01.02.01 02.02.01.05 | | | | | | | | Coloured Households below MLL <i>Change grid lines</i> ACCEPTED |
| I01h | 1. Coloured households by gender below poverty line 11.01.01 01.02.01 02.02.01.05 | Total coloured households by gender below poverty line as % of total coloured households by gender (UNCHS, 1995) | Minimum Living Level (MLL) per household (a) Total # of coloured female headed households with a monthly income below the MLL (b) Total # of coloured male headed households with a monthly income below the MLL (c) Total # of coloured female headed households (d) Total # of coloured male headed households (e) | $b/d*100$ $c/e*100$ | B M R - Report 215 1995 CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | No official poverty indicator exists in SA according to CSS. An average Minimum Living Level (MLL) for the country will be used instead. Household information is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. Coloured Households below MLL by Gender <i>Change grid lines</i> ACCEPTED |
| I01i | 1. Asian households below poverty line 11.01.01 01.02.01 02.02.01.05 | Total asian households by gender below poverty line as % of total asian households (UNCHS, 1995) | Minimum Living Level (MLL) per household (a) Total # of asian households with a monthly income below the MLL (b) Total # of asian female headed households with a monthly income below the MLL (c) Total # of asian male headed households with a monthly income below the MLL (d) Total # of asian households (e) | $b/e*100$ $c/e*100$ $d/e*100$ | B M R - Report 215 1995 CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | No official poverty indicator exists in SA according to CSS. An average Minimum Living Level (MLL) for the country will be used instead. Household information is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. Asian Households below MLL <i>Change grid lines</i> ACCEPTED |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|------|---|--|--|--|---|----------|------|------|---|
| I01j | 1. Asian households by gender below poverty line 02.02.01.05 11.01.01 01.02.01 | Total asian households by gender below poverty line as % of total asian households by gender (UNCHS, 1995) | Minimum Living Level (MLL) per household (a) Total # of asian female headed households with a monthly income below the MLL (b) Total # of asian male headed households with a monthly income below the MLL (c) Total # of asian female headed households (d) Total # of asian male headed households (e) | $b/d*100$ $c/e*100$ | B M R - Report 215 1995 CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | No official poverty indicator exists in SA according to CSS. An average Minimum Living Level (MLL) for the country will be used instead. Household information is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. Asian Households below MLL by Gender <i>Change grid lines</i> ACCEPTED |
| I02a | Total households by subsidy income categories 11.02.01 | Total households by income category for subsidy allocations | Total # of households with a monthly income between R0-R1500 (a) Total # of households with a monthly income between R1501-R2500 (b) Total # of households with a monthly income between R2501-R3500 (c) Total # of households with a monthly income greater than R3500 (d) Total # of households (e) | $a/e*100$ $b/e*100$ $c/e*100$ $d/e*100$ | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1995 | Information requirement from Directorate: Economics. The DoH subsidy income categories will be used. Household information is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. Households by Subsidy Income Category ACCEPTED |
| I02b | White households by subsidy income | White households by income category for subsidy allocations | Total # of white households with a monthly income between R0-R1500 (a) Total # of white households with a monthly | $a/e*100$ $b/e*100$ $c/e*100$ | CSS - OHS 1995 OHS 1996 | Annually | % | 1995 | Information requirement from Directorate: Economics. The DoH subsidy income categories will be |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|------|---|---|---|--|--|----------|------|------|---|
| | categories 11.02.02 | | income between R1501-R2500 (b) Total # of white households with a monthly income between R2501-R3500 (c) Total # of white households with a monthly income greater than R3500 (d) Total # of white households (e) | $d/e*100$ | OHS 1997 | | | | used. Household information is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. White Households - Subs Income Category <i>ACCEPTED</i> |
| I02c | Black households by subsidy income categories 11.02.03 | Blacks households by income category for subsidy allocations | Total # of black households with a monthly income between R0-R1500 (f) Total # of black households with a monthly income between R1501-R2500 (g) Total # of black households with a monthly income between R2501-R3500 (h) Total # of black households with a monthly income greater than R3500 (i) Total # of black households (j) | $a/e*100$ $b/e*100$ $c/e*100$ $d/e*100$ | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1995 | Information requirement from Directorate: Economics. The DoH subsidy income categories will be used. Household information is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. Black Households - Subs Income Category <i>ACCEPTED</i> |
| I02d | Coloured households by subsidy income categories | Coloureds households by income category for subsidy allocations | Total # of coloured households with a monthly income between R0-R1500 (k) Total # of coloured households with a monthly income between R1501-R2500 (l) Total # of coloured households with a monthly income between R2501-R3500 (m) Total # of coloured households with a monthly income greater than R3500 (n) | $a/e*100$ $b/e*100$ $c/e*100$ $d/e*100$ | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1995 | Information requirement from Directorate: Economics. The DoH subsidy income categories will be used. Household information is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|------|---|--|---|--|--|----------|------|------|---|
| | 11.02.04 | | Total # of coloured households (o) | | | | | | soon as metro boundaries are determined. Coloured Households-Subs Income Category <i>ACCEPTED</i> |
| I02e | A s i a n households by subsidy income categories 11.02.05 | Asians households by income category for subsidy allocations | Total # of asian households with a monthly income between R0-R1500 (p) Total # of asian households with a monthly income between R1501-R2500 (q) Total # of asian households with a monthly income between R2501-R3500 (r) Total # of asian households with a monthly income greater than R3500 (s) Total # of asian households (t) | a/e*100 b/e*100 c/e*100 d/e*100 | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1995 | Information requirement from Directorate: Economics. The DoH subsidy income categories will be used. Household information is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. Asian Households - Subs Income Category <i>ACCEPTED</i> |
| I04 | A5.Unemployment rates by gender 11.19.01 11.04.01(opposite) | Average proportion of unemployed during the year as a fraction of the formal workforce, a)unemployed male b)unemployed female (UNCHS, 1995) | Total # of unemployed males (older than 15 years) (a) Total # of unemployed females (older than 15 years) (b) Total # of individuals between 15 - 65 years of age (c) | a/c*100 b/c*100 | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | The CSS definition of total labour force will be used. Information is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. Unemployment Rates by Gender <i>Change grid lines</i> <i>ACCEPTED</i> |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|------|---|---|---|---|--|----------|------|------|---|
| I09 | D2.Population by gender 01.02.02 06.03.01 06.04.01 09.03.07 11.09.01 01.01.03 | Population a)male b)female) within city proper, metro area & urban agglomeration (UNCHS, 1995) | Total # of males (a) Total # of females (b) Population (c) | | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | # | 1997 | Data is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. Population by Gender <i>Change grid lines and label</i> ACCEPTED |
| I17a | 7. Dwelling water connection levels 11.13.01 03.15.03 Related I66 | % dwellings connected to a)water (UNCHS, 1995) | Total # of dwellings (a) Total # of dwellings connected to running water in the dwelling (b) Total # of dwellings connected to running tap water on the site (c) | $b/a*100$ $c/a*100$ | CSS- OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. Dwelling Connection levels to Water <i>Graph changed from a pie chart to a 2d horizontal bar chart.</i> ACCEPTED |
| I17b | 7. Household water access levels 11.13.02 | How far the household has to fetch water (UNCHS, 1995) | Total # of households (a) Total # of households that have to fetch water less than 100m (b) Total # of households that have to fetch water from 100m-less than 200m (c) Total # of households that have to fetch water from 200m-less than 500m (d) Total # of households that have to fetch water from 500m-less than 1km (e) Total # of households that have to fetch water from 1km or more (f) | $b/a*100$ $c/a*100$ $d/a*100$ $e/a*100$ $f/a*100$ | CSS- OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. Household Water Access Levels ACCEPTED |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FORMULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|------|---|---|---|---|---------------------------------------|----------|------|------|---|
| II7c | 7. Dwelling electricity connection levels Rel:171 Rel:03.15.28 11.13.03. | % dwellings connected to b) electricity (UNCHS, 1995) | Total # of dwellings (a) Total # of dwellings connected to electricity from public supply in the dwelling for cooking purposes (b) Total # of dwellings connected to electricity from public supply in the dwelling for heating purposes (c) Total # of dwellings connected to electricity from public supply in the dwelling for lighting purposes (d) | $b/a*100$ $c/a*100$ $d/a*100$ | CSS- OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. Same as 171a-171c. Dwelling Connection Levels to Electricity <i>ACCEPTED</i> |
| II7d | 7. Dwelling sewerage connection levels 03.15.18 11.13.04. Rel 11.13.04. Rel I68 | % dwellings connected to c) sewerage (UNCHS, 1995) | Total # of dwellings (a) Total # of dwellings with a flush toilet in dwelling (b) Total # of dwellings with a flush toilet on site (c) Total # of dwellings with a flush toilet off site (d) Total # of dwellings with a chemical toilet on site (e) Total # of dwellings with a chemical toilet off site (f) Total # of dwellings with a pit latrine with ventilation (VIP) on site (g) Total # of dwellings with a pit latrine with ventilation (VIP) off site (h) Total # of dwellings with other pit latrines on site (i) Total # of dwellings with other pit latrines off site (j) Total # of dwellings with other bucket toilet on site (k) | $b/a*100$ $c/a*100$ $d/a*100$ $e/a*100$ $f/a*100$ $g/a*100$ $h/a*100$ $i/a*100$ $j/a*100$ $k/a*100$ $l/a*100$ $m/a*100$ $n/a*100$ | CSS- OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. Dwelling connection Levels to Sewerage <i>Graph changed from a pie chart to a 2d horizontal bar chart.</i> <i>ACCEPTED</i> |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|------|---|---|--|---|--|----------|------|------|--|
| | | | Total # of dwellings with other bucket toilet off site (l) Total # of dwellings with no sewerage services on site (m) Total # of dwellings with no sewerage services off site (n) | | | | | | |
| I17e | 7. Household telephone connection levels 11.13.05. Rel:03.15.32 Rel: 172 | % households connected to telephone (UNCHS, 1995) | Total # of households (a) Total # of households connected to telephone services (b) | $b/a*100$ | CSS- OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. The telephone services includes access to a cellular phone or a telephone in the dwelling. Households with Access to Telephones <i>Title changed to be more descriptive.</i> ACCEPTED |
| I32 | Dwellings by type 03.07.01 11.28.01 | % dwellings by type | Total # of dwellings (a) Total # of formal dwellings on a separate site (b) Total # of traditional dwellings/huts (c) Total # of flats in a block of flats (d) Total # of town/cluster/semi-detached houses (simplex, duplex or triplex) (e) Total # of formal dwellings/houses/flats/rooms, in backyard (f) Total # of informal dwellings/shacks, in backyard (g) | $b/a*100$ $c/a*100$ $d/a*100$ $e/a*100$ $f/a*100$ $g/a*100$ $h/a*100$ $i/a*100$ $j/a*100$ | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is only available on magisterial district level (urban, semi-urban, rural). Indicators will be calculated on metro level as soon as metro boundaries are determined. Definition of each dwelling will be given in the glossary. Dwellings by Type <i>Title changed to be more descriptive.</i> ACCEPTED |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FORMULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|------|--|--|--|--------------------------------------|-------------|---------|------|------|---|
| | 03.10.02 | | Total # of informal dwellings/shacks NOT in backyard, e.g. in an informal settlement (h) Total # of rooms in hostel/compound for workers provided by employer or municipality (i) Total # of other dwellings (j) | | | | | | |
| I34 | Housing Subsidy Delivery 03.09.01 11.30.01 | % of units completed in housing projects as number of subsidies approved | # of units completed in housing projects (a) # of subsidies approved (b) | $a/b \times 100$ | SMS | Monthly | % | | Data is available on township level. Indicator developed and on Intranet. Accepted by Directorate: Settlement Policy. Housing Subsidy Delivery ACCEPTED |
| I38a | % subsidies accessed by gender 11.34.01 | # of housing subsidies allocated to women headed households as a ratio to the total # of housing subsidies allocated within geographic area (same for men) (DOH, 1998) | # of housing subsidies allocated to male (a) # of housing subsidies allocated to female (b) Total # of housing subsidies allocated (c) | $a/c \times 100$ $b/c \times 100$ | SMS | Monthly | % | 1997 | Data is available on township level. Can be done. Indicator developed and on Intranet. Accepted by Directorate: Settlement Policy. % of Subsidies Approved by Gender ACCEPTED Number of Subsidies Approved by Gender ACCEPTED |

OTHER INDICATORS FOR PHASE II

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|------|---|--|---|----------|--|----------|------|------|---|
| I55a | Percentage of white female population by age category 01.01.04 | White female population by age category per area per annum | Total # of white females between the ages 0-5 years (a) Total # of white females between the ages 6-9 years (b) Total # of white females between the ages 10-19 years (c) Total # of white females between the ages 20-29 years (d) Total # of white females between the ages 30-39 years (e) Total # of white females between the ages 40-49 years (f) Total # of white females between the ages 50-59 years (g) Total # of white females between the ages 60-69 years (h) Total # of white females 70 years and older (i) Total # of white females (j) | | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is available on magisterial district level. White Female Population by Age Category <i>ACCEPTED</i> |
| I55b | White male population by age category | White male population by age category per area per annum | Total # of white males between the ages 0-5 years (a) Total # of white males between the ages 6-9 years (b) Total # of white males between the ages 10-19 years (c) Total # of white males between the ages 20-29 years (d) Total # of white males between the ages 30-39 years (e) Total # of white males between the ages 40-49 years (f) Total # of white males between the ages 50-59 years (g) | | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is available on magisterial district level. White Male Population by Age Category <i>ACCEPTED</i> |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|------|---|--|---|----------|--|----------|------|------|---|
| | | 01.01.04 | Total # of white males between the ages 60-69 years (h) Total # of white males 70 years and older (i) Total # of white males (j) | | | | | | |
| I55c | Black female population by age category 01.01.04 | Black female population by age category per area per annum | Total # of black females between the ages 0-5 years (a) Total # of black females between the ages 6-9 years (b) Total # of black females between the ages 10-19 years (c) Total # of black females between the ages 20-29 years (d) Total # of black females between the ages 30-39 years (e) Total # of black females between the ages 40-49 years (f) Total # of black females between the ages 50-59 years (g) Total # of black females between the ages 60-69 years (h) Total # of black females 70 years and older (i) Total # of black females (j) | | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is available on magisterial district level. Black Female Population by Age Category <i>ACCEPTED</i> |
| I55d | Black male population by age category | Black male population by age category per area per annum | Total # of black males between the ages 0-5 years (a) Total # of black males between the ages 6-9 years (b) Total # of black males between the ages 10-19 years (c) Total # of black males between the ages 20-29 years (d) Total # of black males between the ages 30-39 years (e) Total # of black males between the ages 40-49 years (f) Total # of black males between the ages 50-59 years (g) | | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is available on magisterial district level. Black Male Population by Age Category <i>ACCEPTED</i> |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|------|--|---|---|----------|--|----------|------|------|--|
| | | 01.01.04 | years (g) Total # of black males between the ages 60-69 years (h) Total # of black males 70 years and older (i) Total # of black males (j) | | | | | | |
| I55e | Coloured female population by age category | Coloured female population by age category per area per annum 01.01.04 | Total # of coloured females between the ages 0-5 years (a) Total # of coloured females between the ages 6-9 years (b) Total # of coloured females between the ages 10-19 years (c) Total # of coloured females between the ages 20-29 years (d) Total # of coloured females between the ages 30-39 years (e) Total # of coloured females between the ages 40-49 years (f) Total # of coloured females between the ages 50-59 years (g) Total # of coloured females between the ages 60-69 years (h) Total # of coloured females 70 years and older (i) Total # of coloured females (j) | | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is available on magisterial district level. Coloured Female Population by Age Category <i>ACCEPTED</i> |
| I55f | Coloured male population by age category | Coloured male population by age category per area per annum 01.01.04 | Total # of coloured males between the ages 0-5 years (a) Total # of coloured males between the ages 6-9 years (b) Total # of coloured males between the ages 10-19 years (c) Total # of coloured males between the ages 20-29 years (d) Total # of coloured males between the ages 30-39 years (e) Total # of coloured males between the ages 40- | | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is available on magisterial district level. Coloured Male Population by Age Category <i>ACCEPTED</i> |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|------|---|--|---|----------|--|----------|------|------|---|
| | | | 49 years (f) Total # of coloured males between the ages 50-59 years (g) Total # of coloured males between the ages 60-69 years (h) Total # of coloured males 70 years and older (i) Total # of coloured males (j) | | | | | | |
| I55g | Asian female population by age category | Asian female population by age category per area per annum 01.01.04 | Total # of asian females between the ages 0-5 years (a) Total # of asian females between the ages 6-9 years (b) Total # of asian females between the ages 10-19 years (c) Total # of asian females between the ages 20-29 years (d) Total # of asian females between the ages 30-39 years (e) Total # of asian females between the ages 40-49 years (f) Total # of asian females between the ages 50-59 years (g) Total # of asian females between the ages 60-69 years (h) Total # of asian females 70 years and older (i) Total # of asian females (j) | | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is available on magisterial district level. Asian Female Population by Age Category ACCEPTED |
| I55h | Asian male population by age category | Asian male population by age category per area per annum 01.01.04 | Total # of asian males between the ages 0-5 years (a) Total # of asian males between the ages 6-9 years (b) Total # of asian males between the ages 10-19 years (c) Total # of asian males between the ages 20-29 years (d) | | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is available on magisterial district level. Asian Male Population by Age Category ACCEPTED |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|------|---|--|---|---|--|----------|------|------|--|
| | | 01.01.04 | Total # of asian males between the ages 30-39 years (e) Total # of asian males between the ages 40-49 years (f) Total # of asian males between the ages 50-59 years (g) Total # of asian males between the ages 60-69 years (h) Total # of asian males 70 years and older (i) Total # of asian males (j) | | | | | | |
| I56a | Households by type of dwelling | % of households by type of dwelling per area per annum 01.02.03 | Total # of households living in formal dwellings on a separate site (a) Total # of households living in traditional dwelling/huts (b) Total # of households living in flats in a block of flats (c) Total # of households living in town/cluster/semidetached houses (simplex) (d) Total # of households living in formal dwellings/houses/flats/rooms in backyard (e) Total # of households living in informal dwellings/shacks in backyard (f) Total # of households living in informal dwellings/shacks not in backyard (g) Total # of households living in rooms in hostel/compound for workers provided by employer or municipality (h) Total # of households living in other dwellings (i) Total # of households (j) | a/j*100 b/j*100 c/j*100 d/j*100 e/j*100 f/j*100 g/j*100 h/j*100 i/j*100 | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is available on magisterial district level. Main type of dwelling will be used. Households by Type of dwelling Graph changed from a pie chart to a 2d horizontal bar chart. ACCEPTED |
| I57 | Average number of separate households in a dwelling | Average number of separate households in a dwelling per area per annum 01.02.05 | Total # of separate households in a dwelling (a) Total # of dwellings (b) | a/b | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | Ave. | 1997 | Data is available on magisterial district level. Average Number of Households in Dwelling ACCEPTED |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|------|---|---|---|----------|--|----------|------|------|---|
| | | | Total # of households living in other dwellings (r) | | | | | | |
| I59a | Average monthly income per person | Average monthly income per person per area 02.02.01.01 | Total income in Rand (a) Total population (b) | a/b | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | Rand | 1997 | Data is available on magisterial district level. Per Capita Monthly Income <i>Created a heading, and change the X and Y legend</i> ACCEPTED |
| I60 | % Economically active persons per income category | % of economically active persons per income category per area | Total population with no monthly income (a) Total population with a monthly income between R1-R999 (b) Total population with a monthly income between R1 000-R1 249 (c) Total population with a monthly income between R1 250-R1 499 (d) Total population with a monthly income between R1 500-R1 999 (e) Total population with a monthly income between R2 000-R2 499 (f) Total population with a monthly income between R2 500-R2 999 (g) Total population with a monthly income between R3 000-R3 999 (h) Total population with a monthly income between R4 000-R5 999 (i) Total population with a monthly income between R6 000-R7 999 (j) Total population with a monthly income between R8 000-R9 999 (k) Total population with a monthly income between R10 000-R12 499 (l) Total population with a monthly income between R12 500-R14 999 (m) Total population with a monthly income | | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is available on magisterial district level. Population by monthly income category <i>Title changed to be more descriptive.</i> ACCEPTED |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|-----|-------------------------------|---------------------|---|----------|----------------|----------|------|------|--|
| | | 02.02.01.04 | between R15 000-R19 999 (n) Total population with a monthly income between R20 000-R24 999 (o) Total population with a monthly income between R25 000-R29 999 (p) Total population with a monthly income between R30 000-R39 999 (q) Total population with a monthly income between R40 000-R59 999 (r) Total population with a monthly income between R60 000-R79 999 (s) Total population with a monthly income between R80 000-R99 999 (t) Total population with a monthly income between R100 000-R124 999 (u) Total population with a monthly income between R125 000-R149 999 (v) Total population with a monthly income between R150 000-R199 999 (w) Total population with a monthly income between R200 000-R249 999 (x) Total population with a monthly income between R250 000-R299 999 (y) Total population with a monthly income between R300 000-R399 999 (z) Total population with a monthly income between R400 000-R499 999 (aa) Total population with a monthly income between R500 000-R599 999 (ab) Total population with a monthly income greater than R600 000 (ac) Total population with an unspecified monthly income (ad) Total population (ae) | | | | | | |
| I61 | Average | The average monthly | Total income in Rand (a) | a/b | CSS - OHS 1995 | Annually | Rand | 1997 | Data is available on magisterial |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|-----|--|--|--|--|--|----------|------|------|--|
| | monthly income of households | income of households per area 02.02.01.08 | Total # of households (b) | | OHS 1996 OHS 1997 | | | | district level. Average Monthly Income of Households <i>ACCEPTED</i> |
| I62 | Owners | % of owners per area per annum 03.04.01 | Total # of owners (a) Total # of households (b) | a/b*100 | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is available on magisterial district level. |
| I63 | Renters | % of renters per area per annum 03.04.03 | Total # of renters (a) Total # of households (b) | a/b*100 | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Tenure Information <i>Changed grid lines</i> <i>ACCEPTED</i> |
| I64 | Free housing | % of free housing per area per annum 03.04.04 | Total # of free housing (a) Total # of households (b) | a/b*100 | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | |
| I65 | Population in informal settlements | % of people living in informal areas per area per annum 03.10.01 | Total # of people living in informal areas (a) Total population (b) | a/b*100 | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is available on magisterial district level. Population in Informal Settlements <i>Title changed to be more descriptive.</i> <i>ACCEPTED</i> |
| I66 | Dwellings by main source of domestic water for drinking purposes | % of dwellings by main source of domestic water for drinking purposes per area per annum | Total # of dwellings with main source of water for drinking purposes from running tap water in the dwelling (a) Total # of dwellings with main source of water for drinking purposes from running tap water on the site (b) Total # of dwellings with main source of water for drinking purposes from water carrier/tanker (c) Total # of dwellings with main source of water for drinking purposes from piped to public tap/kiosk (d) Total # of dwellings with main source of water for drinking purposes from borehole with | a/q*100 b/q*100 c/q*100 d/q*100 e/q*100 f/q*100 g/q*100 h/q*100 i/q*100 j/q*100 k/q*100 l/q*100 m/q*100 n/q*100 | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | | 1997 | Extension of I17a Data is available on magisterial district level. Report I17a Accepted. |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA | |
|-----|-------------------------------|--------------------------|--|--|----------------|----------|------|------|--|--|
| | | 03.15.03 | engine on site (e) Total # of dwellings with main source of water for drinking purposes from a communal borehole with engine (f) Total # of dwellings with main source of water for drinking purposes from borehole with handpump on site (g) Total # of dwellings with main source of water for drinking purposes from a communal borehole with handpump (h) Total # of dwellings with main source of water for drinking purposes from rainwater tank (i) Total # of dwellings with main source of water for drinking purposes from flowing water/stream (j) Total # of dwellings with main source of water for drinking purposes from dam/pool/stagnant water (k) Total # of dwellings with main source of water for drinking purposes from a well (non-borehole) on site (l) Total # of dwellings with main source of water for drinking purposes from a communal well (non-borehole) (m) Total # of dwellings with main source of water for drinking purposes from a protected spring (n) Total # of dwellings with main source of water for drinking purposes from an unprotected spring (o) Total # of dwellings with main source of water for drinking purposes from other water sources (p) Total # of dwellings (q) | $\frac{o}{q} \times 100$ $\frac{p}{q} \times 100$ | | | | | | |
| I68 | Dwellings in | % dwellings in which the | Total # of dwellings sharing the toilet facilities | $\frac{a}{b} \times 100$ | CSS - OHS 1995 | Annually | % | 1997 | Data is available on magisterial | |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|------|---|--|--|---|--|----------|------|------|--|
| | which the toilet facilities are shared with other households/people | toilet facilities are shared with other households/people per area 03.15.19 Rel I17d | with other households/people (a) Total # of dwellings (b) | | OHS 1996 OHS 1997 | | | | district level. Dwellings with Shared Toilet Facilities <i>ACCEPTED</i> |
| I69 | Dwellings by type of refuse disposal used | % of dwellings by type of refuse disposal used per area per annum 03.15.23 | Total # of dwellings where refuse is removed by a local authority (a) Total # of dwellings where refuse is disposed at a communal refuse dump (b) Total # of dwellings where refuse is disposed at own refuse dump (c) Total # of dwellings where refuse is not disposed (d) Total # of dwellings (e) | $a/e*100$ $a/b*100$ $a/c*100$ $a/d*100$ | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is available on magisterial district level. Dwellings by Type of Refuse Disposal <i>Changed the legend</i> <i>ACCEPTED</i> |
| I70 | Frequency of refuse removal per dwelling | % of dwellings per frequency of refuse removal per area 03.15.24 | Total # of dwellings with refuse removal by local authority once a week (a) Total # of dwellings with refuse removal by local authority once a fortnight (b) Total # of dwellings with refuse removal by local authority once a month (c) Total # of dwellings with refuse removal by local authority is irregular (d) Total # of dwellings (e) | $a/e*100$ $a/b*100$ $a/c*100$ $a/d*100$ | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is available on magisterial district level. Frequency of Refuse Removal <i>Changed back to a horizontal bar chart.</i> <i>ACCEPTED</i> |
| I71a | Dwellings by main energy source for cooking purposes | % of dwellings by main energy source for cooking purposes per area per annum | Total # of dwellings where main energy source for cooking purposes is electricity from public supply (a) Total # of dwellings where main energy source for cooking purposes is electricity from generator (b) Total # of dwellings where main energy source for cooking purposes is electricity from solar system (c) Total # of dwellings where main energy source for cooking purposes is gas (d) | $a/l*100$ $b/l*100$ $c/l*100$ $d/l*100$ $e/l*100$ $f/l*100$ $g/l*100$ $h/l*100$ $i/l*100$ $j/l*100$ $k/l*100$ | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Extension of I17c Data is available on magisterial district level. Energy Connection Levels for Cooking <i>Changed to a %</i> <i>ACCEPTED</i> |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|------|---|---|--|--|--|----------|------|------|--|
| | | 03.15.28 | Total # of dwellings where main energy source for cooking purposes is paraffin (e) Total # of dwellings where main energy source for cooking purposes is wood (f) Total # of dwellings where main energy source for cooking purposes is coal (g) Total # of dwellings where main energy source for cooking purposes is charcoal (h) Total # of dwellings where main energy source for cooking purposes is crop waste (i) Total # of dwellings where main energy source for cooking purposes is animal dung (j) Total # of dwellings where main energy source for cooking purposes is from another source (k) Total # of dwellings (l) | | | | | | |
| I71b | Dwellings by main energy source for lighting purposes | % of dwellings by main energy source for lighting purposes per area per annum 03.15.28 | Total # of dwellings where main energy source for lighting purposes is electricity from public supply (a) Total # of dwellings where main energy source for lighting purposes is electricity from generator (b) Total # of dwellings where main energy source for lighting purposes is electricity from battery (c) Total # of dwellings where main energy source for lighting purposes is electricity from solar system (d) Total # of dwellings where main energy source for lighting purposes is gas (e) Total # of dwellings where main energy source for lighting purposes is paraffin (f) Total # of dwellings where main energy source for lighting purposes is wood (g) Total # of dwellings where main energy source for lighting purposes is coal (h) | a/m*100 b/m*100 c/m*100 d/m*100 e/m*100 f/m*100 g/m*100 h/m*100 i/m*100 j/m*100 k/m*100 l/m*100 | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Extension of I17c Data is available on magisterial district level. Energy Connection Levels for Lighting <i>Graph changed from a pie chart to a 2d horizontal bar chart.</i> <i>Changed to a %</i> ACCEPTED |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|------|--|---|---|--|--|----------|------|------|---|
| | | | Total # of dwellings where main energy source for lighting purposes is charcoal (i) Total # of dwellings where main energy source for lighting purposes is crop waste (j) Total # of dwellings where main energy source for lighting purposes is animal dung (k) Total # of dwellings where main energy source for lighting purposes is from another source (l) Total # of dwellings (m) | | | | | | |
| I71c | Dwellings by main energy source for heating purposes | Number of dwellings by main energy source for heating purposes per area per annum 03.15.28 | Total # of dwellings where main energy source for heating purposes is electricity from public supply (a) Total # of dwellings where main energy source for heating purposes is electricity from generator (b) Total # of dwellings where main energy source for heating purposes is electricity from battery (c) Total # of dwellings where main energy source for heating purposes is electricity from solar system (d) Total # of dwellings where main energy source for heating purposes is gas (e) Total # of dwellings where main energy source for heating purposes is paraffin (f) Total # of dwellings where main energy source for heating purposes is wood (g) Total # of dwellings where main energy source for heating purposes is coal (h) Total # of dwellings where main energy source for heating purposes is charcoal (i) Total # of dwellings where main energy source for heating purposes is crop waste (j) Total # of dwellings where main energy source for heating purposes is animal dung (k) | a/m*100 b/m*100 c/m*100 d/m*100 e/m*100 f/m*100 g/m*100 h/m*100 i/m*100 j/m*100 k/m*100 l/m*100 | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Extension of I17c Data is available on magisterial district level. Energy Connection Levels for Heating <i>Graph changed from a pie chart to a 2d horizontal bar chart. Changed to a %</i> ACCEPTED |

| No | INDICATOR AND REFERENCE NO | DEFINITION | DATA REQUIREMENTS | FOR-MULA | DATA SOURCE | LEVEL | UNIT | BASE | COMMENTS and ACCEPTANCE CRITERIA FOR INDICATOR, GLOSSARY, HELP, METADATA |
|-----|---|---|--|--|--|----------|------|------|--|
| | | | Total # of dwellings where main energy source for heating purposes is from another source (l) Total # of dwellings (m) | | | | | | |
| 172 | Dwellings by access to telecommunication facilities | % of dwellings by access to telecommunication facilities per area per annum 03.15.32 | Total # of dwellings where access to telecommunication is a cellular phone (a) Total # of dwellings where access to telecommunication is a telephone in the dwelling (b) Total # of dwellings where access to telecommunication is a telephone at a neighbour (c) Total # of dwellings where access to telecommunication is a communal telephone (pay phone) (d) Total # of dwellings where access to telecommunication is a telephone at a shop/clinic (e) Total # of dwellings where there is no access to telecommunication facilities (f) Total # of dwellings (g) | a/g*100 b/g*100 c/g*100 d/g*100 e/g*100 f/g*100 | CSS - OHS 1995 OHS 1996 OHS 1997 | Annually | % | 1997 | Data is available on magisterial district level. Dwelling Telephone Connection Levels <i>ACCEPTED</i> |

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