

This guide will be useful to landowners and prospective landowners whose land contains natural vegetation or is included in the Durban Metropolitan Open Space System (D'MOSS)

Development Assessment Guidelines



DMOSS
Local Action for Biodiversity



WHO IS THIS GUIDE FOR?

This guide is aimed at developers, landowners and potential land-owners who are planning to develop or purchase land within the eThekweni Municipal Area (EMA). It provides a quick guide to the requirements of the Environmental Planning & Climate Protection Department (EPCPD) when assessing the implications of a proposed development for the Durban

Metropolitan Open Space System (D'MOSS) and/or ecosystem types that may be of conservation interest.

Using this publication will enable you to ensure that your development is legally compliant and environmentally sustainable, allowing you to contribute to the sustainability of the City as a whole.



 D'MOSS  100 Yr Floodline  Conservation Servitude

D'MOSS, Conservation Servitudes and floodlines as they appear on the city GIS

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INTRODUCTION

The eThekweni Municipality is constitutionally mandated to undertake municipal planning (Schedule 4 part B of The Constitution of the Republic of South Africa, 1996). This includes the planning of open spaces so that the natural environment, specifically the *ecosystem goods and services* it provides, within the municipality are adequately protected. In addition, the Bill of Rights as set out in the Constitution requires that the environment be protected for the benefit of present and future generations. The National Environmental Management Act (Act 107 of 1998) (NEMA) Principles are also binding on all organs of state when making a decision that could affect the environment. It is against these requirements that the Environmental Planning and Climate Protection Department (EPCPD) of the eThekweni Municipality aims to:

- a) protect our natural environment and the ecosystem goods and services it provides for the benefit of present and future generations; and
- b) plan for mitigation of and adaptation to the impacts of climate change.

One of the key tools developed to achieve this mandate is the planning and protection of the *Durban Metropolitan Open Space System (D'MOSS)*. Any development that is proposed within or adjacent to D'MOSS must be

reviewed by the EPCPD. These reviews aim to assess the potential impacts of the development on biodiversity and on the ecosystem goods and services it provides. The EPCPD has developed a suite of development assessment guidelines that are used when assessing developments.

The EPCPD has become aware that these guidelines are not well known and are often not understood by developers, property owners and prospective landowners. Difficulties have arisen in the past where people, having unknowingly purchased D'MOSS land, are required to abide by the guidelines which often limit the development potential of the affected land.

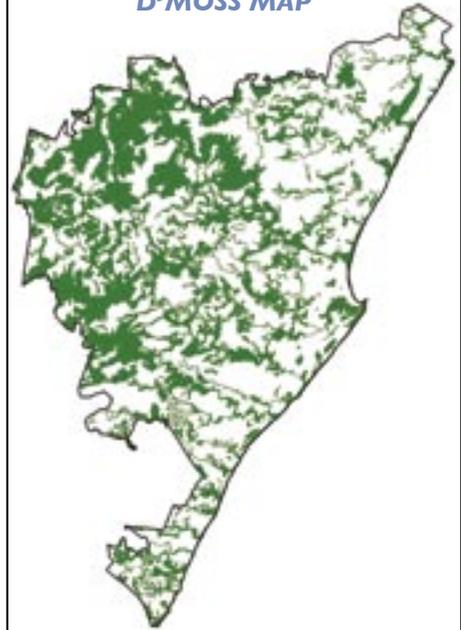
To ensure that city stakeholders are better informed of municipal requirements, this publication describes these guidelines as well as some of the more important environmental legislation that is applicable when development is planned or proposed within or adjacent to D'MOSS and other environmentally sensitive areas.

We hope that this publication will inform and empower landowners and prospective property owners about the requirements and responsibilities that come with owning land that contains important environmental assets.

What is D'MOSS?

D'MOSS is made up of a series of interconnected open spaces that incorporate areas of high biodiversity value and other supporting elements. These natural areas deliver a range of *ecosystem goods and services* (see explanation below and in the glossary) to all the residents of Durban. D'MOSS is currently about 74 000 hectares in extent and includes a variety of aquatic and terrestrial environments, including thickets, grasslands, forests, wetlands and rivers. It is incorporated into the city's Integrated Development Plan, associated Strategic Development Framework and the regional Spatial Development Plans. A process has also been initiated to incorporate D'MOSS into the Town Planning Schemes.

D'MOSS MAP



The Durban Metropolitan Open Space System includes about:

- 11 000 ha of forest (dune, coastal, scarp and swamp),
- 6 700 ha of grassland,
- 17 700 ha of woodlands,
- 15 500 ha of dry valley thicket,
- 18 major river catchments including 2 000 ha of dams and 7 500 ha of wetlands and floodplains, and
- 16 estuaries including 2 400 ha of sand and mudbanks and mangroves.

It provides an opportunity to conserve endangered species and habitats whilst ensuring that ecosystem goods and services are protected for present and future generations.

DURBAN METROPOLITAN OPEN SPACE SYSTEM (D'MOSS)

31 000 tons of carbon dioxide per annum. This stored carbon would be released to the atmosphere if ecosystems were transformed or destroyed, thus exacerbating climate change.

Some of the climate change impacts that will need to be adapted to in Durban include increased sea levels, increased temperatures, increased intensity and frequency of storms, and changed rainfall

patterns. D'MOSS will enable people to better cope with these impacts as:

- well vegetated fore-dunes and coastal setbacks will buffer the impacts of sea-level rise,
- vegetated areas assist in reducing urban temperatures,
- stream setbacks provide a buffer against rising floodwaters,
- wetland protection enables ground water recharge and reduces runoff.



Learners in a Mangrove Forest for environmental education



Harvesting of thatching material from a grassland

EPCPD development guidelines

As a result of the value of the ecosystem goods and services supplied by D'MOSS, any development proposed within it is subject to environmental assessment. Limiting development within D'MOSS will help to conserve biodi-

versity, enabling the city to contribute to national and provincial conservation targets. It will also ensure that Durban is more resilient and able to cope with the predicted impacts of climate change. The quality of life of the citizens of Durban will thus be enhanced.

ECOSYSTEMS REQUIRING SPECIAL ATTENTION

The eThekweni Municipal Area (EMA) contains a number of habitats and ecosystems. Some of these require special attention, either because they are threatened with extinction or because of their value to the citizens

of Durban. These are briefly discussed below. Durban's Biodiversity Report 2007 (which can be obtained from the EPCPD office) contains more detailed information on all the habitats within the EMA.

GRASSLANDS

What are they?

A grassland is a vegetation community in which grasses are the most conspicuous plants. Grasslands are often found on flatter land and hilltops. This is usually land that is suitable for development, and as such many grasslands have been lost to development. Apart from direct habitat destruction, research commissioned by the EPCPD concluded that a 25 m disturbance zone was evident adjacent to development areas. This results in a degradation of the biodiversity on site and eventual loss of quality ecosystems. There are three important types of grassland found in the EMA. Species poor Dry Ngongoni

Veld, dominated by *Aristida junceiformis* and species rich KwaZulu-Natal Sandstone Sourveld found on well drained, nutrient poor sandy soils, are both found in the western regions of the city. The third grassland, Coastal Grassland is restricted to the coastal region. The biodiversity of each of these grasslands is unique and as such



The KwaZulu-Natal Sandstone Sourveld grassland

GRASSLANDS

it is critical that all three ecosystems are afforded protection.

Why protect them?

Grasslands support a rich diversity of grasses, wild flowers, invertebrates, reptiles, birds and other animals. Grasslands absorb and direct rainfall into the soil thus reducing runoff and downstream flooding. Grasslands bind topsoil and in many cases are the only defence against soil erosion and desertification. They also store

significant amounts of carbon, especially in the topsoil.

The removal of grasslands will increase sedimentation in rivers which could have a serious impact on water supply for human development. This could also impact negatively on the ability of the land to support certain forms of agriculture, which will ultimately affect the livelihood and food supply for a large proportion of the population.



A grassland protected from development by a Conservation Servitude



Development adjacent to a grassland

EPCPD development guidelines

- All three grassland types within the EMA are threatened as large areas of these ecosystems have already been lost. Further development in these grassland types is thus, wherever possible, prevented.
- Any development must be set back at least 25 m from the edge of the grassland. This buffer should be used

for indigenous gardening, especially using nutrient loving plants where possible.

- French Drains must not be located within 25 m of the edge of these grassland types. This is to prevent nutrient enrichment that could alter the functionality and composition of these grassland ecosystems.

INDIGENOUS FORESTS

What are they?

Indigenous forests are characterized by groups of indigenous trees whose crowns form a largely closed canopy. Within the EMA there are 4 types of forests: Swamp Forest, Scarp Forest, Coastal Forests (including Dune Forest) and Mangrove Forest. Each of these forest types contains a unique collection

Why protect them?

The National Forests Act of 1998 (as amended) provides the strongest and most comprehensive legislation and mandate for the protection of all natural forests in South Africa. The principles of the Act in Section 3 state clearly that “...*natural forests may not be destroyed save in exceptional circumstances where, in the opinion of the Minister, a proposed new land use is preferable in terms of its economic, social or environmental benefits*”. This prescribes that no development affecting forests may be allowed unless “exceptional circumstances” can be proven. Section 7 of the Act prohibits the cutting, disturbance, destruction or removal of

of species and are found in different geographical locations. Swamp Forests are located within wetland areas, Scarp Forests are found on scarps within steep gorges, Coastal Forests are as the name implies restricted to the coastal regions, while Mangrove Forests occur within tidal estuaries and lagoons.



A Coastal Forest in Burman Bush Nature Reserve

any indigenous living or dead tree in a forest without a licence, while Section 15 places a similar prohibition on protected tree species listed under the Act, some of which are also forest species. The importance of forests has led to the development of a Memorandum of

INDIGENOUS FORESTS

Understanding “Policy Principles and Guidelines for Co-operative Control of Development Affecting Natural Forests in KZN”.

Forests are valuable as they act as carbon sinks, playing a key role in the mitigation of climate change. They also produce oxygen and detoxify the air by



A swamp forest protected from residential development by a Conservation Servitude

removing pollutants. Forests also provide a source of medicines and support a large variety of plant and animal life. Rural communities also use a variety of forest products to improve their livelihoods. Within river catchments, forests trap nutrients and sediment that could pollute rivers.



The forest protected by a Conservation Servitude from residential development

EPCPD development guidelines

- Development within a forested area is not supported.
- Generally a minimum development buffer of 40 m must be maintained from the forest canopy drip line. The size of the buffer may be increased or decreased depending on the forest size, its ecological functionality and the form of proposed development.

The buffer area must be managed as an ecotone area, i.e. an area of transition from one ecosystem to another (grassland/forest ecotone). This ecotone is often more diverse as it can contain elements from both ecosystems and allows for development-associated impacts to be absorbed before impacting on the forest.

What are they?

A wetland is defined in the National Water Act as land which is transitional between terrestrial and aquatic ecosystems, where the water table is usually at or near the surface. The land is periodically covered with shallow water which under normal circumstances supports or would support vegetation typically adapted to life in saturated soil.

Why protect them?

Wetland ecosystems store more carbon per hectare than any other ecosystem in the municipal area. This is because of the amount of carbon stored in wetland

soils. Infilling or draining wetlands for development will thus result in large quantities of carbon being released into the atmosphere. Wetlands also provide a number of other essential environmental goods and services. They regulate runoff by holding back water during high rainfall events and then releasing it slowly, ensuring that water is available during dry periods. Wetlands facilitate the recharging of ground water resources. They also reduce the impacts of floods resulting in less damage to property. Wetland ecosystems also remove pollutants from water entering them, releasing cleaner water to downstream areas.



A wetland habitat in Mount Moreland



An example of a delineated wetland showing a recommended 20-metre buffer.

EPCPD development guidelines

- Generally, a minimum 30 m development buffer must be maintained between development and wetlands. The size of the buffer required depends on the size and the functionality of the wetland, as well as the nature of the proposed development.
- The functionality and exact boundary of the wetland is established by wetland specialists during the development application process.

WATER COURSES

What are they?

This includes rivers, streams and drainage lines as well as their associated floodplain areas i.e. areas that are regularly inundated by water.

Why protect them?

Water courses often support a diversity of plants and animals which provide a broad range of environmental goods and services. The most recognisable good is the provision of water for all forms

of development, as well as for human survival. Water courses also provide waste management services as effluent is discharged either directly or indirectly into water courses or the sea. Apart from these obvious benefits, developing within or in close proximity to a water course would place the development at a greater risk of flooding, which is likely to increase as a result of climate change.



The Ohlanga River with its floodplain area



The Inanda Dam on the Umngeni River, a major source of potable water for Durban

EPCPD development guidelines*

- In general, a minimum buffer of 20 m is required between the footprint of development and the top of the bank of a stream or drainage line. The size of the buffer depends on the size and functionality of the system, as well as the density and type of development, and may be increased or decreased following a more detailed assessment.
- Development is not supported within the 1:100 year floodline. In addition, a setback of 10 to 40 m from the 1:100 year floodline is required, depending on the stream order. This is applied to ensure the protection of vegetation outside the flood zone.

*These guidelines may change following the completion of the national study to determine appropriate buffer areas.

SUMMARY OF APPLICABLE NATIONAL ENVIRONMENTAL LEGISLATION

The National Environmental Management Act (Act 107 of 1998) (NEMA) is the overarching environmental law of the country. The act provides for co-operative governance by establishing:

- Principles for decision making on matters affecting the environment,
- Institutions that will promote co-operative governance, and
- Procedures for co-ordinating environmental functions exercised by organs of state.

It also provides for certain aspects relating to the administration and enforcement of other environmental management laws. NEMA is binding on all organs of state, including the eThekweni Municipality.

A number of subsidiary Acts have been promulgated under NEMA including:

- The National Environmental Management: Biodiversity Act, NEM:BA (Act 10 of 2004) that provides for

the management and conservation of South Africa's biodiversity.

- The National Environmental Management: Protected Areas Act, NEM:PA (Act 57 of 2003) that provides for the protection and conservation of ecologically viable areas representative of South Africa's biological diversity, its landscapes and seascapes.

Other relevant legislation include; the NEMA Environmental Impact Assessment (EIA) regulations, the National Forest Act (Act 84 of 1998), the Conservation of Agricultural Resources Act (Act No. 43 of 1983) and the National Water Act (Act 36 of 1998).

The table below summarises some of the relevant sections of these laws and indicates the implications for landowners who own land including certain indigenous habitats.

SUMMARY OF APPLICABLE NATIONAL ENVIRONMENTAL LEGISLATION

HABITAT TYPE	LEGISLATION
<p>Any indigenous habitat</p>	<ul style="list-style-type: none"> • The transformation or removal of indigenous vegetation of 3 hectares or more or of any size within a critically endangered ecosystem listed in terms of Section 52 of the NEM:BA (Act 10 of 2004) requires formal approval in terms of the NEMA EIA regulations. • Clearance of an area of 5 hectares or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation requires EIA approval according to the NEMA EIA Regulations.
<p>Forests</p>	<ul style="list-style-type: none"> • According to the National Forest Act (Act 84 of 1998) (NFA), all forests are protected and no trees (dead or alive) may be cut, damaged or removed without a licence from DWAF (or a delegated authority). It also notes that "...natural forests may not be destroyed save in exceptional circumstances where, in the opinion of the Minister, a proposed new land use is preferable in terms of its economic, social or environmental benefits". The term "exceptional circumstance" indicates situations that are unusual or rare. In this case it refers to capital projects of national and provincial strategic importance. Where forests are affected by such projects, it must first be proven beyond doubt that these are in the strategic national or provincial interest, and secondly that no feasible alternative is available. • The NFA also stipulates that a minimum area of each woodland type should be conserved. • No indigenous tree or tree species that has been declared by the Minister as protected may be removed or damaged without a licence from the Department of Agriculture, Forestry and Fisheries (DAFF). The following protected tree species are found within the eThekweni Municipal Area: Powderpuff Tree (<i>Barringtonia racemosa</i>), Shepherd's Tree (<i>Boscia albitrunca</i>), Black Mangrove (<i>Bruguiera gymnorhiza</i>), Red Mangrove (<i>Rhizophora mucronata</i>), White Milkwood (<i>Sideroxylon inerme subsp. Inerme</i>), Coastal Red Milkwood (<i>Mimusops caffra</i>), Cheesewood (<i>Pittosporum viridiflorum</i>), Marula (<i>Sclerocarya birrea Subsp. Caffra</i>), Outeniqua Yellowwood (<i>Podocarpus falcatus</i>) and Real Yellowwood (<i>Podocarpus latifolius</i>).
<p>Wetlands</p>	<ul style="list-style-type: none"> • The NEMA EIA regulations require that any development that is likely to impact on a wetland be subject to formal environmental assessment. • The National Water Act (Act 36 of 1998) stipulates that all activities that may result in the infilling of a wetland obtain a Water Use license from the Department of Water Affairs (DWA). • Utilization of vegetation in vleis, marshes, water sponges or within the flood area of a water course or within 10 m horizontally outside such a flood area in a manner that causes or may cause the deterioration of or damage to the natural agricultural resources is prohibited in terms of Conservation of Agricultural Resources Act (CARA).
<p>Water courses</p>	<ul style="list-style-type: none"> • Activities that are likely to have a negative impact on a watercourse are listed as requiring formal environmental assessment in the NEMA EIA regulations. • Section 144 of the National Water Act (Act No. 36 of 1998) requires 1:100 year floodlines to be indicated on layout plans for township establishment. Section 21 controls activities that are likely to have an impact on a water course.

MANAGEMENT RESPONSIBILITIES

What are your management responsibilities?

- The Conservation of Agricultural Resources Act (Act No. 43 of 1983) (CARA) stipulates a legal obligation for landowners to keep their land free of invasive alien plants (EPCPD has an info sheet that can be consulted for assistance).
- It is the responsibility of the landowner to ensure that their land is managed and maintained in a manner that does not pose any nuisance to neighbours. In addition, grasslands require regular burning to prevent bush encroachment and reduce fire risks to adjacent properties (EPCPD has an info sheet that can be consulted for assistance).
- The landowner must manage any activities on site to ensure that they are legally compliant, i.e. no infilling of wetlands, no vegetation clearing until the necessary approvals have been granted.

The landowner can at any stage seek advice from the EPCPD and the provincial Department of Agriculture, Environmental Affairs and Rural Development (DAEA&RD) to ensure compliance with the above.



Top: Clearing of alien invasive vegetation

Centre: Controlled burning of grasslands helps maintain grasslands in their natural condition

Bottom: Illegal clearing of a site can do irreversible damage to the environment

IMPLICATIONS FOR LAND OWNERS

The previous sections of this publication have outlined the EPCPD development guidelines applicable to D'MOSS areas as well as certain specific habitats or ecosystems. It has also detailed some of the applicable national environmental legislation. What are the implications of these for you as a land owner considering future development?

1. It is likely that development within D'MOSS or within the ecosystems mentioned above is going to be restricted to ensure that Durban's biodiversity and the ecosystem goods and services that it delivers are not compromised. The extent of the restrictions can only be determined following an assessment of the application.

2. There are a number of activities that are listed in the NEMA EIA regulations. The municipality will not approve any development that requires EIA approval until this has been obtained from the competent authority (normally the provincial Department of Agriculture, Environment and Rural Development). This may cause delays in the planning process. In order to avoid these it is suggested that you make early contact with either this department (see the enquiry process overleaf) or the DAEA&RD prior to submitting your formal application. Any required development restrictions will be

identified during the EIA process and these are normally incorporated into the decision issued by the DEAR&RD. The cost and responsibility for undertaking this assessment is for the developer.

3. Where a site is sensitive because of its location within D'MOSS or because it contains particular habitats, then the EPCPD may call for an environmental assessment to be undertaken in order to evaluate the development application even if there is no NEMA EIA trigger. This assessment may include a wetland delineation or vegetation assessment. Required development restrictions and setbacks will be determined through this process and included in any planning approval granted. The cost and responsibility for undertaking this assessment is for the developer.

4. Where a development has been restricted to protect sensitive areas of the site, it is not uncommon for the EPCPD to require that these areas be registered as a non user conservation servitude. The property remains in private ownership but cannot be transformed without the permission of the Municipality. The area can be used by the owner for passive recreation provided that this does not impact on the conservation value of the area. The servitude area will require management but rates relief could be applied for.

THE ENQUIRY PROCESS

The EPCPD has initiated an enquiry process that enables you to seek early environmental input if you are considering the development of your land or planning to purchase land that may be affected by the requirements outlined in this publication. A simple form can be obtained from the EPCPD office (contact 031 311 7471/7875)

which, once completed and returned, allows a desk top evaluation of the site in question. You will on average obtain advice and guidance within a two-week period. This enables you to plan more effectively prior to the submission of a formal development application, and should prevent the wasting of professional fees by reducing referrals.



Development Planning, Environment & Management Unit Environmental Planning & Climate Protection Department

ENQUIRY FORM

Please complete and return via Fax to 031 311 7134 or ramnarainpam@durban.gov.za

Name: _____

Telephone: _____ Fax No: _____

Email: _____

Property Description: _____

Street Address: _____

Zoning: _____

Interest in the Property e.g. owner/estate agent etc: _____

Nature of Enquiry/Complaint: _____

NB: A locality plan must be included with this fax/email submission

A sample of what the enquiry form looks like

TERMINOLOGY AND ACRONYMS

TERMINOLOGY

Biodiversity	The variety of life on earth, including all the species and ecosystems that are found in any region as well as the genetic differences within and between species.
Climate Change	A change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.
D'MOSS	This is the acronym for the Durban Metropolitan Open Space System. It is a municipal planning tool, most well known as a spatial layer representing a series of interconnecting open spaces in private, public and communal ownership that forms a network of natural environments across the metropolitan area. It will be shown on town planning zoning maps as a green hatching or as a green layer on the Council's GIS.
Ecosystem goods and services	The free goods and services provided by the natural environment without which ratepayers' money would be used to compensate. These include climate regulation, food supply, water regulation, water supply as well as flood attenuation.

ACRONYMS

CARA	Conservation of Agricultural Resources Act (Act No.43 of 1983)
DAEA&RD	Department of Agriculture, Environmental Affairs and Rural Development
D'MOSS	Durban Metropolitan Open Space System
DAFF	Department of Agriculture, Forestry and Fisheries
DWA	Department of Water Affairs
DEA	Department of Environmental Affairs
EIA	Environmental Impact Assessment
EMA	eThekwinini Municipal Area
EPCPD	Environmental Planning & Climate Protection Department
NEMA	National Environmental Management Act (Act 107 of 1998)

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