



# BIG 5 HLABISA MUNICIPALITY (KZ276)

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## INFRASTRUCTURE APPRAISAL

&

## MAINTENANCE PLANNING POLICY

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## **Rationale of this document**

1. The objective of this document is to describe the policy underlying the procedures that have to be adopted for the Big 5 Hlabisa Municipality Infrastructure Appraisal process and Maintenance Plan.

## **Aim**

2. The overall objective of this policy is to improve the management and delivery of Infrastructure Appraisal and its contribution to long term maintenance planning for the Big 5 Hlabisa Municipality.

## **Officer Responsible**

3. The IA & MP process, its policy and procedures are administered under the authority of the Infrastructure, Planning and Development (I,P&D hereafter) Operations, Technical Services and Facilities division:

## **Who Should Use This Document**

4. The following personnel involved in the planning, delivery and control of Technical Services Infrastructure Appraisal, condition assessments and Infrastructure Maintenance management should be familiar with this document:

- Infrastructure Planning/Technical Services Manager or equivalent
- PMU Manager/Technical officers/Technicians
- Planning Managers or equivalent
- Planning Officers or equivalent
- SCM Managers and officials
- Manager Maintenance Program & Performance
- Senior Manager/Director I,P&D & Technical Regulation
- Managers
- Secretary I,P&D
- Environment, and Risk Management Managers
- Approved Technical services Consultants

## **Procedures Reference**

5. Reference should be made to the Infrastructure Appraisal and Technical Maintenance Infrastructure Management for information on the detailed conduct of IA & MP and its application.

## Terms and Definitions

6. The following terms and definitions are used in this document:

<b>Term</b>	<b>Definition</b>
CMS	Comprehensive Maintenance Service - combined CMC and GSS contract
TIMS	Technical Infrastructure Management System - used to record and manage data inputs and outputs from the IA &MP process
Desktop IA	An Infrastructure Appraisal undertaken using a facilitated workshop of key Technical personnel
FP&E	Fixed Plant and Equipment – separate portion of the comprehensive maintenance contract and usually covered under the contractors risk fee
IA	Infrastructure Appraisal
SCM	Supply Chain Management
Physical IA	An Infrastructure Appraisal undertaken by on-site inspection of assets by Technical staff and or CMS and or external consultants
PLO	Planning Liaison Officer or equivalent
RPM	Regional Planning Manager or equivalent

## Background

7. The Big 5 Hlabisa Municipality is changing the manner in which it delivers technical service maintenance outcomes. In the past, the process for allocating Infrastructure and Maintenance funds to maintenance priorities was reactive in nature and driven from the bottom up. It relied on bidding for maintenance requirements identified by I, P&D stakeholders (occupants and I, P&D managers). The bids were refreshed annually based on perceived priorities within the Big 5 Hlabisa Municipality and were considered through Local assessment process.

8. The Big 5 Hlabisa Municipality is now taking a strategic approach to the delivery of maintenance outcomes that is proactive in dealing with the risks posed by a deteriorated Infrastructure. The development of forward maintenance programs is to be shaped by strategic considerations and informed by the needs of I,P&D stakeholders and a detailed understanding of the risks inherent in the current condition of technical department. The conduct of Infrastructure Appraisal (IA) and Maintenance Plan (MP) is to assess the risks and to support a longer-term view of technical services of maintenance requirements.

9. Previous attempts at infrastructure appraisal and Maintenance Plan have not generated convincing results and have not been successful in attracting the desired levels of maintenance funding. A re-examination of the objectives and constraints for successful maintenance planning has resulted in a revised concept for IA and MP that is more realistic. This new approach that now needs to be transmitted into implementation.

## IA and MP Outcomes

10. The required outcomes of the IA and MP Program are:

***I,P&D Profiling* – identification of appropriate maintenance standards for all structures to be maintained. These will be moderated by the structure's contribution to Technical capability and strategic impacts known to apply to the structure;**

***IA Strategy* – the plan for conduct of IA, based on desired frequency and nature of the assessment;**

***Maintenance Data* - the collection of maintenance forecast information and population of Big 5 Hlabisa Municipal area in the form of future Work Requests;**

***Maintenance Forecasting* - a view of future predicted maintenance requirements for an asset, including cost and priority assessments;**

***Maintenance Planning* – the ability to schedule forecast maintenance requirements (i.e. modify the dates) to suit funding, delivery or other requirements that would influence infrastructure maintenance decisions;**

***Infrastructure Maintenance Plan* – a single document that describes the plan for maintenance of Infrastructure including environmental and heritage works, determined during the infrastructure appraisals. The Infrastructure Maintenance Plan is to be the basis for bidding maintenance projects in the**

**Maintenance program and as such is to be annually approved by the Infrastructure/Technical Services Manager or HOD;**

***Project Planning* – the ability to aggregate forecast maintenance actions together into discrete packages of work to be bid as projects in the Infrastructure Maintenance program, based on the approved maintenance plans.**

## How Maintenance Is Funded and Undertaken

### ***Two components***

11. Maintenance works are undertaken in two ways – a pre-committed component in Comprehensive Maintenance Service (CMS) for The Big 5 Hlabisa Municipality, and a discretionary component that is allocated annually by the I,P&D department in response to bids from the district.

12. The CMS component includes the maintenance of Fixed Plant and Equipment (FP&E) and the conduct of reactive maintenance or minor repairs. The discretionary component deals with Work Requests that have not yet been approved and major repairs, replacements and refurbishment works (other than works covered by FP&E). These tasks are aggregated into “projects” for bidding purposes and are known as Risk Managed Works. Management of these works is provided by the CMS under the General Local Work component of the contract.

13. Infrastructure Appraisal (IA) is an inspection or condition assessment process undertaken periodically as a guide to identifying the tasks to be undertaken and allocating the necessary funds as part of the discretionary component.

### ***Methods used for IA***

14. IA is a critical part of the maintenance process. It seeks to inform I,P&D Managers of the current condition of the assets and assist in prioritising the allocation and timing of funding and work to be done.

15. IA can be based on a "desktop" assessment, or on a physical inspection. The desktop approach uses existing data and knowledge to provide a virtual assessment of the condition of the assets and lists of works required. It relies heavily on the practical knowledge of the facility as known to its maintainers and occupants.

16. The physical inspection utilises skilled inspectors who record defects using a data entry device or any approved method. Physical inspections may be for the facility as a whole, or for specific elements.

### ***Maintenance Standards***

17. The IA & MP process, no matter how it is undertaken, is based on a required standard of condition that is both realistic and affordable. An IA & MP process that becomes a comprehensive list of defects, or the sum of all things required to bring an asset to "as new" condition, does not provide useful guidance. With such an approach the volume of data

and the costs to capture it are excessive, with little hope of success in securing the funds to undertake the work.

18. This policy includes the determination of maintenance standards as part of the IA & MP process.

### ***Specialised IA & MP***

19. A wide range of specialised IA & MP is undertaken or planned for the I,P&D by various groups. Each has a specific focus such as pavement and lighting assessments, environmental management planning, one-off planned assessments of bulk fuel facilities and specific local investigations by the Municipality. The utility of these IA & MP could be enhanced with improved coordination. This would provide opportunities for procurement and data collection efficiencies and greater consistency in the capture of collected forecasts of maintenance works.

## **IA & MP Concept of Operations**

### ***Goals and Objectives of IA & MP***

20. The approach to IA & MP is aimed at the following:

#### **Goals:**

- To improve the **effectiveness** of maintenance works by:
- Demonstrating the application of scarce resources in a logical framework of operational priorities and strategic planning;
- Ensuring funds contribute to achievement of appropriate standards and conditions for the Big 5 Hlabisa Municipality assets over time; and
- Providing stakeholders with a credible forecast of works that supports enhanced Technical Strategic Planning.
- To improve the **efficiency** of maintenance works by:
- Implementing a proactive maintenance process that limits operational risks and financial loss;
- Allowing the pre-planning of works into larger and more economical delivery packages; and
- Creating a transparent and low cost process that can be easily managed, audited and updated.

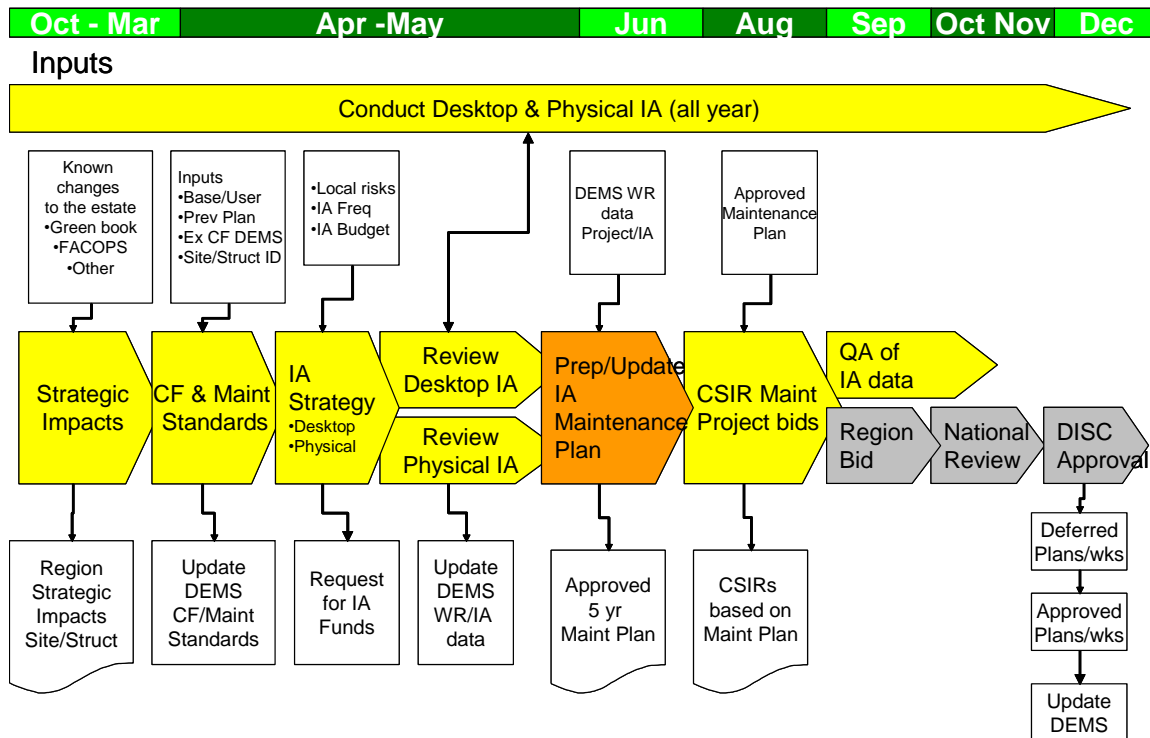
#### **Objectives:**

- To ensure the forward plan of Works is aligned with the Big 5 Hlabisa Municipality Strategic Plans;
- To clearly define appropriate maintenance standards;
- To co-ordinate, plan and deliver IA & MP in a consistent manner;

- To ensure information collected can be used to develop approved 3 year Maintenance Plans; and
- To use the approved 5 year plans as the basis for aggregating works into projects approved for delivery in the Infrastructure Maintenance program approval process.

## Process Outline

21. The diagram below comprehensively shows the process at a high level (generic).



## Strategic Impacts

22. The expected future and life of a structure is an important consideration in assessing its forward maintenance requirements. As an example, it is counter-productive to expend substantial maintenance funds on a structure that is planned to be vacated, demolished, or to be the subject of a capital investment via a Major Capital Facilities project. The Municipality need to know the strategic context or assumptions upon which the IA and resulting planning can be based.

23. This guidance, while it is not a statement of undisputed fact, provides a planning basis at a point in time. It can be amended in future should a change in strategic direction occur such as approval of a base redevelopment project. Potential sources of strategic direction information are:

- Strategic Plan for the I,P&D
- Current master-planning at Site/Zone/Precinct level;
- Current Local Constraints and Existing Infrastructure reports (structure suitability);



- All current and bid Infrastructure Maintenance projects and their impact on each structure;
- Environment Strategic Plan - Key themes to be addressed;
- Technical Services Strategy - key risk assessments required; and
- Standards and Compliance - key risk assessments required.

24. Strategic Impacts information is held in Hlabisa (Head Office) at the Property level and will identify the timing of the impact and the structures affected by it as assessed by the Big 5 Hlabisa Municipality.

### ***Assessing Maintenance Standards***

25. A key issue in the condition assessment process in IA & MP is the definition of a standard against which the inspection is made. It is clearly not possible for every facility to be kept in “as-new” condition all of the time, and some authoritative guidance is required. If a maintenance standard in readily understood terms can be provided, then assessments are more accurate and realistic, and consistency is enhanced.

26. The standard to be set needs to reflect:

- The strategic importance of the facility. This is defined by the “Contribution Factor” (CF), see definitions at Attachment 3. A facility can have a very high CF but have very low intensity of current use. In such a case the maintenance task is to have the facility in readiness for intensive operational use at short notice.
- The expected life and future intended use. This is often a product of capital works planning and may be well known in Provincial office, but may not be known in the District. It is not productive to over-invest in works on facilities that are due for short-term replacement; and
- The present condition in relation to its operational use.

27. A more detailed description of the “Maintenance Standards” approach is provided at Attachment 1. In short, a 5-point scale is used as follows:

Category	Standard
A	Exceptional
B	High
C	Standard
D	Minimal
E	Mothball

28. For each level, the standard defines desired criteria for appearance, functionality, compliance and financial performance. As stated above, the CF is an input to the definition of a maintenance standard, and the standard is defined in terms recognisable to inspection teams undertaking an IA & MP.

29. The maintenance standard should be reflective of the strategic impacts, the CF, the expected life of the facility and local Municipality needs. Municipality should apply the standards in consultation with Base Users. This ensures that the resulting plans and its

priorities are seen as a valid response to the standard selected. Where funds are not allocated, Municipality should if needed downgrade the maintenance standard accordingly. This provides a clear link between cause and effect when allocating funding.

### ***Approaches to Undertaking IA & MP***

#### **Desktop IA & MP**

30. A Desktop IA is a virtual condition assessment where IP&D staff, SCM staff and other suitably knowledgeable persons assess the available data (Local Knowledge etc) to produce a list of works and priorities.

31. Desktop IA & MP should be considered the default approach for all structures unless special circumstances exist. It is to be undertaken each year for all assets that are not already the subject of a Physical IA & MP. The Desktop IA & MP should be a structured assessment, where the strategic impacts and maintenance standards are confirmed and/or amended for each structure. The assessment uses existing Work Request data and local inputs to produce a broad assessment of future works over a 3 year period.

#### **Physical IA & MP**

32. The inspection of structures by experts to assess the current condition against the desired maintenance standard and the recording of works required to bring the asset up to an acceptable condition. This can be delivered by personnel trained in Big 5 Hlabisa Municipality Infrastructure Appraisal either:

- IP&D or
- Engagement of the SCM department to deliver a 5 year plan of proposed works, using whatever IA & MP approach the CMS deems to be appropriate or
- Engaging an experienced technical consultant as required and nominated contractor.

#### ***Desktop IA & MP In Advance Of Physical IA & MP***

33. It is preferable to conduct an initial Desktop IA & MP for a whole base in advance of commissioning any Physical IA & MP. This allows assessment of the overall priorities and provides more detailed scope on the type of structures and the specialist skills that may be required. Eg, the Desktop identifies major issues with say wharf assets and requires specialist inspections/investigations to determine the forward maintenance works.

#### ***Developing the IA Program***

34. The development of the IA program is supported by Infrastructure Maintenance Plan which will produce a list of all structures for a selected site, grouped in accordance with planned physical IA frequency. Where a local assess that the cyclic frequency for physical appraisals is not appropriate it can be changed to suit local conditions.

35. PLID will then review the list and will be able to form a program of physical and desktop appraisals. Desktop appraisals are to be conducted annually.

### ***Cost Thresholds for IA & MP***

36. For IA & MP to be effective it will be focussed on identifying major maintenance works. Capturing large amounts of small value data is not effective and is a duplication of the existing routine maintenance process delivered by the CMS.

37. IA & MP will not be conducted on the basis of a "defects" survey of small and minor works. The focus on IA should be on major maintenance works only. Should an item of work be identified during an IA such as an OH&S or other compliance issue within the standard CMS work-limit it should be referred for immediate rectification to the CMS.

38. The IA & MP will be focused on major works across the whole of the structure. For example it shouldn't be identifying partial fit out type works such as painting or carpeting of single rooms.

39. This allows for replacements of items to small structures like guttering to a shed which might not be addressed under the routine maintenance arrangements.

40. New capability works are not to be included in Infrastructure Maintenance bids and are not considered in the IA & MP process. Infrastructure Maintenance bids for enhancements are separate to IA & MP Maintenance works and should not be shown as work requests in the IA & MP modules.

### ***Capture of Urgent and Minor Items***

41. During the course of a Physical IA & MP minor items of work may be identified that require urgent attention by the SCM or I,P&D staff. These items are not to be recorded in the IA & MP modules. Where a matter is deemed of an urgent nature, life threatening, OH&S it should be reported immediately to the I,P&D or other appropriate Municipal staff.

42. Where the matter is important but not urgent it should be noted in the Minor Items Data Sheet and handed to the I,P&D for consideration in the reactive maintenance program or some other action.

## **IA Maintenance Plan**

43. Resulting from the completion of appraisals, the Big 5 Hlabisa Municipality has information about the forward maintenance requirements. This needs to be converted into a formal IA Maintenance Plan. The IA Maintenance Plan is to be prepared at the technical level. It is to be a document that reports the outcomes of the appraisals conducted to date and presents a three year forecast of works and funding to achieve the agreed infrastructure standards.

44. All bids for maintenance type works submitted for Building Maintenance funding are to be sourced from IA& MP, are to be forecast in the approved 5 Year IA Maintenance Plan. Bids that are unable to demonstrate the link to IA & MP derived works forecasts will not be funded in the Infrastructure Maintenance program.

## **Maintenance Plan Template**

45. A template for developing an Infrastructure Maintenance Plan can be downloaded from the IM. The template is to be used for all Infrastructure Plans. Prior approval must be sought from Technical services for any proposed changes or alteration to the format and template.

46. The IA Maintenance Plan template is available from the Infrastructure Maintenance Plan

⇒ 1 Infrastructure Appraisal

⇒ 1.10 develop 5 Year Base IA Maintenance Plan

## ***Roles and Responsibilities for Preparation of the Infrastructure Maintenance Plan***

47. The Infrastructure Maintenance Plan is to be prepared/updated by the local Municipal HOD responsible for the infrastructure. The Planning Head Of Department or equivalent is the deemed Author of the Plan. Use of consultants or contractors to develop plans will not abrogate the Planning Officer's responsibility to sign off on the completed Plan

48. The Municipal Manager is responsible to provide oversight and direction in preparation of the Plan and must sign off on the completed plan that reflects realistic operational needs.

49. The Town/Development Planning is responsible to provide strategic direction in preparation of the plans, selected data quality reviews and is to sign off each completed Spatial Plan.

## ***Information Used to Develop Maintenance Plans***

50. Maintenance Plans must only use data derived from the IA & MP database. No works can be added to a Plan that does not appear in the IA &MP system. The Plan should be cross checked with the IA database to ensure that the works and forecast funds match the submitted plan. Data provided in the IA Maintenance Plan should be extracted from the IA & MP Module.

51. Planning Officers, Technical Services Managers and the Head of Department should check data integrity before sign off.

## ***Separation of Infrastructure Maintenance from Minor New Works***

52. IA is focused on identifying the overall municipal Maintenance liability and is not to address improvements or enhancements in capability, functionality or other non maintenance works. The Plan should not include any works of this nature.

53. Where the replacement of an element or part of an asset may deliver an improvement due to better technology and the like it is still deemed maintenance if it seeks only to re-instate the assets original designed use or function. E.g. replacement of an old packaged A/C unit with a better unit (due the technology gains) is still maintenance. Where no A/C exists its provision is not maintenance.

54. Bids for Minor New Works are to be documented using the Minor New Works template and will be considered separately in the prioritisation and funding of works to be included in the funded Infrastructure Maintenance program. The bids for minor new works are to be sponsored by user units.

55. The Minor New Works template is available from the Infrastructure Maintenance

⇒ 2 Bid Development

⇒ 2.3 Minor New Risk Managed Works

### ***Maintenance Plan Periods and Update***

56. IA Maintenance Plans are to be for 5 years from the next immediate Maintenance funding year. E.g. if the current year Infrastructure Maintenance funds are already approved then the Maintenance Plan should be from 16/17 to 20/21.

57. The Plan will be updated and advanced one year forward and will become a 5 year rolling program in perpetuity.

### ***Combining Plans for Small Bases or Properties***

58. Plans can combine the IA &MP Maintenance Plans for small bases and/or properties into one or more plans. This is a Municipality decision based on geographic location, user group or type of facility. For example:

- a number of remote training facilities may be combined into a Training Bases Plan; or
- a number of satellite properties associated with a major Base may be combined into a larger infrastructure plan

59. The combined plan should identify each separate base or property and the 5 year forecasts for each infrastructure /property using the IA data. The values of the combined plan must equal the sum of each infrastructure /property in the IA database and should be validated by the author to ensure no errors are made in the totals.

### ***Steps to Create a Infrastructural IA & Maintenance Plan***

60. Detailed procedures for preparing the structure IA Maintenance Plan are provided on the IM at Infrastructure Maintenance Plan develop 5Year infrastructure IA Maintenance Plan. The following is an overview only.

- Step 1 – IA data validation – covers the review of IA & MP data to ensure it reflects current policy, correction of data errors, update of approved IA works, work load balancing over the next 5 year period. E.g. unapproved works for the current year are moved to the next year and following year's works re-adjust to even out work loads over 5 years.
- Step 2 – Planning Program Advice and municipal Themes – Incorporating any planning programs or directed priorities into the forward plan as well as municipal Themes. Municipal Themes may include Heritage or Environmental related works that are prioritised at a Local Level.

- Step 3 – Draft infrastructure IA Maintenance Plan – Completion of a draft plan using the IM template including indicative Projects for the next planning year.
- Step 4 – Consult Stakeholders – circulation of the draft plan and consultation with relevant stakeholders to ensure the Plan reflects operational needs.
- Step 5 – Complete the plan & sign off May/Jun – update of the Plan following stakeholder input and sign off by the responsible officers.

### ***Infrastructure Maintenance Plans***

61. The MP & IA Maintenance Plan is a summary of all infrastructure /property plans in the Municipality. No specific format is supplied for regional plans, however regions are to include as a minimum the following:

- List of all infrastructures /Properties covered by the Infrastructure Plan;
- List of any excluded infrastructures /Properties not covered by the Infrastructure Plan and reasons;
- Summary of the 5 year forward plans for each infrastructure/Property
- Summary of the Projects for year1 works; and
- Suitable commentary on the major issues affecting forward maintenance in the municipality including but not limited to, major capital works, planning strategies, resource constraints, delivery strategy and future IA and Maintenance Planning initiatives or improvements.

### ***Maintenance Project Proposals***

62. All maintenance bids for Infrastructure Maintenance funding are to refer to the relevant approved IA Maintenance Plan. The Infrastructure Maintenance template is to be used for documenting bids for maintenance projects. All such Plans are to be authored and sponsored by municipal staff. The risk assessment is included in the bid.

63. Completion of the risk assessment is likely to require involvement from the occupant, especially in areas such as capability and staff morale, but municipality is to have primary carriage of the all maintenance bids.

64. Only bids for minor new works are to be sponsored by user units.

65. The Infrastructure Maintenance template is available from the I,P&D Maintenance Plan  
 ⇒ 2 Bid Development  
 ⇒ 2.2 Maintenance Risk Managed Works

66. Where qualified funding is available to the Infrastructure Maintenance program, there may be a requirement to code the maintenance bid according to the specifics of the qualified funding.

## Management of the IA & MP process

### ***Audit and Compliance***

67. The IA process includes the requirement to conduct an annual audit of a selected Municipality plans or infrastructure plans to validate the forecast funding requests and give confidence that the IA process has been followed and thereby reflects a nationally consistent outcome

68. I,P&D will be responsible for commissioning independent audits and tabling their results to the review by the Facilities Consultative Forum. The Audit will be conducted as a peer review with I,P&D staff, suitably trained in the IA process.

69. The audit will focus on:

- Compliance with defined IA procedure and process;
- Undertake a comparison (both physical and desktop IA) of sample data collected by the technical department to assess its suitability and accuracy;
- Assess the level of skills of staff, consultants and SCM who participated in the IA under review;
- Assess the appropriateness of the developed plan and budget to meet the Big 5 Hlabisa Municipality strategic and operational priorities; and
- Provide constructive advice to satellite and central office staff on areas of improvement.

### ***Continuous Improvement***

70. The IA process will be subject to regular annual review. I,P&D Department is to submit recommendations to the Municipal Manager for consideration in any change to business process, training or functionality.

### ***FP&E***

71. Repairs and replacements of Fixed Plant and Equipment (FP&E) are covered under the Nominated contractor and should not be included in IA forecast costs.

72. Where an IA identifies the need for future replacement of FP&E it should only be included following approval of the responsible municipal Contract Manager and should be noted in the description of works that the item is approved for inclusion and Municipal file number.

### ***Procurement of Desktop IA***

73. The conduct of a Desktop IA requires an IA facilitator trained in the IA process. I,P&D have a number of options to procure their Desktop IA:

- a) Use of a regionally based facilitator trained in the IA process; or
- b) Use of a trained Consultant IA facilitator.

## Sustaining the IA Process

### ***Funding***

74. To be sustainable, IA must be supported by sufficient resources and skills to ensure its on-going delivery and compliance with procedures.

75. The IA process will have a separate allocation of the Infrastructure Maintenance budget and distributed between each department in response to a mini-bid process conducted by I,P&D. IA & MP funding is provided from the Risk Managed Works component of the Infrastructure Maintenance budget.

76. The budget is based on:

- Departmental costs for conduct of desktop IA (SCM, venue and attendance costs etc)
- Current and projected physical IA requirements
- Local physical IA requirements based on outcomes of desktop IA;
- An amount for training of I,P&D staff, SCM staff and consultants in Municipality specific IA requirements and update in process and procedures as they will occur over time;
- An amount for independent audit of IA and maintenance plans.

77. Where the corporate demand for IA reduces in a given year, the I,P&D are able to seek additional funding to accelerate local IA programs.

### ***IA Skills Development and Support***

78. Turnover in satellite and central office staff, changes in contracts and the value for money approach to engagement of consultants generates a requirement for an ongoing training and re-training program. This is aimed at ensuring that programming of IA and collection of forecast maintenance requirements is performed in accordance with municipal requirements.

79. The training program will consist of:

- **Introduction To Infrastructure Appraisal** course: a 2 day course aimed at skilling attendees in the use and application of the IA process; and
- **Maintenance Planning** course: another 2 day course aimed at producing the draft infrastructure IA Maintenance Plan. Pre-requisites for this course are attendance at the Introduction to IA course, desktop IA has been completed recently (within a year) and IA data has been validated.

80. Recognition will be given to those who complete the training and will be valid for 2-3 years, depending on the rate of change in policy and procedures.



### ***Frequency of IA***

81. As a minimum, IA must be conducted annually to update the forward rolling 5 year infrastructure **IA Maintenance Plan**. Desktop IA is a minimum requirement for every infrastructure each year to allow review of forecast works for each structure and to add/amend/delete work requests accordingly. Results of separately commissioned physical IA should be loaded on completion of the inspections or prior to the annual desktop IA.

### **Infrastructure Appraisal Module**

82. The IA module supports the IA process covering:

- Strategic Impacts on structures
- Maintenance Standards
- IA Program/Strategy
- Desktop IA
- Physical IA
- Maintenance Planning (forward 5 BN7 Year Plan)
- IA data collection tool for off-line use

### ***Structure Class***

83. The DEMS system contains a hierarchy of location and asset codes.

84. At the structure level, DEMS records Current Use, Contribution Factor (CF), Maintenance Standard and links to any associated Strategic Impacts. Work Requests are also linked to structures in DEMS.

### **Contribution Factors**

85. Contribution Factor is used to rank the importance of a structure and therefore its priority in any bid for funding. The CF codes are:

CF Score	Description
CF1	Major Asset
CF2	Important Asset
CF3	Support Asset
CF4	General Purpose Asset
CF5	Low Importance Asset
CF0	To Be Determined

## Definitions of Maintenance Standards

### **Introduction**

These standards define a desired condition of facilities with respect to visual appearance, functionality, economic performance and legal compliance. They are outcome oriented and do not themselves dictate maintenance or cleaning tasks or budgets. Maintenance and cleaning standards influence planning, and establish quality and presentation levels which maintenance and cleaning service providers are required to achieve.

The standards are defined at five levels, each referring to a category that may be allocated to individual facilities or parts of a facility. The maintenance standard is determined by a combination of expected life of the structure (derived from strategic impacts) and contribution factor as per the following table. Note that the majority of structures are likely to have an expected life of “Indefinite”.

<b>Expected Life</b>	<b>&lt;1 year</b>	<b>1 – 5 years</b>	<b>Indefinite</b>
<b>CF</b>			
<b>1</b>	A (Exceptional)	A (Exceptional)	<b>A (Exceptional)</b>
<b>2</b>	B (High)	B (High)	<b>B (High)</b>
<b>3</b>	E (Mothball)	D (Minimal)	<b>C (Standard)</b>
<b>4</b>	E (Mothball)	D (Minimal)	<b>C (Standard)</b>
<b>5</b>	E (Mothball)	D (Minimal)	<b>D (Minimal)</b>

Areas or facilities may be allotted various categories at different points of their life cycle. As examples, the standard of some facilities may be raised by one level for the period of a special event or function, or reduced for a time prior to sale or demolition.

### **Aims and usage**

Maintenance and cleaning standards are aimed at avoiding confusion and uncertainty about the overall level of condition to which a facility or part of a facility is to be maintained. The standards enable the development of maintenance and cleaning policies and practices to be negotiated and agreed between owner and service provider. They can then be used to:

- set the type and frequency of cyclic maintenance and inspections;
- define acceptable threshold levels of performance and presentation;
- fix acceptable standards of workmanship, appearance and cleanliness;
- establish acceptable response times for the correction of faults or for cleaning after special events or emergencies; and
- Define performance criteria for maintenance or cleaning contracts.

The following pages describe the characteristics of each category.

## Maintenance Standard A - Exceptional

### ***Characteristics***

In such areas, the requirement is to preserve the facility in fully operational condition continuously and indefinitely, and to correct unacceptable conditions swiftly and unobtrusively.

### ***Examples***

Examples include Roads, high security communications and control facilities, electricity and reticulation, high profile public areas, and other areas where asset failure or non performance will impact critical Municipal Operations and/or Capability.

### ***Performance Criteria***

Visual appearance	Highest quality reasonably achievable that is consistent with intended use.
Function	All elements must function as intended at all times, with no down time tolerated during periods of intended use. Planned cyclic replacement in advance of failure is the accepted approach to maintain functional capacity
Compliance	Full compliance with applicable standards and codes
Financial	Financial and economic criteria are not primary considerations in planning maintenance programs for buildings of this type.

### ***Planning implications***

A very high proportion of maintenance in such areas should be undertaken on a pre-planned, regular basis. Inspections, maintenance tasks (and cleaning operations) must be scheduled outside normal working hours or when the facility is not in use.

A rapid response capability must be available to respond to any failures which occur when the facility is in use, and on a round the clock basis if required. All essential spares must be kept in inventory or readily available at short notice elsewhere. Planned redundancy or duplication of items may be appropriate.

Comprehensive and regular inspections are carried out frequently and all existing or developing defects are rectified promptly.

Facilities in this category often contain unusual special purpose finishes, structures and plant items (standby generators, special security systems etc) and may also have to comply with heritage or other conservation criteria. Maintenance work orders must be fully detailed and include all necessary work practices and materials. Full reference manuals and instructions must be kept available for ready reference.

## Maintenance Standard B - High

### ***Characteristics***

In such areas, the requirement is to preserve the facility in good condition both visually and functionally, and to respond promptly in the event of failures.

### ***Examples***

Areas of operational importance, including CF2 or CF3 structures or those with public significance including Sports grounds, public reception areas, less critical communications facilities, executive offices, high technology training areas, bulk fuel and some industrial facilities where limited cost penalties or downtime may be incurred.

### ***Performance Criteria***

Visual appearance	Minor signs of deterioration when viewed closely may be acceptable. No deterioration when viewed from normal distance. Some deterioration may be tolerated for short periods of time.
Function	All elements must function as intended during periods of intended use, with a low probability of failure.
Compliance	Full compliance with applicable standards and codes
Financial	The primary aim in this category is to maximise the long-term economic performance of the facility. Refurbishments, equipment replacements and maintenance planning should be in a strategic framework, and decisions taken on a life-cycle basis.

### ***Planning implications***

A high proportion of maintenance should be undertaken on a cyclic basis, in order to reduce failures and maintain an adequate level of functionality and appearance. Inspections and maintenance tasks should be planned in conjunction with the user to minimise disruption, but some interruptions to service can be tolerated.

A call out capability must be available when the facility is in use, in order to respond to failures reported by users. Unusual items should be kept in inventory, but some delays and certain substitutions may be acceptable.

Inspections should be carried out regularly and defects rectified as soon as possible.

## Maintenance Standard C - Standard

### ***Characteristics***

This standard is the "default" standard which should apply if no special conditions are present. It is aimed at preserving essential functionality, complying with statutory health, safety and environmental obligations, and rectifying faults before consequential damage incurs additional cost.

In such cases the requirement is to preserve the operational capacity of the facility as much as possible. This standard does not in itself require close attention to physical appearance except in so far as it is desirable in order to meet the other criteria.

### ***Examples***

This standard applies to most areas which are in routine use for Municipal purposes that do not have a direct or critical impact on Municipality capability eg CF 3 to 5 and to which no special conditions apply. Examples include administrative office accommodation, general Parking areas, and residential accommodation and storage facilities.

### ***Performance Criteria***

Visual appearance	In this category physical appearance is not the major consideration and signs of deterioration are acceptable.
Function	All required elements should function as intended during periods of intended use. Minor failures, excluding those which bring a threat to safety or security, can be tolerated.
Compliance	All requirements with respect to health, safety and the environment must be met. Other obligations should be met to the maximum extent feasible.
Financial	The primary aim in this category is to maximise the long term economic performance of the facility. Refurbishments, equipment replacements and maintenance planning should be in a strategic framework, and decisions taken on a maximum life-cycle basis.

### ***Planning implications***

Some maintenance is undertaken on a cyclic basis, in order to reduce failures and maintain an adequate level of functionality. Cleaning, inspections and maintenance tasks should be planned in conjunction with the user to minimise disruption, but some interruptions to service are acceptable. A call-out capability should be available in order to respond to emergency failures reported by users.

## Maintenance Standard D - Minimal

### ***Characteristics***

This standard applies to facilities which have a limited life or fulfil a low level Municipality function. It can also be used for facilities that provide a basic utility function only and visual appearance and amenity are not critical. Maintenance is aimed at minimising current operational costs whilst continuing to preserve essential functionality for operational purposes and complying with statutory obligations to the maximum extent possible. The standard is normally applied where the expected remaining life of the facility is less than five years or where use is expected to meet basic operational needs only.

### **Examples**

This standard applies to facilities which are CF 3-5 or approaching the end of their life and for which vacation or disposal is planned, or structures that are rarely used. Examples might include buildings with low Municipal capability requirements, a structure identified for major refurbishment or replacement in the short term (but still required for use) a general store, or a secondary access road with limited usage.

### **Performance Criteria**

Visual appearance	Signs of deterioration are acceptable.
Function	All primary elements should function as intended during periods of intended use. System failures will be tolerated except for security.
Compliance	Statutory responsibilities with respect to health, safety and the environment should be met.
Financial	Limitation of short and long term maintenance costs is the primary objective.

### ***Planning implications***

Most maintenance in such areas is reactive, and planned to retain functionality for a limited period only. Cyclic maintenance is confined to primary elements of the asset only and should be undertaken only where existing function has failed. Any works should be focussed on the minimum required to retain safety and compliance with regulations. Regular cleaning is undertaken.

## Maintenance Standard E - Mothball

### ***Characteristics***

This standard applies to facilities which have been closed or vacated, and are not in current use.

Maintenance is aimed at maintaining essential safety and security, protecting against vandalism or other damage, and limiting any cost penalties. Cleaning only takes place to ensure essential hygiene and safety, eg pest control.

### ***Examples***

Facilities which are held vacant awaiting sale, demolition or a decision about their future facilities with a CF 5 or CF and have a short term life. This standard should not be applied to facilities that are "Municipal Mothballed". Eg, are brought into service in time of disaster. Facilities in this situation should be maintained at a D or higher standard depending on their required level of operational readiness.

### ***Performance Criteria***

Visual Appearance	Not important.
Function	No requirement to retain any functional performance except to avoid degradation of asset value (only if asset is to be sold).
Compliance	Only essential responsibilities with respect to safety and the environment should be met.
Financial	In this category the limitation of maintenance costs in the short term is the primary objective.

### ***Planning implications***

Maintenance in such areas is confined to regular patrols and inspections, with only essential works undertaken such as the control of proclaimed noxious weeds or non avoidable essential services.

## Definition of Work Request Priority

**Work Requests developed in an Appraisal are to be prioritised as follows:**

1	OH&S or OH&S Statutory Works	A WR that if not completed in the year shown will result in a breach of OH&S law
2	High Risk to Municipality Capability	A WR that if not completed in the year shown will result in a major failure to Municipality capability
3	Asset Preservation	A WR that if not completed in the year shown will result in un-acceptable deterioration of the asset
4	Low Risk to Municipality Capability	A WR if not completed in the year shown could result in a minor loss of Municipality capability
5	Life Cycle Replacement	A WR that is not a priority 1-4 but is required to ensure the functionality of the asset

**The Priority code is not a replacement of the 7 dimension Risk process, which is applied to Projects and not each Work Request. The Work Request priority codes will assist in grouping works for Project funding.**

### **Clarification for Environmental Works**

<b>1</b>	<b>OH&amp;S &amp; OH&amp;S Statutory Works</b>	<b>A WR that if not completed in the year shown will result in a breach of OH&amp;S law.</b>
<b>2</b>	<b>High Risk to Municipality Capability</b>	<b>A WR that if not completed in the year shown will result in a major failure to Municipality capability.</b>
<b>3</b>	<b>Asset Preservation</b>	<b>A WR that if not completed in the year shown will result in an un-acceptable deterioration of the asset.</b>
<b>4</b>	<b>Low Risk to Municipality Capability</b>	<b>A WR that if not completed in the year shown will result in a minor loss of Municipality capability.</b>
<b>5</b>	<b>Life Cycle Replacement</b>	<b>A WR that is not a priority 1-4 but is required to ensure the functionality of the asset.</b>



## Definition of Contribution Factor

### Guidance

The following definitions are provided as guidance. There may be circumstances where the Municipality capability supported by the structure in question warrants a deviation from this guidance. For example this may include instances where a structure within a Sports field provides direct support to a more important capability than a CF = 3,(ie the guidance for a Sports field) would indicate. In this case it could be rated as CF2 or CF1 depending on the link to capability.

### Multi-Use Facilities

**Where a structure contains multiple functions that provide a different contribution to capability, determination of the CF should typically be according to the majority use of the structure. Works on higher CF elements within the structure should be addressed using the Work Request priority, allocated during the appraisal.**

No.	Category	Description and Examples
1	Major	<p>Major Assets provide a very high level contribution towards operational capability and are the most critical structures of a Municipality operations, national security objective or Group objective.</p> <p>The loss or compromise of a Major Asset would be a major concern to our security management with repercussions such as:</p> <ul style="list-style-type: none"> <li>• Very High impact on the overall capability of PLID</li> <li>• Very high danger to many members of the public or municipality</li> </ul> <p>A Major Asset should be located in a security area, protected by an approved Security Alarm System.</p> <p>Examples include:</p> <ul style="list-style-type: none"> <li>• Critical control, intelligence and communications assets; and</li> <li>• Electricity and backup electricity for Major Assets.</li> </ul>

No.	Category	Description and Examples
2	<b>Important</b>	<p>Important Assets provide a direct and high level contribution towards the capability of a Municipality, security objective or Group objective.</p> <p>The loss or compromise of an Important Asset would be a high concern to our security managements, with repercussions such as:</p> <ul style="list-style-type: none"> <li>• High impact on the overall capability of the ADO;</li> <li>• High danger to many members of the public or the ADO;</li> <li>• Lengthy lead times to restore extant capabilities;</li> <li>• High embarrassment to the ADO; or</li> <li>• Very high asset replacement costs.</li> </ul> <p>An Important Asset should be located in a security area, protected by an approved Security Alarm System.</p> <p>Examples include:</p> <ul style="list-style-type: none"> <li>• Essential Police working accommodation and Finance buildings;</li> <li>• Storage facilities for Documents, Contracts, combustible materials and medications; and</li> <li>• Records for Important Assets.</li> </ul>
3	<b>Support</b>	<p>Support Assets perform a capability support function to enable the efficient and effective functioning of Major and Important Assets.</p> <p>The loss or compromise of a Support Asset would be a moderate concern to Hlabisa security, with repercussions such as:</p> <ul style="list-style-type: none"> <li>• Short-term impairment of an Important Asset's functions;</li> <li>• Danger to many members of the public or Municipality;</li> <li>• Lengthy lead times to restore capability support; or</li> <li>• Moderate embarrassment to the Municipality.</li> </ul> <p>Examples include:</p> <ul style="list-style-type: none"> <li>• Capability support working offices;</li> <li>• Essential training and educational assets;</li> <li>• Municipal vehicle storage;</li> <li>• High-use live-in accommodation; and</li> <li>• Electricity for Support Assets and backup electricity for Important Assets.</li> </ul>

No.	Category	Description and Examples
4	<b>General Purpose</b>	<p>General Purpose Assets perform day-to-day infrastructural functions and do not generally require high security protection.</p> <p>The loss or compromise of a General Purpose Asset could cause the temporary impairment of a Support Asset's functions or a moderate impact to a single capability element.</p> <p>General Purpose Assets are typically:</p> <ul style="list-style-type: none"> <li>• Low in replacement value;</li> <li>• Require regular maintenance;</li> <li>• Require normal fire protection; and</li> <li>• Require normal security protection.</li> </ul> <p>Examples include:</p> <ul style="list-style-type: none"> <li>• Office, retail and assembly buildings;</li> <li>• General live-in accommodation and detached houses; and</li> <li>• General purpose utilities and engineering structures.</li> </ul>
5	<b>Low Importance</b>	<p>Low Importance Assets are typically:</p> <ul style="list-style-type: none"> <li>• Low in replacement value;</li> <li>• Require occasional maintenance;</li> <li>• Require reduced fire protection; and</li> <li>• Require reduced security protection.</li> </ul> <p>Examples include recreation facilities, monuments, car parks, general storage, and unused buildings.</p>

**NB: It must be noted that this IA and MP must also be accompanied by a procurement plan detailing all specifications on each facility/property or project that has to be maintained.**