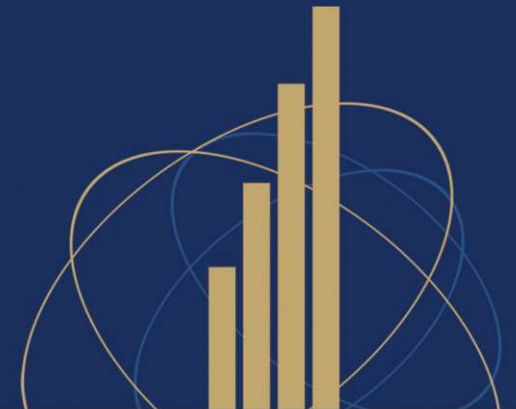




Asset Verification and Condition Assessment Done Right : Practical Approaches to Safeguard Municipal Assets



CIGFARO
Chartered Institute of
Government Finance, Audit & Risk Officers

www.cigfaro.co.za

SAQA Recognised Professional Body

Asset Verification

- **What is an asset?**

An asset is something valuable that can help generate income, reduce expenses, or be converted into cash (provide future economic benefit)

- **What is Asset verification?**

Asset verification and condition assessment is the process of identifying the asset by name, location, unique number identification and GIS coordinates, and obtaining information of the asset's performance, functionality, structure integrity, age of asset, corrosion, breakdowns and leakages where applicable.

Therefore, asset verification is the process of checking the existence and accuracy of an item owned and controlled by an entity which is meant to generate income and meets all the specified requirements under GRAP 3 for the criteria of an asset.

Standards and Guidelines used

Asset Group	Guideline for condition index	Source
ROADS	Visual Assessment Manual for Flexible Pavements (TMH 9) and according to Technical Recommendations for Highways 22(TRH 22)	Committee of State Roads Authorities and Published by Department of Transport.
LANDS & BUILDINGS	Guidelines for infrastructure asset management in local government 2006 – 2009	DPLG
ELECTRICAL	Guidelines for infrastructure asset management in local government 2006 – 2009	DPLG
COMMUNITY	Guidelines for infrastructure asset management in local government 2006 – 2009	DPLG
Water and sewer pipelines	-Design guidelines and parameters	Human Settlement Planning Design Guidelines (Red Book),
Valuation of Assets	Good s and services Price indices	Stats SA Publications
	Similar projects undertaken	Municipalities
	Quotations form suppliers	

Condition Assessment

- What is condition assessment?

In terms, asset management and the public sector (GRAP environment), a condition assessment is the process of inspecting and evaluating the physical condition of an asset to determine its current state, performance, and maintenance needs.

- Condition Assessment can be in the following forms:
 1. Physical condition visual condition assessment
 2. Physical condition weighted condition assessment
 3. Information & desktop based condition assessment

Types of Condition Assessment

1. Visual Condition Assessment

An inspector visually examines the asset for signs of wear, damage, deterioration, or defects. An inspector then makes an informed professional assumption on the condition of an asset.

During a visual condition assessment, the assessor typically checks for:

Cracks, dents, corrosion, or rust

Missing or damaged parts

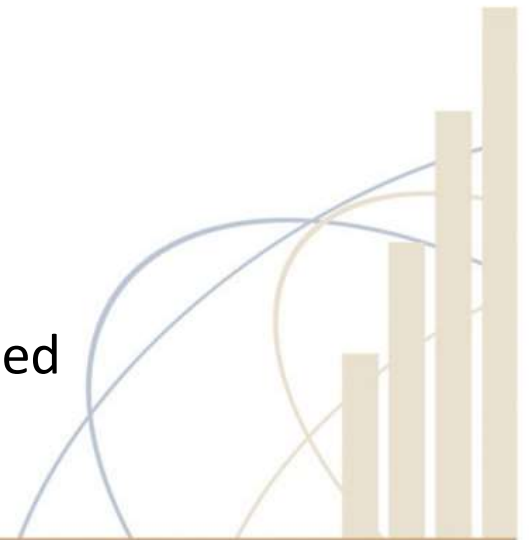
Excessive wear and tear

Leaks, stains, or contamination

Physical security and safety issues

Cleanliness and overall appearance

Whether the asset is operational and being used as intended



Types of Condition Assessment

1. Weighted Condition Assessment

A weighted condition assessment is a method of evaluating an asset's condition by assigning different levels of importance (weights) to various components or assessment criteria. This provides a more accurate overall condition score than treating all components equally.

How it works

Identify assessment criteria/components (e.g., structure, mechanical parts, electrical systems, appearance).

Assign a weight (%) to each criterion based on its importance.

Rate the condition of each criterion.

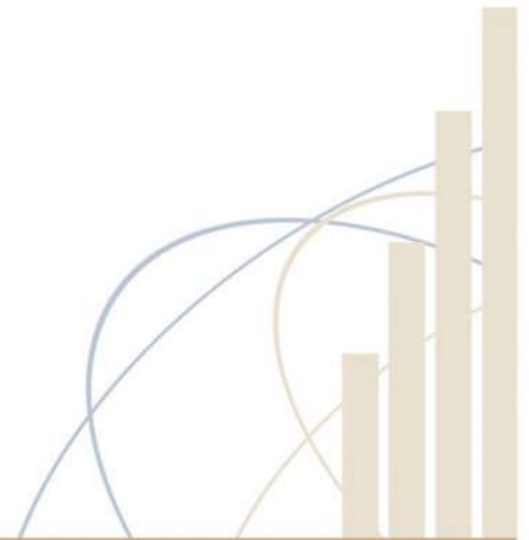
Calculate the weighted score by multiplying each rating by its weight and summing the results.

Types of Condition Assessment

3. Information & Desktop based Condition Assessment

Uses existing records and historical information without a physical inspection. To obtain information on performance, maintenance and incidents relating to assets.

This type of verification is ideal for network assets and assets that are operated underground. e.g. pipelines where you can have meeting with plumbers and you check burst frequency and where pipes have been replaced

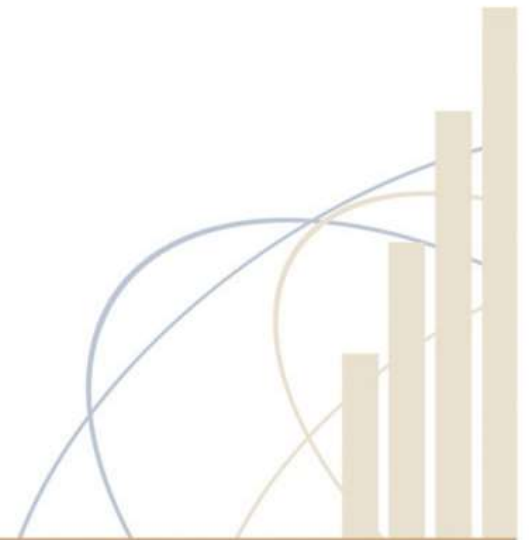


Condition Assessment Methodology

Data collection and document review is the first step

The following documents are used as a basis for review and formulating the implementation strategy before starting physical verification of assets:

- Asset management policy
- Audited FAR for the previous financial year
- WIP projects list/register
- Previous Technical verification reports
- GIS and drawings
- Audit Report for previous year
- Management for previous year



Equipment required for asset verification

The following equipment will be required for the field assessment:

1. A vehicle (suitable for all terrains)
2. GPS or similar instrument that can take coordinates (smart phones and/or tablets) compatible with verification app e.g. fulcrum which is location enabled
3. A torch, if assessments will be done in dark areas, e.g. valve chambers
4. Distance measuring device and tape measure
5. Access keys to open sites e.g. Ring Main Units, pump stations, etc.
6. Protective clothing (safety)

Categories of Conditions

Typical Condition Ratings

Organizations often use a scale such as:

Rating	Condition
1	Very Good / New
2	Good
3	Fair
4	Poor
5	Very Poor / Failed

Condition Ratings

- What do these condition ratings mean?

Rating	Condition	Description	Indicative RUL relative to EUL
1	Very Good / Excellent/New	Asset is new or nearly new. No visible defects. Performing as intended with little or no maintenance required.	71% - 100% EUL
2	Good	Minor wear and tear. Asset is functioning well and requires only routine maintenance. (<5%) of asset value	46% - 70% EUL
3	Fair / Average	Noticeable deterioration or defects. Asset is still operational but may require repairs or increased maintenance. (10 -20%) of asset value	26% - 45% EUL
4	Poor	Significant deterioration. Performance may be reduced, and major repairs or rehabilitation are needed. (20 -40%) of asset value	11% - 25% EUL
5	Very Poor / Failed**	Asset is at the end of its useful life, has failed, or is close to failure. Replacement or complete renewal is required. (>50%) of asset value	0% - 10% EUL

Asset Verification Example

- Asset: Water pump at a municipal pumping station
- Check the asset ID or serial number.
- Confirm the pump is physically present.
- Verify its location against records.
- Inspect its condition (e.g., operational, fair, poor).
- Take photographs as evidence.
- Record any discrepancies such as missing components or incorrect asset details.
- Verification Result: Pump exists, location is correct, and condition is rated as fair. Asset register updated with current condition and photograph.
- Typical Evidence Collected During Verification
- Asset tag or serial number
- GPS coordinates (for infrastructure assets)
- Photographs
- Condition assessment notes
- Verification checklist signed by the verifier
- This process is commonly used for municipal infrastructure, buildings, roads, vehicles, IT equipment, and plant machinery.

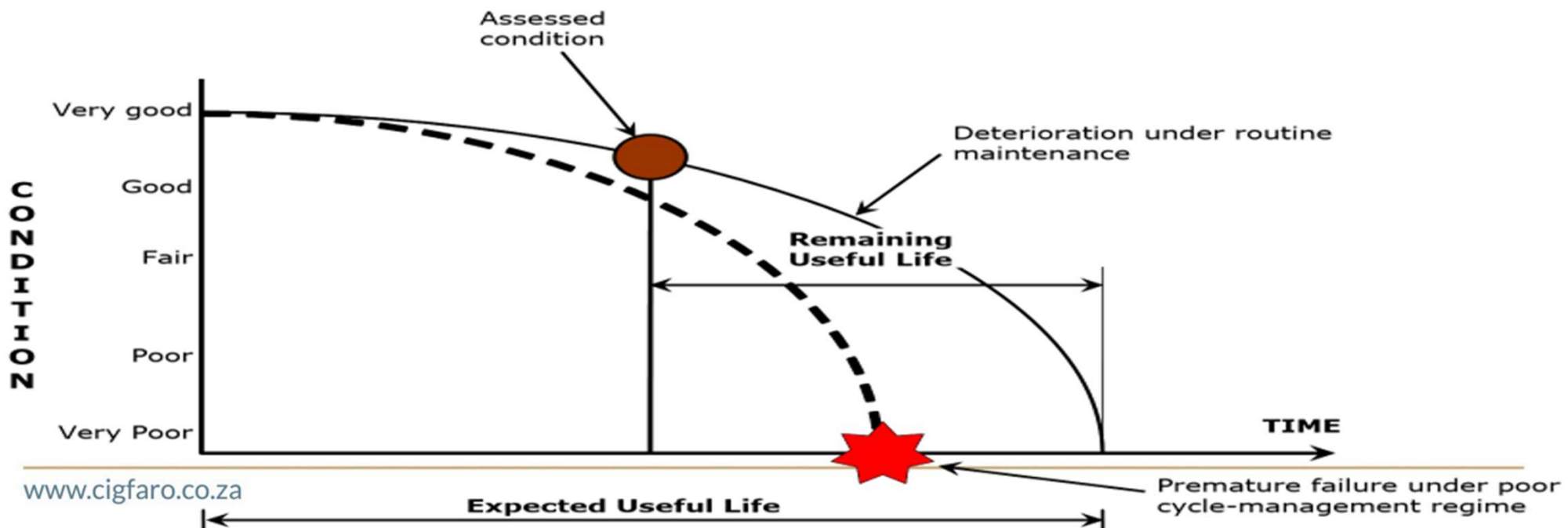
Asset Verification Results

Result	Meaning
Verified	Asset was found and matches the asset register details.
Verified with Discrepancies	Asset exists, but some details (location, condition, custodian, description, etc.) differ from the register.
Not Found / Missing	Asset could not be located during verification.
Unrecorded Asset	Asset exists physically but is not listed in the asset register.
Disposed Asset	Asset has been sold, scrapped, or transferred but remains on the register.
Damaged Asset	Asset was found but is damaged or in poor condition.
Duplicate Record	More than one register entry exists for the same asset.

Ideal Asset Life Cycle

• Parabolic Curve for Assets

- The diagram below shows the relationship between condition and expected useful life. The time shown shows the extent the asset is main to be in use under normal circumstances and when as asset is properly and routinely monitored and maintained.
- Condition assessment may then prove that an assets remaining useful life is either longer, lesser or maintaining the RUL as expected.
- Ideally through use an asset will deteriorate in condition over time but a premature failure may occur, or incident may happen, and the extent of failure may be expressed by condition assessment in relation to RUL to provide strategic and tactical information.



Practical Approaches to Safeguard Municipal Assets

What practical approaches can be taken to safeguard municipal assets?

1. Maintain an Accurate Asset Register

2. Verification of assets

Why? This will assist in knowing the type of asset, its use and importance to the whole system, location and value of asset. Regular asset verification.

3. Condition assessment of assets

Why? This will assist in knowing the state of the asset in relation to its function and performance which will entail the level of deterioration, remaining useful life, and whether repairs, maintenance, rehabilitation, or replacement are required. Regular condition assessments.

4. Identifying assets with needs for repairs and maintenance.

Why? Prioritising assets with conditions of good and fair (upper level) for routine maintenance. Assets with conditions for fair (middle to lower level) and poor for repairs and rehabilitation in good time. Regular repairs and maintenance.

Continuation on Safeguards

5. Budgets on repairs and maintenance

Why? The budgets on repairs and maintenance should be based on the carrying value of an asset register. At least 1-2% of the asset register carrying value should be identified as the base of the repairs and maintenance budget or else identified assets in the Fair and Poor conditions have their cost values analysed to have a basis for repairs and maintenance purposes. This will assist the municipality from operating from a reactional approach of an asset malfunction but a planned and strategic rehabilitation approach.

6. Assets Under Construction/Work In Progress

Why? Assets under construction/WIP should also include pre-existing assets which are approaching the end of their life cycle or have been identified to be in a poor (lower level) and very poor conditions as this will allow for a strategic planning and budget prioritization. These assets should be considered for replacement or improvement taking into account technological changes, reasons for rapid deterioration and growing community needs. A good example of assets that get affected by technology are Electrical/mechanical assets

Continuation on Safeguards

7. Accurate and Regular Incident and Theft Reports

Why? To assist in identifying assets that may need immediate replacement and allow for reprioritization of funds available in the repairs and maintenance budget.

8. Increase Security Features

Why? Where the assets are susceptible to vandalism and theft it would be ideal to have camera systems and alarms in place with some strategic assets requiring security personnel to man the assets to avoid any unforeseen or anticipated damage or theft.

Continuation on Safeguards

9. Assign Accountability

Why? Designate responsible officials or asset custodians for specific assets, clearly define responsibilities in policies and procedures which will provide an extra buffer on security while custodians keep a basic inventory least for tracking.

10. Develop and Enforce Asset Management Policies

Why? Establish policies for acquisition, use, maintenance, transfer, and disposal of assets. Ensure compliance with municipal regulations and applicable legislation. Separate duties related to asset acquisition, custody, and record-keeping. Require approvals for asset movements and disposals. The asset management will provide a full proof on issues relating to all assets and how these issues are to be treated in their unique circumstances.

11. Insure Critical Assets

Why? Obtain appropriate insurance coverage for significant assets where feasible. Regularly review insurance values and coverage. In the event that an unforeseen incident occurs the municipality will be sheltered to replace the asset with minimal costs which may not affect budgets significantly.

Continuation on Safeguards

12. Records of movement of assets essential for accurate register

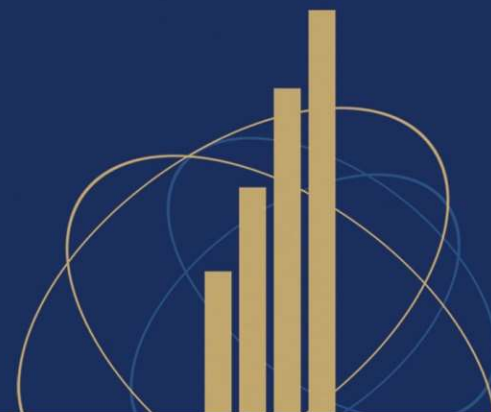
Why? This is very important for the accurate register as movement of assets needs to be recorded .

13. Maintenance records

Why? Maintenance records must be kept so the condition and performance of asset can be assessed accurately.



Q&A



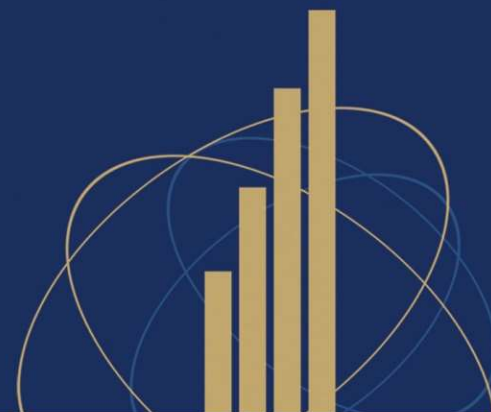
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