

PAPER 9

CONCERNING MUNICIPAL MAINTENANCE EXPENDITURE

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ABSTRACT

Treasury has laid down that municipalities shall budget for maintenance and repair an annual sum equivalent to 8% of the “carrying value” of “property, plants and equipment and investment property”.

The guidance provided by this ruling is invaluable. But to what extent do municipalities pay much heed to the ruling? And what is Treasury doing about those municipalities which chronically under-budget? Furthermore, the 8% norm will likely be insufficient under most circumstances, especially given the substantial maintenance backlogs which municipalities are known to carry.

Research initially undertaken in the course of reviewing budget guidelines for Treasury revealed the extent to which municipalities, with very few exceptions, are reported to be spending far less than even this inadequate 8% – in some cases, spending hardly anything at all on maintenance and repair. Also, whereas it is crucial to service delivery by any municipality that the strategic infrastructure be identified and that it must receive priority when the maintenance and repair budget is allocated, in so many cases this is not done.

The purpose of the proposed paper is (i) to present current concerns about the condition of key infrastructure (not only municipal infrastructure), (ii) to outline and comment on the Treasury guidelines, and (iii) to present the spending realities, acknowledging that, while municipalities are strapped for funds, generally, more can be done, or the consequences for service delivery will be dire – as is already evident.

INTRODUCTION

The delivery of public sector infrastructure services, such as water, sanitation, electricity, and solid waste management, as well as the many services dependent on infrastructure being in good condition – e.g. the services which make use of roads, rail, hospitals, clinics, schools, airports and harbours – is to a great extent hampered by the oftentimes substandard condition of this infrastructure. (Examples of this are given later in this paper.)

The Development Bank of Southern Africa (DBSA) has clearly stated its view of the consequences of infrastructure operation and maintenance deficits (and also of the absence of infrastructure in the first place) for access to service delivery.

“Infrastructure is directly linked to the economic development and growth of a country. ... It also increases productivity and improves the quality of life for many communities. ... [and] When these infrastructures are not operating properly, the chain of production is disrupted. This disruption hinders development, which causes economic deficit and, in turn, brings low standards of living” (DBSA, 2021).

The economic and social cost of under-maintenance of public sector infrastructure is huge.

The average condition of public sector infrastructure in South Africa is far from what it should be and, it would seem, generally getting worse. For example, the Department of Water and Sanitation (DWS) “Green Drop” report on the condition of wastewater systems, released in March 2022, revealed that: “23 wastewater systems scored a minimum of 90% when measured against the Green Drop standards and thus qualified for Green Drop Certification. This compares lower than the 60 systems awarded Green Drop Status in 2013 ...” (DWS 2022.)

While work on the fourth national infrastructure condition report card, published by the South African Institution of Civil Engineering (SAICE), is by no means complete, early indications are that the public sector condition of infrastructure in almost all infrastructure sectors has deteriorated since the last report card appeared (in 2017).

The maintenance and repair of infrastructure, from initially being a taboo subject in some government circles (as the author can personally attest), has become a frequently-referred-to concept, not least in the popular media. The problems of unacceptable infrastructure condition – sometimes combined with issues to do with the operational management of the infrastructure – are raised by leaders of industry and commerce, for example, with greater and greater vehemence. (See the following section.)

Infrastructure maintenance and repair has long been punted as a solution, not just to restore the functionality of infrastructure, but also (rightly so) as the potential creator of a massive number of jobs, especially for people with the lowest level of skills – which makes great sense, given that it is this group which suffers from the highest rate of unemployment. (Wall, 2011a; Wall, 2011b.)

But there are many obstacles to be overcome before one can expect the condition of public sector infrastructure to improve. Among the biggest are:

- often reluctant political will on the part of the owners of the infrastructure (e.g. municipalities), and/or the abdication of that will (for example, Makinana, 2022¹);
- complex procurement regulations and time-consuming procedures which often add little value (Wall, 2022b.)
- weak and/or overburdened client skills (as described in, for example, Lawless 2016; SAICE 2017; SAICE forthcoming); and
- the institutions to perform the maintenance and repair, and also of course the rehabilitation of that infrastructure which is too far gone for maintenance and repair to have the necessary effect.

In many institutions, in many parts of the country, the absence of (e.g. political will), unsuitability of (e.g. procurement regime), dearth of (e.g. skills) or inadequacy of institutions², or combinations of these, are such that, without radical reform, there is little chance of improvement.

But even if all the others were in place, one (at least) further major obstacle remains, namely: budgets – more accurately, the low levels of budgets for maintenance and repair – particularly at municipalities.

¹ “Where are mayors and MECs when municipalities collapse, asks AG. Elected politicians need to accept their responsibility to make things work at local level, says Maluleke.”

² For example, as discussed in Wall 2022a.

PROBLEM STATEMENT – SECTOR BY SECTOR

The consequences of substandard infrastructure condition – sometimes combined with issues to do with the operational management of the infrastructure – are frequently raised by leaders of industry and commerce.

The (negative) “poster boy” for the consequences of unreliability of public sector infrastructure has been Eskom. The three other most prominent targets have been rail, rural roads and municipal infrastructure.

For example (in the same order):

Electricity

Eskom, the state-owned enterprise responsible for generating more than 90% of electricity in the country, has for several years been forced, by frequent breakdowns of generation plant, to implement rolling blackouts. Various estimates have been made of the cost of this load shedding, to the economy, to quality of life, and to infrastructure itself. For example, the CSIR estimated the ‘impacts to the economy’ in 2019 alone to have been between R60 billion and R120 billion (Wright & Calitz, 2020: 5).

That a major reason for the load shedding (not the only reason – another oft-ascribed reason is government’s perceived tardiness in promoting or even sufficiently enabling increase in generating capacity) has been significant under-maintenance in the past of generation and transmission infrastructure, has been emphasised by Eskom repeatedly. For example, the CEO in 2021 stated that:

“Eskom’s fleet of coal-fired power stations, excluding Medupi and Kusile, are on average 41 years old. These power stations have been run far harder than international norms and *have not been maintained as they should have been*” (Quoted in Eberhard, 2021).

Rail

South African exporters, particularly of minerals, are highly reliant on rail infrastructure. However, due to the widely-reported inability of Transnet to provide reliable rail services, these companies have become less competitive and have lost a significant portion of their international market share.

The effect of the current state of infrastructure condition in the rail sector can be illustrated by the following media extracts:

“Minerals Council SA expresses concern about effect of logistics constraints on mineral exports in the first four months of 2022.” “SA is missing out on the benefits of high commodity prices because of rail, port and border inefficiency.” (Erasmus, Delene, 2022.)

“Transnet is in “free fall” and it is throttling investment and will ultimately cause mines to close, industry leaders have warned. Speaking at the McCloskey Southern African Coal Conference on Thursday, coal producers impacted by Transnet’s poor railing performance lamented the dire state of the coal line to the Richards Bay Coal Terminal (RBCT) at a time when demand for South African coal has jumped, and export coal prices are rocketing.” (Steyn, 2022b.)

“Exxaro joins a host of companies that have been counting the costs of inefficiencies at rail operator. Exxaro, the largest supplier of coal to Eskom, suffered about R5bn in lost export sales due to bottlenecks in the country’s rail network, the latest reminder of one of the biggest constraints on the flagging economy.” (Gernetzky and Erasmus, 2022)

“Rampant cable theft and the inability to acquire critical parts for locomotives on the coal line caused the rail performance of coal delivered to Richards Bay Coal Terminal (RBCT) to drop to ... 58.3 million tons in 2021, compared to its annual capacity of 77 million tons. The continued

trouble on the coal line comes as export coal prices are at historic highs and demand for South Africa coal has surged amid sanctions against Russia.” (Steyn, 2022a)

“The South African coal, chrome, iron-ore and manganese mining sectors lost between R39-billion and R50-billion in export earnings last year as Transnet struggled with capacity to rail bigger volumes of these commodities to ports, says economists.co.za chief economist Mike Schussler. “To put this into context, this is about 1% of the country’s gross domestic product ...” (Venter, 2022)

Naturally enough, the financial press picked up on this. An editorial of “Business Day” in March, under the headline “Transnet holds back the economy”, wrote that;

“The rail company and its shareholder owe us an explanation for lost opportunities — and a plan.” (Business Day, 2022)

Rural roads

The following extract is sufficient to make the point.

“The deterioration of the country’s road network and continued poor maintenance is having a direct impact on the agricultural sector – and by extension, the price of produce in South Africa, says industry body AgriSA.

.....the group presented survey results from participants in the agricultural sector which was initiated to determine the impact of deteriorating road infrastructure on the sector. ...

“The findings are dire, and point to the enormous cost of South Africa’s poor road maintenance for the proper functioning and growth of the sector,” AgriSA said. The costs incurred range from engine and trailer damage to shorter vehicle lifespan and accidents. It added that the increased transport and maintenance costs ultimately affect the consumer, determining how much consumers pay, and how fresh they receive the produce.” (Staff Writer, 2022)

Municipal infrastructure

Municipalities, too, have received their share of criticism. The last few years have seen business, for one, increasingly expressing its dissatisfaction with the quality and reliability of the basic services provided by municipalities. Well-publicised examples have included Clover in Lichtenburg and Astral Foods in Lekwa, not to mention the ongoing saga of the treatment works in Koster and the dissatisfaction recently voiced by the Chambers of Commerce of eThekweni (Erasmus, Des, 2022) and Nelson Mandela Bay with the condition of infrastructure in those cities. All of these have drawn attention to the cost of substandard maintenance of public sector infrastructure.

They are not alone. For example, in May this year Mr Mboweni, the previous Minister of Finance, drew attention to the need for “*fixing bad roads and infrastructure, and cleaning up municipalities*”, which, he stated, would, if he were president, be his priority – and, without which, “South Africa can forget about meaningful economic growth”⁴. (Buthelezi, 2022.)

Others agree. “Gareth Ackerman, the chair [of Pick n Pay] has become the latest corporate leader to bemoan the government’s inability to ensure basic functions, such as fixing potholes, which, in turn, increases the cost of doing business.” (Child, 2022.)

Infrastructure in some of South Africa’s towns and cities has degraded so much that, he states, the company “is battling to get insurance cover on some assets”.

At the time of writing, the voice most recently heard in support of the

³ Emphasis added by present author.

⁴ Emphasis added by current author.

call for more maintenance has been that of Dr Sooliman of Gift of the Givers. Generalising from the context of Nelson Mandela Bay⁵, where his team had arrived to provide selected assistance, he is quoted as having said:

Roads and buildings are falling apart. *This country has a serious lack of maintenance and management. It's time that we stop building things and start fixing things.*⁶ (Adams, 2022)

Finally: sector-specific examples of either the condition of municipal infrastructure or the consequences of that condition abound. For example, as in Gibbons et al, Griffiths et al and Chettiar et al (all forthcoming). The first of these provides a broad overview of the water and sanitation sector, whereas the second concentrates on water leakage, consequent losses, and the potential savings. The third provides specific examples of the impact of municipal infrastructure failure, particularly through lack of maintenance, on the tourism sector, particularly on the KZN coast.

FUNDS

The preceding section, despite having made a strong case for maintenance as part of a general effort to improve the operation and condition of public sector infrastructure, has presented only a small sliver of the media coverage of the topic during the course of the last few months.

So: why is more maintenance not undertaken? And how can that maintenance “happen”?

The main “obstacles to be overcome before one can expect the condition of public sector infrastructure to improve” were listed earlier. However, as it was pointed out there, even if all the others were in place, one (at least) further major obstacle remains, namely: budgets – more accurately, the low levels of budgets for maintenance and repair – particularly at municipalities.

In other words, there would seem to be small likelihood of the hopes of Mboweni, Ackerman, Sooliman and those referred to earlier being realised anytime in the foreseeable future.

Incidentally, what order of magnitude of funds is required? There are a few estimates of the funds required to rehabilitate all existing public sector infrastructure (or replace it, if it is not possible to rehabilitate) or of the funds required to preserve the present condition of infrastructure. Some of these, though, are suspect.

A relatively reliable, and also recent, estimate may be found in the Green Drop report released earlier this year. Briefly, this suggested that:

- based on a “very rough order of measurement”, an “indicative amount” “for all treatment systems within each WSI” (water services institution);
- “a total budget of R 8.14⁷ billion is required, nationally, to restore the WWTWs (wastewater treatment works) functionality”; and
- “a total of R 1.55 billion will be required by all WSAs (water services authorities), on an annual basis, to maintain their assets”. (DWS, 2022:33).

⁵ Further: “It’s deceptive...when you’re on the plane and look down, everything seems fine. Until you get out of the airport and see the taps for people to collect water when everything dries out. When you drive down the streets, everything seems okay. Until you speak to the people. Dr Imtiaz Sooliman, Gift of the Givers founder.”

⁶ Emphasis added by current author.

⁷ Given later, on the same page, as 8.41. No matter – the amount is so huge and unreachable anyway.

Note that this is an estimate for wastewater only, and not for water infrastructure, let alone does it include the infrastructure for any of the other engineering services for which municipalities (or water boards) are responsible.

Nonetheless, with that estimate providing some context, we turn now to examine what municipalities should budget – and, for contrast, what they actually spend – for “infrastructure repairs and maintenance”.

Spoiler alert: what they actually spend falls far short of what would appear to be required “on an annual basis, to maintain their assets”, let alone to “restore functionality”.

WHAT AMOUNTS SHOULD BE BUDGETED?

This paper does not attempt to review infrastructure asset management planning and practice. Rather, its purpose is to draw attention to budgeting for infrastructure maintenance and repair (and its spending), one of the key issues which must be addressed if infrastructure asset management planning and practice by the South African public sector, and particularly municipalities, is to improve.

Budgeting for maintenance and repair needs to take into account major variables, particularly, for each infrastructure component:

- the type of infrastructure;
- the age of the infrastructure;
- it’s present condition;
- it’s workload (e.g. if a road, do large numbers of heavy vehicles traverse it?); and
- the expected remaining useful life under normal operating conditions and a maintenance regime which has conformed to manufacturers’ specifications; as opposed to
- the estimated remaining useful life under the actual (or predicted, if this were to be different) operating conditions and the actual (or predicted) maintenance regime.

Ideally, budgeting for maintenance and repair should start with knowledge of the “current replacement cost” (CRC) of the infrastructure, by component, together with sufficient information as to type, capacity, age, condition and other relevant aspects of each component. However it would not be unfair to suggest that too few South African municipalities are sufficiently aware of the condition of much of their infrastructure, or the CRC of that infrastructure.

No doubt recognising this nearly 10 years ago, Treasury published guidelines based on “value” of the infrastructure. The way this is defined, it is not “value” as in for example “value to service delivery”, but, as one might expect from an organisation which thinks primarily in terms of monetary units, Treasury’s concept of “value” is a financial one. Specifically, the guidelines are based on “carrying value”, which is:

“... the original cost of an asset, less the accumulated amount of any depreciation or amortization, less the accumulated amount of any asset impairments.”

<https://www.accountingtools.com/articles/what-is-carrying-value.html>

As to whether there is any difference between “carrying value” and the more familiar “book value”.

“The term book value is derived from the accounting practice of recording asset value based upon the original historical cost in the books. Book value can refer to several different financial figures while carrying value is used in business accounting In most contexts, book value and carrying value describe the same accounting concepts.”

<https://www.investopedia.com/ask/answers/010815/what-difference-between-book-value-and-carrying-value.asp>

The key Municipal Finance Management Act (MFMA) circular is “MFMA Circular No. 71: Municipal Finance Management Act No. 56 of 2003: Uniform Financial Ratios and Norms” (National Treasury 2014).

This Circular, in the process of providing sets of “uniform key financial ratios and norms suitable and applicable to [in this case] municipalities and municipal entities”, inter-alia lays down budget guidelines indexed to “carrying value”. The first part of the Section 3 “Repairs and Maintenance as a % of Property, Plants and Equipment and Investment Property (Carrying Value)” reads as follows:

“Purpose/Use of the Ratio

The Ratio measures the level of repairs and maintenance to ensure adequate maintenance to prevent breakdowns and interruptions to service delivery. Repairs and maintenance of municipal assets is required to ensure the continued provision of services.

Formula

Total Repairs and Maintenance Expenditure/Property, Plant and Equipment and Investment Property (Carrying Value) x 100⁸

Norm

The norm is **8%**.⁹ (National Treasury, 2014:4)

Although what this guideline recommends is very far from best infrastructure asset management practice, Treasury cannot, given the circumstances, be faulted for laying down such a practical and convenient measure for the purposes of its guidelines. Thus this Treasury “8%” guideline would for many entities be an essential first step to improved infrastructure asset management practice.

It would seem, therefore, that for most municipalities, the approach advocated by Treasury, based as it is on carrying value has much merit in the absence of sufficiently comprehensive and reliable information on the CRC of their infrastructure. In the course of time, though, all municipalities should be encouraged to improve knowledge of their infrastructure, including knowledge of the CRC and remaining useful life of infrastructure components. Priority must be given by each municipality to its most strategic components, i.e. those which, were they to fail, would have the greatest harmful effect on the service delivery capability of the municipality.

USING TREASURY’S GUIDELINES

Treasury requires entities to:

- itemise all infrastructure of at least a (specified) minimum level of significance;
- assess the “carrying value” of each component; and
- use the total carrying value of the infrastructure (“property, plants and equipment and investment property”) to estimate the overall budget required for maintenance and repair.

As noted above, for municipalities, how to do this is briefly described in “MFMA Circular No 71”, Section 3 “Repairs and Maintenance as a % of Property, Plants and Equipment and Investment Property (Carrying Value)”. (Treasury, 2014)

Except for those municipalities able to show they can budget for maintenance and repair on the basis of infrastructure asset management plans, with priority given to strategic infrastructure, municipalities

⁸ Note that the numerator is an operational expenditure figure, and the denominator is a valuation based on historic capital expenditure.

⁹ Although the Circular does not specifically say so, it could only be intended that this is a “percentage per annum”.

are obliged by law to budget in terms of this MFMA Circular – that is, a minimum¹⁰ of 8% be budgeted for

Total Repairs and Maintenance Expenditure (expressed as Rand per annum)
divided by
Property, Plant and Equipment and Investment Property
(expressed in terms of its Carrying Value).

WHAT IS SPENT?

Not many municipalities, though, budget – or spend – in terms of the Circular. The great majority by far, including some of the better-resourced municipalities, spend much less than the recommended norm of 8% of carrying value. Some municipalities, according to Treasury’s website “Municipal Money”¹¹, even spent less than 1% during the course of the most recent financial year captured on that website (i.e. 2019/2020) – some are recorded as spending 0%! (Table 1)

Information on selected non-metropolitan municipalities indicates that they spent around 2% on average during 2019/2020 i.e. one-quarter of the Treasury minimum. Such a low level is surely a major contributor to below-par condition of infrastructure – little wonder that the 2017 infrastructure report card graded “other¹² paved municipal roads” as “D minus” (i.e. “at risk of failure”) and deteriorating, and another key municipal infrastructure service, namely, “water supply for all other¹³ areas” also as “D minus” (SAICE 2017).¹⁴

Infrastructure in this condition will be catastrophic for service delivery – if, in some areas, it is not already.

Metropolitan municipalities have, in previous financial years, spent on average double that of non-metropolitan municipalities – still much too little. However, according to the Municipal Money website, which shows the actual expenditure by metro¹⁵, their average expenditure in 2019/2020 dropped significantly compared to 2018/2019, and now stands at 2.7% of carrying value. Which is only marginally higher than the average for the random sample of local municipalities in Table 1.

This – that the metropolitan municipalities are investing at such a low level in the repair and maintenance of their infrastructure – is a matter of the greatest concern.

While it is acknowledged that many entities have severe financial problems, Treasury, using whatever mechanisms it has at its disposal, should give high priority to addressing gross underexpenditure on maintenance and repair by wayward municipalities. The alternative is broken infrastructure and consequent unreliable service delivery.

¹⁰ Circular 71 does not actually use the word “minimum” in connection with the 8% – the word “norm” is used. However it is clear from the context that “minimum” is implied.

¹¹ <https://municipalmoney.gov.za/>

¹² Other, that is, than SANRAL roads or roads in metropolitan areas.

¹³ Other, that is, than major urban areas.

¹⁴ The gradings assigned by the SAICE national infrastructure condition report card to be published during the second half of 2022 are not to hand at the time this paper for IMESA is being written, but there is a strong likelihood they will be by the time of the conference. If that is the case, they will probably be presented there.

¹⁵ Excluding the 2019/2020 figures entered for two of the metros, which are not credible.

TABLE 1: *Sample Municipalities' Expenditure*

Random sample of municipalities (Not metros or DMs – for ease of comparison, local municipalities only)	Actual expenditure (per "Municipal Money")	
	2018/2019 FY	2019/2020 FY
In W Cape	0.0%	4.1%
In W Cape	7.8%	8.5%
In E Cape	0.0%	0.9%
In E Cape	0.0%	2.4%
In E Cape	2.1%	1.7%
In KZN	2.5%	0.0%
In KZN	1.6%	3.4%
In F State	0.6%	0.2%
In F State	1.3%	1.3%
In Limpopo	0.0%	2.4%
In Mpumalanga	0.5%	0.6%
In North West	1.8%	2.8%
In North West	1.1%	0.9%
In N Cape	3.0%	2.4%
In Gauteng	1.6%	0.0%

EFFECT OF THE SPENDING

The author has over the years had opportunity to compare the apparent condition of infrastructure of a substantial number of municipalities with comparable maintenance and repair budgets.

Sadly, some municipalities have less than others to show for reportedly equivalent spending.

CONCLUSIONS

That municipalities, the sphere of government responsible for many basic services, to such great extent neglect to fund maintenance and repair of the infrastructure of which they have been given trusteeship specifically so that they may deliver these services, is not acceptable. Yet this is how it has been for years, and many interventions from the national government sphere, be they policies or incentives or on-the-ground assistance, have generally failed to bring about significant improvement.

Ideally, change should initially come from within the municipalities. That is, more political will at municipalities, i.e. the councillors understanding their role as stewards of the infrastructure, and putting this understanding into practice through support for more funding of maintenance and repair, and for improved execution of the work.

Another former Cabinet minister, the previous Minister of Health, accurately identified the "many obstacles to be overcome before one can expect the condition of public sector infrastructure to improve" such as those named at the beginning of this paper. (Mkhize, 2018.)

He unwittingly but successfully summarised the dilemma underpinning this paper to IMESA 2022. As follows:

"Municipalities are at the core of promoting economic growth. One of the most distinct areas of local government's competence with a direct and profound impact and influence over economic growth is the effective and efficient provision of core services. These services – reliable water and energy supply, road maintenance, refuse removal, maintenance of street lights to the satisfaction of its customers and cutting of grass at the verges of the road – are what we consider necessary services offered by a functional municipality." (Ibid.)

Despite four years having passed since then, it cannot be claimed that the situation has much improved, if at all. Therefore, regrettably, that the

majority of municipalities will be in a position to significantly increase their budgets for repairs and maintenance appears to be unlikely.

To further illustrate how little in a position to significantly increase their budgets they are likely to be, it was recently reported that: "About two-thirds of SA's 257 municipalities are in financial distress and require assistance from the National Treasury, according to director-general Dondo Mogajane, who said the Treasury cannot cope with the situation". Moreover:

"Finance minister Enoch Godongwana has also noted that 43 of the worst performers meet the criteria to be placed under mandatory intervention by the national government in terms of the constitution." (Ensor, 2022)

This is of the greatest concern, and does not bode well for municipalities to be able to source the funding to increase their maintenance and repair budgets – that is, even if they had the political will to allocate that funding strategically and appropriately, and the ability to spend those funds wisely.

The need for infrastructure maintenance and repair continues to escalate. Calls for "more maintenance", as covered by the media, are more and more frequent – even on the day that this paper was submitted to the IMESA 2022 conference organisers, the editorial of a well-known newspaper stated inter alia:

"We should take more seriously the question of infrastructure maintenance." (Sunday Times, 2022)

Indeed.....

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