

DEVELOPING A COMPREHENSIVE ROAD MANAGEMENT PLAN

Victoria's Road Management legislation is ushering in some fundamental changes in how councils approach the management of roads and footpaths. It is being closely watched by other state governments.

By Ashay Prahbu

The introduction of the Victorian Road Management Bill, due to apply as from January 05, signifies a major shift in the way councils will be required to provide service delivery in future. The Bill intends to establish broad principles and powers to maintain roads as follows:

- setting out clear allocation of responsibilities for asset management;
- establishing clear processes for determining operational goals and performance standards;
- providing adequate legal powers and funding arrangements to achieve those goals and standards;
- establishing corresponding accountability.

Councils have been putting together their road management plans to demonstrate compliance with the legislation. But producing the plan is only one aspect of the real requirements to demonstrate accountability, reasonableness and defence against litigation.

The Bill does not make it mandatory for councils to have a road asset management plan. It does, however, recommend that in line with responsible stewardship, the Plan will be a fundamental tool in demonstrating that Council has done everything reasonable within their limits to set and achieve targeted service levels to be provided to its community, with respect to their road assets. The Bill does not prescribe a framework for the plan, but it does provide some mandatory elements to be covered.

The Act in itself will not provide councils with any defence mechanisms or criteria. A separate Bill called the 'Policy Defence Bill' is intended to provide councils with defence frameworks against negligence.

Policy Defence was originally proposed to be included in the Act. However, the state government has insisted that such a defence should be developed for all types



of state and local government infrastructure. One possibility is to introduce the policy defence through amendments to the *Victoria's Wrongs Act* and grant councils with substantial legal protection if they adopted into official policies a road management framework (RAMP) and were able to demonstrate that they were able to comply with that framework.

In a nutshell, the Act will require councils to set reasonable maintenance standards for the management of its road infrastructure assets. Reasonable maintenance standards require community transparency to ensure that citizen needs and preferences have been taken into account, whilst also maintaining an appropriate balance between council's resources, systems and funding levels.

In defending itself from litigation in future, a council's defence will most likely be based on the following as a minimum:

- quality of inspection - are council inspectors trained in picking up asset condition - safety, statutory compliance?
- reasonableness of inspection method and frequency - i.e. has it been designed and tested?
- audit process for inspectors, work-crews and data-collectors;
- community transparency and consultation by council in setting service levels;
- council's responsiveness in terms of quality of repair - permanent, semi-

permanent and temporary - and process of auditing this.

- ability to prove that standards are reasonable - i.e. tested for needs, expectations, resource levels, demographic needs etc;
- ability to prove adherence to service levels and standards as set out in the gazetted RAMP;
- specific evidence as to why a court should be satisfied the council has done everything 'reasonable' within its power, duties and rights to deliver these standards;
- activity guidelines for renewal, repair and maintenance.

What are reasonable standards

Reasonable may be interpreted as sensible, practical, logical, rational, realistic or equitable. There is no current benchmarked test for reasonableness with respect to the RMA.

So are we to interpret that reasonableness will be assessed as being 'rationally expected' in terms of community expectations, rights and needs or as being 'practically achievable' in terms of council's ability to deliver within budget and resource constraints or as a 'realistic' combination of both?

What is achievable now and in future, is a function of what the present state of the asset is, and what its future state is likely to be. Therefore, a robust Asset Management Plan will be one that can demonstrate what level of funding for road maintenance and capital can or can't practically achieve desired expectations.

In this context, take a moment to think about how you set service levels and performance standards.

- Service Levels are functions of quality, quantity, intervention triggers and response times based on hierarchy, e.g. we will repair every footpath hazard of

a 25mm lip, with a permanently executed repair within three months of identification.

- Performance standards are your ability to achieve these levels e.g. given our resource levels, budgets and available skills, we expect to achieve the responsiveness in 70% of cases.

Therefore there must be a realistic balance between adopted service levels and targeted performance standards.

Is this defect reasonable?

How you set service levels will impact on your asset inspection method and mode of responsiveness. Service levels may be set in two ways - using intervention level as a base or using responsiveness as a base.

1. Set different intervention points for each asset hierarchy and a common response time for each hierarchy - e.g. with footpaths - say, 25mm intervention in high pedestrian zones, 50mm intervention in medium pedestrian zones and 75mm in low pedestrian zones. Response times for repair are then set at say 6 months for each zone.

2. Set common intervention points for each asset hierarchy and a different

response time for each hierarchy - e.g. with footpaths say, 50mm intervention for all zones and response times of 3 months in high pedestrian zones, 6 months in medium pedestrian zones and 12 months in low pedestrian zones.

The second method is easier for asset inspectors. It is a lot easier and more convenient to auto-set the responsiveness, using your AMS in the office, than it is to measure different interventions on the field.

The first method may also have the ability to create misleading negative perceptions e.g. rate-payers may find it difficult to accept varying interventions for, say, potholes but may be happy with varying response times, as long as the identification criteria for every incident is consistent.

Austrroads is about to release guidelines on how councils should conduct road maintenance inspections and actions, particularly in light of the Road Management Bill.

It will establish frameworks and guidelines for developing standards for intervention, service levels and response times for roads, roadsides, drainage struc-

tures, retaining walls and bridges. These standards may have the potential to be considered as 'industry guides' in defending against negligence.

How you allocate your funding may be a serious matter in your defence frameworks. Most councils are facing a situation where footpaths, walkways and bicycle paths are becoming the most critical asset in terms of risk from litigation and public injury.

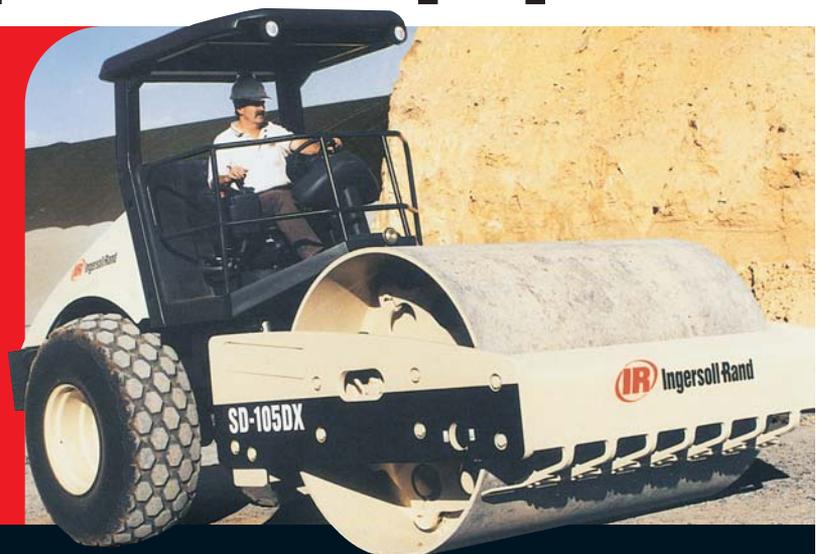
This, however, does not mean that councils should redistribute their resources and funding purely based on perception. Analysis of asset value, risk of failure, current condition, potential for accidents and risk of future liabilities should be objectively assessed.

Many councils are also seeing the need to distribute road funding specifically by category, depending on hierarchy, risk, future liability, deterioration characteristics etc.

Having a scientifically modelled strategy to demonstrate your funding allocation within an asset class or between asset classes may be crucial in defence. For example, increasing footpath maintenance by 20% may be seen as being

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reasonable if it can be shown that footpath assets do pose higher risk. In this instance, a council's decision to reduce road funding by 20% to fund footpaths may also be seen as reasonable.

Similarly, increasing capital budgets on footpaths may reduce asset loss, thereby reducing poor-condition footpaths in future and lowering future risk. Another scenario that many councils are rigorously modelling is the long-term impacts of increasing the resurfacing in short-term by trading off against reconstruction.

All these trade-off analysis need good, robust performance models, so that defensible cases can be put forward to decision makers whilst also ensuring that we have rock-solid defence with respect to the Act in terms of asset management.

In this example for a local council, the modelling indicates that reducing road funding levels by 10% would still keep the road asset under the high-risk levels for next five years, whilst significantly reducing the risk on footpaths with additional 10% funding.

However, the cost of recouping the road pavement asset loss after five years (to continue to keep the asset below high risk levels) in this situation should also be accounted for in the decision making.

Pilot Testing Service Level Models

There is no better method to test models, frameworks or targeted practices than by piloting and sampling. Maintenance service levels can be tested over the next six months (for final endorsement) by using a simple 'pilot framework'. Such a framework may include spreadsheets to undertake the piloting, given that EXCEL is a powerful tool in analysing the data. Piloting 'adopted service levels' within the context of available resources and funding is a very robust and representative means of defending reasonableness.

Benefits of Piloting

- Piloting provides real data to check and set 'pragmatic service levels'.
- It provides much-needed 'real' information to give to the council and community in seeking additional resources or to re-align resources and to demonstrate what is really achievable.
- If adopted service levels are based on piloting, then it provides a solid platform for any future defence.

Maintenance and Capital

This is a very common issue in most local governments I have been associated with in Australia, Malaysia, India and New-

Zealand. Any plan, however detailed, is still ineffective in application if it cannot distinguish clearly between maintenance and capital.

Often the distinction between maintenance and capital gets very blurred. At what stage do we call a road patching treatment capital and not maintenance? At what stage does footpath repair become capital replacement and not maintenance? When is a kerb replacement considered maintenance and why?

It is important that these definitions are understood by the council for the following reasons:

- Funding in its simplest form is allocated by the council as capital works and maintenance works. It is very important that the annual resources are allocated according to that split, so that it can be demonstrated next year that more or less funding is needed for either category.
- The RMA requires the setting of service level standards for maintenance as well as capital works. Without proper definitions, how are standards justified and proven to be reasonable, and how are actions defended against potential litigation?
- Distribution between capital and maintenance can have an impact of future condition levels. Efficiencies and effectiveness in proactive maintenance can have a phenomenal impact on capital funding needs in future. It is therefore important that maintenance does get its proper share. The example below demonstrates how a local council has explicitly determined the 'optimal strategy' i.e. the best way to distribute its available funding to achieve best long-term asset condition.

Having a scientifically established strategy, with objective decision-making criteria, can be a solid form of defence in proving that "council has done everything reasonable to manage its infrastructure in the long term".

Finally what data do we collect and why do we collect it to comply with the Act?

It is important to recognise that to comply with a standard of reasonableness, we have to collect two types of data. One is the proactive maintenance data that is essential to keep the asset safe, serviceable and in use for the community.

Examples of such data are pothole locations, deep deformations, footpath trip hazards, kerb roll backs etc. This data will trigger maintenance work which is expected to be programmed and

scheduled as per maintenance response times. The other data are proactive capital data. This data is essential to ensure the long-term preservation of the asset. Examples are pavement cracking, pavement roughness, rutting, major shape loss, kerb distortions, footpath distortions, seal surface oxidisation, surface texture etc.

Note that the two data types are markedly different. The maintenance data triggers specific localised work, whilst the capital data triggers segment or block level work.

The response times for maintenance works may be as short as a week while that for capital works may be as long as two years. Often, the inspection frequency for capital data will be one to three years. The frequency for maintenance data may be as low as three months depending on the hierarchy of the asset.

Getting the plan right and implementing the plan

Getting the plan right is the first critical step. A word of caution to understand that this plan is different from a strategy. A strategy is a statement of intent and is developed from stakeholder objectives.

A typical road management strategy would cover funding (financial) strategy, resource strategy, treatment strategy, data collection mechanisms, asset use strategy and environmental strategy.

A plan on the other hand is an enabling structure that sets standards, targets, tactical programs, and establishes inspection regimes, sets out asset management processes and practices to deliver the adopted strategy.

To get the plan right, it is therefore critical that the council gets the strategy right first. Once the strategy is endorsed, the affordable service levels, responsiveness, quality of repair, intervention triggers and performance standards can follow.

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