



THE NECESSITY OF LOCAL GOVERNMENT SPECIFICATION



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“The Australian economy spends approximately \$7 billion per annum to resolve disputes in the construction industry. Concerns exist including the cost of tendering, lack of clarity of documentation, and unequal allocation of risk.”

- CRC Construction Innovation, Guide to leading practice for dispute avoidance and resolution: An overview (2009)

1 Overview

1.1 *Brodie v Singleton Shire Council* and the “highway rule”

On 31 May, 2001, the High Court in the case of *Brodie v Singleton Shire Council*, ruled in favour of the plaintiff Brodie. Brodie drove a truck with a 22 tonne loaded weight over a 50 year old wooden bridge. The bridge collapsed, the truck was damaged upon falling into the creek bed below, and Brodie suffered injuries.

The bridge collapse was found to have been caused by the failure of the supporting girders. There was evidence that in recent years the Council had replaced faulty planks on the bridge, but not the girders. The case was held to be one of misfeasance since by only replacing the planks, the Council had negligently repaired the highway and left it in a condition in which failure was inevitable. The danger was hidden to users of the highway.

What was known as the “highway rule” was overturned in this case. Under this rule, road or public authorities that were responsible for the care and management of highways, may be liable for a negligent act of misfeasance, but were not liable for nonfeasance. A highway authority’s immunity to nonfeasance was reconsidered and the Court held that the tortious liability of highway authorities would be determined according to the general principles of negligence.

The Court concluded that highway authorities are in a position fit to be liable for objects or structures which are the potential sources of harm. In the absence of this immunity, they owe users a duty of care to ensure their assets are safe and fit for purpose. With the introduction of this duty of care, prudent Councils and public authorities are gradually shifting from performing reactive maintenance, to implementing a system of proactive maintenance.

1.2 State Government Civil Liability Acts (2002/2003)

The State and Territory Governments’ Civil Liability Acts of 2002/2003 prescriptively qualify some of the generalities of the High Court 2001 judgement. The Acts have transformed the way in which personal injury damages are awarded, having a significant effect on many product liability claims, including those against Local Councils.

In addition to the disposal of the “highway rule,” local road authorities now have the added responsibility of more onerous State legislation. This was qualified by the introduction of duty of care and the need for road authorities to take precautions to minimise the risk of harm or injury to users.

The various states’ Civil Liability Acts gave some protection from breach of duty of care:

- By the limitation of financial resources.
- By consideration of the broad range of the road authority’s activities.
- By permitting the road authority to have compliance with its general procedures and standards.

Accordingly, the protection of the law is only given to Councils that have proactive asset defect maintenance systems in place. Evidence is crucial to show that they competently and effectively utilise these day-to-day defect systems to maintain the quality and safety of their assets for public users.

1.3 Why is AUS-SPEC required?

The 2001 High Court ruling from *Brodie v Singleton Shire Council* set a new benchmark for duty of care and liability, virtually discarding the centuries-old road authority defence called “the highway rule.” By 2003, the Australian states and territories had responded to the High Court ruling by passing various Civil Liability Acts in their individual state jurisdictions, prescriptively qualifying and defining matters raised by the High Court judgement.

With the development of new technologies in the past decade or so, there has been exponential growth in the implementation of advanced asset management information systems. However, Local Councils have been undertaking different approaches to asset management, depending on their willingness and capacity to adapt to the challenges being faced. Councils have generally opted for a blend of enhanced manual and automated systems that recommend recognised standards and specifications, depending on the size and experience of the Council and its reporting requirements.

While the way businesses are run has evolved, the fundamental aspects of asset management remain the same. AUS-SPEC is a specification system for the life cycle management of community assets, and was developed by the IPWEA based on the collective knowledge of many Local Councils, with input from various industry bodies. It is aligned to the NATSPEC National Classification System, which is used widely by the construction industry and is maintained and updated by NATSPEC, a not-for-profit organisation owned by Government and industry bodies. AUS-SPEC’s objective is to improve the quality of construction and asset maintenance in Australia.

AUS-SPEC packages include design, construction, and maintenance specification templates (called worksections) for buildings, roadworks, urban and open spaces, and public utilities. The system supports technical and contractual consistency between Councils, allowing flexibility to edit and add project-specific requirements where necessary.

1.4 Asset maintenance - reactive and proactive

Maintenance of community assets is an essential part of Council activity. Inappropriate maintenance and repairs result in unnecessary cost to the Council, inconvenience, and a decreased standard of safety to users. Councils have a duty of care to deliver and maintain these assets so that they are safe for the community.

- **Reactive maintenance** involves unplanned repair work that is carried out in response to service requests, and management or supervisory direction.
- **Proactive maintenance** includes both planned scheduled maintenance (e.g. every six months) and planned unscheduled (e.g. at component failure) maintenance. It requires continuous monitoring and application of periodic and preventative work to ensure assets reach their useful life.

Both reactive and proactive responses are combined, prioritised, and delivered using the AUS-SPEC specification materials, which support a proactive approach to maintenance based on:

- Programmed maintenance
- Quality management
- Competitive principles

The AUS-SPEC system can be adapted for documenting routine, periodic, and urgent maintenance, using in-house service agreements or external contracts, or a combination of both. The AUS-SPEC asset maintenance system templates can also be customised to reflect the asset maintenance management policy of the individual Council, as well as their local requirements.

1.5 Malfeasance, misfeasance, and nonfeasance

These are types of failure to discharge public obligations as instated by common law, custom, or statute:

- **Malfeasance** is the wilful and intentional act that results in injury.
- **Misfeasance** is the wilful inappropriate action that results in injury.
- **Nonfeasance** is failure to act where wilful action is required, resulting in injury.

Before 2001, the “nonfeasance principle” was the dominant law that concerned road authorities, relating to negligence. Otherwise known as the “highway rule,” road authorities were historically not liable for neglecting to do road repair tasks for defects that they were not aware of. Road authorities were still liable for misfeasance, or work that was improperly done.

1.6 Limits of road maintenance

A typical country Council has a road network similar to the branches of a tree. As the branches reach the dead ends they will only service one or two properties. These dead end roads and other less commonly used roads, such as those leading into bushland or into dangerous terrain like gullies, are proportionally more expensive to maintain given their limited use. To limit the Council funding used to maintain these less commonly used roads, many Councils have traditionally enacted policies within their own governing area to dictate where Council maintenance would extend to.

Some Councils set limitations to the final one or two property accesses. These limitations don’t necessarily occur at Council public roads or Crown public roads. Until 1992, Councils in NSW built roads or buildings on Crown public roads without gazettal as a Council road. Without gazettal that the section of Crown land was now under the ownership of the Council, the liable party for maintenance and management of the land was often uncertain. While the Council owned assets on this Crown land, the Council was deemed liable for maintenance of only the assets.

The “highway rule” further provided immunity from litigation as the Council was not liable for nonfeasance. The need to resolve these ownership and liability issues for Council roads developed after the High Court judgement of 2001 and the ensuing Civil Liability Acts of 2002/2003.

2 Case Samples

Examples of how Councils have been maintaining their infrastructure assets.

2.1 Bogan Shire Council

Asset management practices saving thousands of dollars in insurance claim costs for a small, western NSW Council with population 3,500.

In the 1990's, the Council was sued for \$25,000 by a ratepayer who was injured tripping on one of the footpath tripping points. The Council lost in the Dubbo Local Court but appealed to the Orange District Court, arguing that they had an inspection system in place to manage repairs, but were limited to an extent by allocated budget funds.

The Council used an annual spreadsheet recording system for ranking footpath tripping defects as Condition 1 to 5, with 5 being the most severe or unsafe. The cost to eliminate all tripping points was \$300,000, and the Council's annual budget allocated \$50,000 for rectification of defects rated Conditions 4 and 5.

The District Court accepted the Council's appeal and overturned the Local Court's judgement. Only as a result of the stringent maintenance and management system that they had in place to record and address the footpath tripping points, was the Council able to make an appeal to the District Court.

In 2017, the Council maintains the resources to sufficiently execute its asset management and maintenance plan. The Council still uses the self-developed spreadsheet as part of the asset management and maintenance system, and it has:

- An asset management engineer for its local roads and other assets.
- A Roads and Maritime Services contract for the highways.
- Two highway inspectors to report defects using dedicated Asset Management Information Software (AMIS) and iPads.

Bogan Shire and three other neighbouring Councils were successful in acquiring a 100% grant from the State and Federal Government for training, software, and the purchase of devices such as iPads, to be utilised for proactive asset inspections.

2.2 Hilltops Council

Asset management practices in a medium-sized, amalgamated NSW country Council with population 19,000.

The new Hilltops Council is implementing a new asset maintenance and management system to centralise information and provide a single view of customers and operations. As an amalgamation of the former Boorowa, Harden, and Young Councils, the new Council requires an accelerated resourcing effort to bring together the differing processes and work cultures, and integrate the three Councils into one cohesive and functional body.

All three former Councils previously used manual systems (handwritten forms and spreadsheets) for core asset and maintenance management practices. Taking advantage of and keeping up with technological advancements, the

new enterprise system will be used across the entire Council, removing silos and improving visibility of information to deliver superior and more efficient customer service. Performance will be streamlined and all available resources utilised to their full potential. Customer requests will be raised electronically, and a full mobile solution integrating GIS used for field retrieval of defects.

The integration of new technologies will result in a more proactive response and defect management system, helping to achieve and maintain the Council's efficiency in the future.

2.3 City of Canterbury-Bankstown

Asset management practices in an amalgamated City Council with population 361,500.

The City of Canterbury-Bankstown Council consists of the recently amalgamated Canterbury and Bankstown Councils. The former Bankstown Council has a well-developed and sophisticated asset management system, which will be incorporated into Canterbury Council by a team of asset engineers.

The Bankstown asset management system combines reactive and proactive defect management, and is complemented by up-to-date technologies such as iPads, GIS mapping, and GPS positioning. The new City of Canterbury-Bankstown Council will benefit from this thorough system.

2.4 A medium-sized country Council

Asset management practices clearing a medium-sized country Council of culpability.

A motorbike rider was killed when he hit a deep pothole on a new construction site in a Country Council. The coroner's inquest focused on the duty of care of the Council. Having an effective customer request and monitoring system for defect management in place, the Council was cleared of a potentially expensive insurance matter and possible culpability and public relations issues.

In the future, due to the 2001 High Court judgement and Civil Liability Acts 2002/2003, it is likely that coroners will be required to more stringently observe misfeasance issues or reasons for defects, and any design or construction errors made by the Council. In the case of death or serious injury, pavement engineers may also be consulted to assist in determining the extent of the Council's liability.

2.5 A large country Council

Potential consequences of not maintaining up-to-date asset management practices.

A legal dispute arose between an asphalt contractor and a large Country Council.

The contractor sued the Council and won \$750,000 in damages. One significant contributing factor to the ruling against the council and damages awarded was that the Council was using a modified outdated specification. Expired or superseded standards and regulations were being followed with regards to asset management and maintenance.

Many Councils have opted to use outdated specifications that are up to 20 years old. The Council had elected to modify the 1997 AUS-SPEC worksections, with their own procedures integrated. Without updating the documents with changes to regulations and standards, potentially disastrous consequences can ensue. This includes public injury or death and the consequent legal proceedings and financial damages, which result in damage to reputation and loss of public faith.

3 AUS-SPEC Case Studies

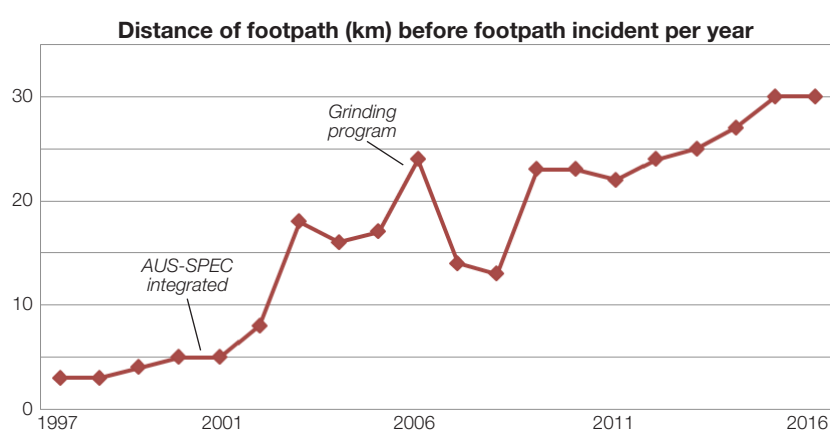
Examples of how Councils have benefited from using the AUS-SPEC specification system for asset maintenance and management.

3.1 Penrith City Council

Starting with existing Council maintenance funding levels, Penrith City Council implemented the AUS-SPEC systems approach to road reserve maintenance in 2001-02. With the guidance of the specifications, a detailed plan was created to maximise the benefits of their new management and maintenance plan. Existing maintenance funds were allocated to the categories identified in the AUS-SPEC documentation, and month-by-month costs associated with intervention levels previously set for defects were plotted to better prioritise defect maintenance, and the progress was monitored. Intervention levels were amended to better align with the allocated budget.

The process was monitored monthly, and the data used to refine the plan. With this system in place and the highly comprehensive data and information that was able to be extrapolated, it became less challenging to attract the right level of funding from Council for maintenance.

For any given local Council, footpath incidents arising from tripping points are the most common claim from the community. After the adoption of the AUS-SPEC system for the maintenance of their roads and footpaths, Penrith City Council saw a substantial decrease in the number of footpath incidents, hence a lower risk of litigation and the resulting damages and loss of credibility.



In 1997, a footpath incident occurred every 3km. The year after the AUS-SPEC system was integrated, there was an incident every 8km. A grinding program introduced by the Council was undertaken in 2006, and the distance of footpath per footpath incident has increased since.

Data courtesy of Penrith City Council

This is a testament to the effectiveness of the roads maintenance system that Penrith City Council has been using over the past 20 years. The Council's resources are being more efficiently used, and safety for the community has been drastically improved.

3.2 City of Salisbury

Historically, maintenance of a Local Council's infrastructure has been done on a reactive basis that does not encompass sustainable asset management. The City of Salisbury in South Australia used the AUS-SPEC maintenance specification to document the maintenance contract requirements for the development of the suburb of Mawson Lakes, comprising 104 parks and reserves across 620 hectares.

The AUS-SPEC maintenance system allowed the Council to:

- Efficiently prepare tender documentation, including Conditions of Tendering, Conditions of Contract, Appendices, Specifications, and Tender Response Schedules.
- Calibrate service levels across a number of activities and asset classes with their Parks and Recreation's maintenance and operations budget.
- Collect records of asset inspections, defects, programmed and prioritised works, and completed reports from monthly works.
- Progressively improve management of asset maintenance, using control and historical data.
- Manage risk through a systematic approach to maintenance of Council assets.



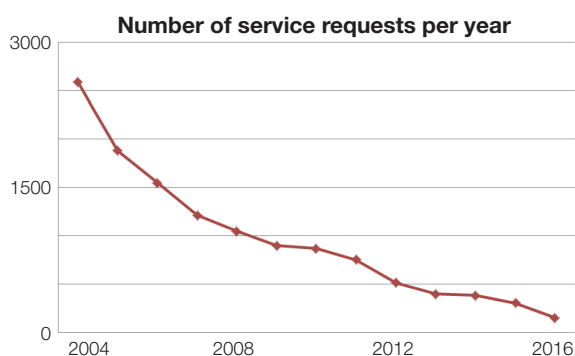
Image courtesy of the City of Salisbury

Using this system for the project allowed the Council to more effectively scale the level of service for any combination of funding scenarios.

3.3 City of Parramatta

The City of Parramatta has in the past relied on the community to inform them of road and footpath failures. The Council found that depending on the general layperson to instruct them on where and when to maintain components of complex multi-million dollar assets was often an ineffective and inefficient system. Assets were not sufficiently managed and defects were not controlled.

In 2004, the Council exchanged its outdated reactive maintenance system for a proactive one. The implementation of an asset management and maintenance plan using the AUS-SPEC documentation resulted in a systematic approach to identifying and prioritising maintenance works. Scheduled inspections led to reduced operational costs and unplanned rework. The cost savings and the reduction in number of reactive complaints can be observed:



Data courtesy of City of Parramatta

Reactive maintenance requests from the community have decreased and levels of service are able to be quantified in consistent terms. The system mandates that records of inspections and work undertaken to be kept, lowering the risk of litigation and potential damages costs.

3.4 MidCoast Council

MidCoast Council, formerly Great Lakes Council, has been using the AUS-SPEC specification system for the design, construction, and maintenance of Local Government assets since 2002. Recently, AUS-SPEC documentation was used for a project to extend the Tea Gardens Industrial Estate, construct a new Waste Transfer Station, and prepare the new Works Depot site. At \$5.1 million, this was by far the largest project ever undertaken by the mid-north coast NSW Council.

With AUS-SPEC Templates, the Council was able to clearly and concisely document requirements for the associated works across the project sites, including:

- Clearing and grubbing the site.
- Extension of the water reticulation supply.
- Extension of the electricity supply.
- Extension of the telecommunications network.

The Council highlights the ease of using and sharing AUS-SPEC documents with the contractors, and the time and money saved. The Council engineer only had a fortnight to complete the specification and other tender documents, but by using the AUS-SPEC Templates was able to compile and edit the documents according to the project specific requirements, rather than taking months to write it from scratch. Since the technical specification document was clear and void of ambiguity, efficient and productive work was done. Customisation to the specifications to suit local requirements only accounted for approximately five per cent of the entire project, which was described as minimal.

Extension of the Tea Gardens Industrial Estate

In addition to the aforementioned requirements, the works to the estate included extension of an existing road, construction of a new road, and creation of 12 industrial subdivision lots. Four lots were fully constructed with the remaining eight being partially constructed to enable the continued operation of the Council's existing Works Depot. A large open stormwater drainage line and vacuum sewerage system were also constructed.

New Waste Transfer Station

In addition to the aforementioned requirements, the works to the new waste transfer station included the construction of a tip shop building, and a large concrete hard stand area with a large steel roof structure to provide weather protection and measuring 46.6m long and 19.6m wide. Access and circulating roadways measuring approximately 350m in length were also constructed, with supporting infrastructure. Council subcontractors undertook bitumen sealing and asphaltting on the project site under the direction and control of the contractor. The Council supplied the nominated materials that were already easily available on contract.



Image courtesy of MidCoast Council

4 AUS-SPEC and IPWEA

4.1 About AUS-SPEC

AUS-SPEC is the national Local Government specification system for the life cycle management of assets. It is a joint venture between IPWEA and NATSPEC, with the objective to improve consistency, quality, and efficiency in construction through proactive leadership of information. AUS-SPEC documents were created to capture the wealth of experience in local government, and harmonise local government contract documentation across Australia. The specification system forms the foundation for duty of care for asset works in Local Governments throughout Australia.

An AUS-SPEC subscription includes editable specification templates, guidance and examples for preparing specifications, tender and contract documentation, maintenance management plans and contract schedules for design, and construction and/or maintenance contracts. AUS-SPEC specifications are updated annually in response to changes in regulations, standards, industry practices, and the evolving needs of our subscribers.

For AUS-SPEC resources or more information about AUS-SPEC, visit www.natspec.com.au.

4.2 NAMS.PLUS: An online guided pathway for asset management planning

NAMS.PLUS was developed in 2007 by the IPWEA. It provides tools and templates to assist asset intensive organisations, like Local Government, to develop, maintain, and update asset management and long term financial policies, strategies, and plans aligned to the International Infrastructure Management Manual (IIMM) and the Australian Infrastructure Financial Management Manual (AIFMM). NAMS.PLUS includes risk management guidance for developing a risk assessment, and a register for including critical asset risks in the risk and asset management plan.

The majority of local governing bodies subscribe to NAMS.PLUS. Combined with the use of AUS-SPEC standard processes and specification templates, Local Governments can effectively deliver projects and services while managing cost, risk, and service level trade-offs.

For more information about NAMS.PLUS visit www.ipwea.org.

4.3 Stakeholders in AUS-SPEC

At NATSPEC we update the AUS-SPEC worksections annually, and we receive advice on changes from our specialty partners, including Standards Australia, AAPA, ARRB, AustStab, Austroads, IPWEA, and WSAA. AUS-SPEC documents are regularly reviewed by Councils and various industry organisations; the collective knowledge and experience benefits AUS-SPEC and its subscribers.

Councils with annual AUS-SPEC subscriptions have access through SPECbuilder to the updated worksections, for preparation of new tender documents.



"IPWEA is renowned for its best practice, industry leading publications and training. Our solutions management approach is highly valued by councils, government and the private sector. AUS-SPEC was developed by IPWEA Australasia to provide nationally consistent civil specifications for councils that prevent duplication of effort and reduce costs.

The AUS-SPEC library of civil design, construction and maintenance templates brings a shared professional language and process to engineering projects. In the current environment of increasing pressure on resource allocation, these publications is a tool to streamline asset life cycle planning and maintenance, while maintaining the essential focus on community safety and risk prevention."

David Jenkins, CEO, IPWEA Australasia



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