

17th August 2018

Secretary
Department of Planning and Environment
Level 22
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SYDNEY NSW 2000

**Submission by
Adrian Ellson
regarding
Veolia's Modification Requests to MP
06_0239 and MP 10_0012**



Adrian Ellson

17th August 2018

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Private Submission

Thank you for providing the opportunity to provide comment on Veolia's requested modification requests to Woodlawn Mechanical Biological Treatment (MBT) Facility (MP 06_0239) and Crisps Creek Intermodal (Crisps Creek IMF) (MP 10_0012). This is a **private** submission separate to the Tarago and District Progress Association Inc (TADPAI) for which I am the Secretary of.

Purpose

The purpose of this Submission is to articulate some personal observations and draw out lessons to be learnt regarding the management of State Significant Developments (SSD) and State Significant Infrastructure (SSI) projects, and to apply this specifically to the NSW Government, Goulburn Mulwaree Council (GMC), Queanbeyan Palerang Regional Council (QPRC), and Veolia interactions with regard to Veolia's operations within the Woodlawn Eco Precinct and use of public infrastructure.

Background

Veolia has submitted modification requests seeking approval to construct and operate a resource recovery facility, known as the Solid Recovered Fuel (SRF) facility to process up to 50,000 tonnes per annum (tpa) of residual general solid waste (non-putrescible) from the Mechanical Biological Treatment (MBT) facility to produce solid recovered fuel. The solid recovered fuel produced at the facility would not be used on-site, it would be transported to the Crisps Creek IMF by road where it would be railed to Port Botany and utilised either locally or internationally.

SSD versus SSI

"SSDs and SSIs both have slightly varying steps towards gaining approval. However, both assessment pathways typically include:

- *the Department issues environmental assessment requirements*
- *preparation of an environmental impact statement by the applicant*
- *public exhibition and opportunity for comment on the proposal by the community*
- *response by the applicant to the submissions made during exhibition*

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- *assessment of the proposal by the Department*
- *determination of the proposal by the Planning Assessment Commission, the Department or the Minister (in the case of most SSI projects).*

In addition, the Minister may also decide that a review and public hearing by the Planning Assessment Commission may be required for the complex State significant development proposals.”

Source: <https://www.planningportal.nsw.gov.au/understanding-planning/major-projects> of 3 Aug 2018

For the purpose of this submission, SSD and SSI planning approval processes, and on-going management, are assumed to be one and the same. It is not clear to me if Veolia's Woodlawn Eco Precinct is defined as an SSD or an SSI; however, its operation is now critical to Sydney's management of its municipal waste, and its importance in the management of the ACT and surrounding local governments municipal waste is growing on a daily basis. I therefore believe that Veolia's portion of the Woodlawn Eco Precinct is an SSI rather than an SSD, albeit may have started out as an SSD, noting most Governments are reluctant to recognise waste disposal as a form of essential service/infrastructure provided to the public. This is something that the Minister should provide some guidance and certainty on.

Public Private Partnerships (PPP) Versus State Development Projects

I think it is important at this time to reflect of the contractual framework used to progress SSI and SSD projects. This too is something that I believe is not articulated well, and I recognise that there is no definitive direction as to what contractual framework should be used for SSI and/or SSD projects. And, I suspect the the current and future governments will always leave its options open and choose its preferred contractual framework for any new or upgrade project based on its perception of public popularity and support.

Public Private Partnerships (PPP) are essentially formalised joint ventures between Government and selected company (/or companies) for the benefit of both, and in theory the benefit of the public. This type of contractual framework is normally the preferred framework for progressing popular SSI projects.

What I refer to as State Development Projects, are informal joint ventures, for progressing SSD and unpopular SSI projects, where there is benefit to the Government but little to no benefit to the public. These types of contracts enable Governments to provide some level of separation between itself and the project being progressed - mining projects are good examples.

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In any case, Government approval of SSI or SSD projects, either as PPP or State Development Project incurs obligations on the Government itself that legally must be provided. These legal obligations are less visible within State Development Projects, as Government tends to try to distance itself from what is viewed as unpopular developments; this does not dwindle the Government's legal obligations to its private partners and/or the public and local communities, whether provided in writing, verbally or intentionally left silent

Veolia's waste operations within the Woodlawn Eco Precinct is a case in point. The public at large in Sydney have little to no knowledge of the processes involved in the disposal of their municipal waste, yet here in Tarago we live with it everyday through impositions of excessive vehicle movements, waste trains and odour issues.

The Tarago Community does not oppose in principle Veolia's waste operations at Woodlawn; however, its ongoing operations and expansions must be dependent on Veolia's ability to safely and conveniently merge its use of public infrastructure (road and rail) with the need and use of all other users, and to either immediately address or compensate local residents for the on-going 12 year odour impost. The NSW Government, GMC and QPRC each has key roles to play in the addressing of these issues, but my observation is that to date, each entities' commitment to and participation in the management of these issues appears to have been minimal.

It is my opinion that in approving any licence, or modification of licence, for any SSI or SSD, that in doing so the NSW Independent Planning Commission is also committing the NSW Government to providing the correct level of infrastructure to support the SSI and/or SSD, and correct level of resourcing to monitor and enforce licences approved. And if this is not the case, than the Commission does not have the authority/mandate to approve any licenses or license amendments, including Veolia's current Modification Requests.

Visibility of Contracts underpinning Development Approvals and Modification Requests

I am aware of multiple contracts between Veolia, and the NSW Government, Local Governments and private companies regarding the acceptance, treatment, and storage of waste at Woodlawn Eco Precinct. However, my concern is that they are indefinite in duration and their relationship to and justification for Development Approvals and Modification Requests are unclear. Lengthy or indefinite contracts contribute to the creation of mutual dependency and thus should be avoided. Contracts should be for defined periods and provide Governments with

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options out so as to maintain their independence and to provide confidence that value for money is being obtained.

It would be beneficial, and best practice, for all SSI and SSD Development Approvals and Modification Requests to include a tabulated record of the Clients and contracts being serviced by the SSI and/or SSD. For example, something along the following lines for Veolia:

Contract Title	Clients	Waste Tonnages/ Year	Contract Start Date	Contract End Date	Contract Options
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Note: Contract pricing information should not be included in this table.

This table should be supported by a narrative that relates the Development Approval and/or Modification Request relationship to which contracts (could be one or more). Could explain if the Development Approval and/or Modification Request is a prototype, and if successful whether or not future expansion will occur. The objective here is to avoid incremental developments and scope creep, and to allow for Commonwealth, State and Local Governments planning and implementation of supportive long-term public infrastructure.

The table should also be supported by a narrative defining any possible conflict of interests (perceived and/or actual), and measures put in place to mitigate any conflicts.

I am not about constraining business, but all for the proper long-term strategic planning of.

Slow Vehicle Lane between Crisps Creek and Collector Road

Whilst other community and private submissions shall address the need to construct a slow vehicle (climbing) lane up the hill on the Tarago-Bungendore Road from Crisps Creek to Collector Road; this part of my Submission examines the implications from not proceeding with the construction of the requested/needed slow vehicle lane.

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Road Ownership

It is my understanding that Braidwood Road and the Tarago-Bungendore Road are defined as local government roads belonging to GMC and QPRC respectively, to maintain. However, it is also very clear that within Veolia's Woodlawn Eco Precinct and Crisps Creek IMF licenses, and I suspect that if I were to review Heron Resources, Hi Quality, Infegen, etc. licences, that the NSW Government (via NSW Independent Planning Commission) has imposed or granted conditions of use on these companies. Case in points, constraints in hours of general operation, specified routes, and the use of B-double vehicles by Heron Resources and Veolia, despite, according to common understanding that the Tarago-Bungendore Roads not endorsed or designed for this type of vehicle.

Where the NSW Government has identified public road infrastructure to be used in support of SSI and SSD operations, than these roads must equally be deemed State owned, funded, and maintained roads. While the State will always have the option to contract out maintenance and improvement programs to Local Governments and private contractors, the design and funding of these roads to meet the demands of all users is, and always will be, the responsibility of the NSW Government, unless overridden somehow by the Commonwealth Government.

Local Governments contracted or allocated State roads to maintain have the responsibility and obligation to advise and inform the NSW Government of maintenance and capital works necessary to maintain to keep the State roads in good working order, and safe for use by all users.

If not done so already, than the NSW Government, GMC and QPRC, should be acknowledging that Braidwood and Tarago-Bungendore Roads, and part of Collector Road, are State roads, whether intended by considered design or morphed by incremental Government decisions - they are not private roads belonging to Veolia, Heron Resources, Hi Quality or any other company using these roads. And, it is important that the NSW Government, GMC and QPRC, each acknowledge their responsibilities and obligations to maintain these roads for the safe use by all road users.

Coroner's finding against Gosford City Council

On 8th June 2007, Adam Holt, 30, his de facto wife Roslyn Bragg, 29, their children Madison, 3, and Jasmine, 2, together with a nephew, Travis Bragg, 9, were killed when the road collapsed in heavy rain at Somersby, 75 kilometres north of Sydney. The cause for the crash and

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subsequent deaths was the failure of a culvert with a known history of degradation. At Appendix 1 is a copy of the Sydney Morning Herald's synopsis of the Coroners findings dated 19th September 2008.

This decision was and remains a historically important decision, and has had a profound impact of how Australian Local Governments and State Governments, and their Agencies approach and fund asset management. And its implications are no less significant with regard to the requested slow vehicle lane than its findings against the Gosford City Council.

Should a fatality now occur on the Tarago-Bungendore Road between Crisps Creek and Collector Road, it is my opinion, that based on the precedence set by the Gosford City case of 2007/08, that any coroner could find:

- the NSW Government (various Departments), GMC, the Independent Planning Commission and, to a lesser extent, Veolia were and are all aware of the need for a slow vehicle (or climbing) lane between Crisps Creek and Collector Road by virtue of the requirement being included in the 2012 licence (and possibly earlier), discovery efforts that would find it discussed since then, and most importantly this and similar Submissions;
- the NSW Government (various Departments), GMC, and the Independent Planning Commission are all aware of the likely increase in traffic movements as a result of license and license modification approvals granted in recent years;
- the lack of a regular review of need as to when the lane should be constructed by;
- the fatality could have been avoided through proactive action on behalf of one or more entities to construct a slow vehicle lane; and
- that negligence might be attributed to one or more entities and/or individuals.

Similar conclusions could be drawn for the NSW Government (various Departments), QPRC, the Independent Planning Commission and, to a lesser extent, Veolia with regard to the Commission's April 2018 modification to Veolia's license approving a sizeable increase in the road transportation of local/regional waste from 50,000 tpa to 90,000 tpa, without any added obligation on the NSW Government, and/or GMC and QPRC, to provide appropriate additional road maintenance and improvements to support this increased movement. And now noting, the death of a cyclist on 3rd June 2018 on the Tarago-Bungendore Road, on the licensed ACT/QPRC to Woodlawn transportation route. The only mitigating factor in this matter, is that neither a Veolia or one of its contractors/customer waste vehicles was involved in the accident.

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Funding of the Construction of the Slow Vehicle Lane

The Tarago Times has reported “*The \$8.6 million project [to extend the Tarago Rail Siding] was announced by the NSW Roads and Freight Minister Melinda Pavey*”. [July 2018 Edition, page 4] It is further understood from Veolia that Transport for NSW is considering or has decided to park the first returning empty train from Crisps Creek IMF in the Tarago Siding while the second train has a uninterrupted run directly into Veolia’s Crisp Creek Intermodal Facility (Crisps Creek IMF). This decision was made by Transport for NSW without consultation with the Tarago Community.

Transport for NSW approach to parking waste trains in the extended rail siding will result in the noisy engines and smelly waste containers being parked up immediately behind the Tarago Public School. This is totally unacceptable to the Tarago Community and the School, for the obvious disruptions and that will occur from noise, vibrations and odour, and concerns regarding student and staff health.

I question the role of DPE and the Independent Planning Commission in the approval and funding determination for the Tarago Rail Siding extension. How does Transport for NSW and Infrastructure NSW make a determination regarding the operation or operational support of a SSI and/or SSD without consulting with the public, and more importantly the Independent Planning Commission? Who has seniority over decisions relating to SSIs and/or SSDs - the Independent Planning Commission, or Transport for NSW and Infrastructure NSW?

Had Transport NSW consulted with the Tarago Community via TADPAI, it would have been informed that the road movement in and around Tarago and District is of more significant concern for the following reasons, and that the \$8.6m would be better spent on building a slow vehicle lane along the Tarago-Bungendore Road, between Veolia’s Crisp Creek IMF and Collector Road at the top of the hill.

- around 6000 new truck movements per annum between Goulburn and Woodlawn Mine via Tarago when Heron Resources commences production towards the end of 2018;
- the near doubling of Veolia semi-trailer truck movements as a result of approval in April 2018 to increase the waste volumes to be moved by road from 50,000 tpa to 90,000 tpa;
- proposal to divert up to 300,000 tpa of Canberra waste to Veolia’s Woodlawn Bioreactor, via rail to the Crisp Creek Intermodal terminal, and thence by road to Woodlawn Mine;
- general increase in heavy vehicle movements afforded by improved road conditions between Canberra and Nowra, and between Goulburn and Batemans Bay respectively;
- general increase in cars and caravans, cars and boats, etc. numbers because of the improved roads cited above, and Council’s and others tourism campaigns; and
- general increase in population in Tarago and surrounding districts in response to housing affordability in the area compared to elsewhere, including Goulburn, and

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corresponding work commutes between Tarago, and Canberra and Goulburn respectively.

I implore the Independent Planning Commission intervene on the basis of road safety and Community concerns, and have the \$8.6m allocated to extending the Tarago Rail Siding reallocated to the construction of a slow vehicle lane between Crisps Creek and Collector Road, and for this work to occur earlier than later. Noting that Veolia states in its Submission **'Modification to enable the construction and operation of a Solid Recovered Fuel (SRF) processing area within the Woodlawn Eco Precinct'** dated July 2018 (page 2): *"Both truck and train movements associated with the modification would be accommodated within movements assessed and acknowledged by existing approvals"*.

Veolia's interaction with the Tarago Community

My personal observation is that Veolia's interaction and consultation processes are poor.

Under Veolia's licence to operate the Woodlawn Eco Precinct, Veolia is obligated to meet and consult with TADPAI on a quarterly basis - this simply does not happen. The Independent Planning Commission and DPE are requested to make this happen henceforth.

An extract from Veolia's Modification Request Submission re its consultations is on the next page. Projects of this size should not be relying of telephone conversations as justification / proof of consultation, especially if the other party has not had the opportunity to review and comment on draft documents. From the review of Veolia's minutes of its Community Liaison Committee (VCLC) meetings, I can find no evidence where the members of the VCLC were ever provided with any written documents with regarding these Modification Requests to review and provide comment on.

Commenting on Veolia's submission at this time during public exhibition does not constitute 'consultation' within the context of the Modification Request's development.

In moving forward, the Independent Planning Commission, should direct that the VCLC be replaced by a Community Consultative Committee (VCCC) per current legislation and policies; and that DPE should appoint an experienced Chairperson to guide and oversee all parties in how to consult with each other. Veolia must provide to the new VCCC and to TADPAI draft documents for review and comment; otherwise, as is the case now, there is no auditable trail of consultation.

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Table 7: Summary of Stakeholder Consultation

Stakeholder	Form of Consultation	Issues raised
NSW EPA	Project brief was provided to EPA and DPE during meetings at DPE offices on 14 October 2016 and 20 June 2017.	Comments received which are reflected in the SEARs have been fully addressed.
DPI Fisheries	Project brief was provided on 18/07/2017.	Advised to consider any impacts on natural drainage water ways.
DPI Agriculture	Project brief was provided on 18/07/2017.	No issues were raised.
DEE	Project brief was provided in correspondence dated 23/03/2018	DEE advised that the SRF material from the MBT facility would not be considered hazardous waste and therefore does not require a hazardous waste permit for its export
Rural Fire Services and/or Fire and Rescue NSW	Project brief provided by phone on 18/07/2017.	Advised to consider if the site is considered as Bush Fire prone area.
Roads and Maritime Services (RMS)	Project brief was provided via telephone (12/07/2017) and emails (14/07/2017).	No issues were raised. RMS advised it will review the application during the exhibition phase.
Water NSW	Project brief was provided via telephone 4/07/2017.	No issues were raised.
South East Local Land Services	Project brief was provided via email on 18/07/2017.	No feedback received.
Goulburn-Mulwaree Council	Project brief was provided via telephone 11/07/2017.	Initial comments included to keep the local community informed about the project.
Palerang Council	Project brief was provided via telephone (11/07/2017) and emails (14/07/2017).	No feedback received.
The surrounding landowners and occupiers that are likely to be impacted by the proposal	Project brief was provided during the Community Liaison Committee meeting on 7 July 2017, 16 August 2017 and 15 November 2017	No feedback received.

Source: Veolia states in its Submission '**Modification to enable the construction and operation of a Solid Recovered Fuel (SRF) processing area within the Woodlawn Eco Precinct**' dated July 2018 (page 35):

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Resolution of the Community's odour concerns

Putrid odours continue to be emitted from the Woodlawn Eco Precinct, and despite best efforts by Veolia to eliminate the odours, all efforts have come to naught. While some Community members continue to lodge complaints to the Environmental Protection Agency (EPA) and directly with Veolia; many people have given up on the reporting of odours because nothing seems to be done to resolve this matter.

There is considerable discontent within the Tarago Community with regard to the odours coming from the Woodlawn Eco Precinct, and some residents now believe it is time for some form of legal Class action. TADPAI is now trying to negotiate with Veolia for a once-off compensation package for affected residents, this is proving challenging and progress is slow.

It flies in the face of community concerns to read that Veolia contracted The Odour Unit to conduct a qualitative desktop assessment, based on some conceptual modelling using the technical drawings and specifications provided by Veolia. And that in conclusion, an actual assessment of odour emissions could not be determined, and that the proposed method to abate emissions has to be validated after commission.

This approach is not an appropriate response to Community concerns - it is an improper position being taken by Veolia and The Odour Unit. At this time, there should be no Modification Requests being considered that involve the additional production of odours, no matter how small or minor.

It is requested that the Independent Planning Commission place on hold this, and any and all other new licence or Modification Request with respect to the waste operations at Woodlawn, pending Veolia and the Tarago Community reaching an appropriate compensation package for the ongoing odour emissions.

Water Management

Notwithstanding, the Commonwealth Department of Environment and Energy (DEE) assessment that the SRF product is likely to be 'non-hazardous' (Appendix D); DEE response goes on to say:

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“Please also be aware that, if the Material is to be shipped to an overseas facility for processing, you will need to obtain the necessary import approvals from the relevant Competent Authority, if required, and comply with the relevant transport and packaging requirements”.

The Final Report states on page 48 that *“There will be no container or vehicle wash down activity at the SRF Processing area. Containers will continue to be washed at Woodlawn Bioreactor facility if required as part of the existing container maintenance schedule”.*

As an experienced logistician, it is my observation, that it is not possible to reuse containers delivering municipal waste to Woodlawn to ship SRF product overseas without first washing the containers, and having them certified waste free. And that this level of washing will involve a higher level of scrutiny than that offered at the Woodlawn Bioreactor wash down point.

Veolia needs to present to the Independent Planning Commission, the various standards that it will need to comply with to ship SRF product overseas, including the shipping agents requirements and thence what facilities are required on-site to meet these standards and requirements. Without which, Veolia's Modification Requests Submission is incomplete.

Carbon Accounting (Section 4.3)

Carbon Accounting should be based on the end to end process, anything short thereof will generate the wrong findings and lead to erroneous decisions, as I suspect is possibly the case here.

The inputs to Carbon Accounting for the SRF are as follows:

- the CO²-e value 50,000 tpa residual waste from the MBT facility (MBT_{WCO2});
- the CO²-e value of the diesel consumed by the trucks moving the MBT waste to the Bioreactor (MBT_{WDB});
- the CO²-e value of the diesel and/or electricity used to move the MBT waste to the SRF facility (MBT_{WDSRF});
- the CO²-e value of the electricity consumed producing the SRF (SRF_{ELEC});
- the CO²-e value of the 12,600 SRF waste transported to the Bioreactor (SRF_{WCO2});
- the CO²-e value of the diesel consumed by the trucks moving the SRF product to Crisps Creek IMF and returning (SRF_{PDV});
- the CO²-e value of the diesel consumed by the trucks moving the SRF waste to the Bioreactor (SRF_{WDB});

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- the CO²-e value of the diesel consumed by the train moving the SRF to Sydney (SRF_{PDT});
- the CO²-e value of the diesel / electricity offloading the SRF from the train and onloading to the ships(SRF_{PDOFF})¹; and
- the value of the 37,400 tpa SRF product represented in terms of electricity generated/consumed CO²-e value (SRF_{PCO2}).

To calculate the Carbon footprint for producing the SRF product and transporting it to its destination of end use, and use thereof, the following formula should be used, based on the above inputs:

$(MBT_{WDSRF} + SRF_{ELEC} + SRF_{PDV} + SRF_{PDT} + SRF_{PDOFF} + SRF_{PCO2}) + (SRF_{WCO2} + SRF_{WDB}) < (MBT_{WCO2} + MBT_{WDB})$
Noting of course that the SRF product consists of SRF_{PCO2}, SRF electricity output, and SRF residual waste (which should be much smaller in volume than the SRF product and have a much lower CO²-e footprint value).

In terms of Carbon Accounting, the carbon cost for processing the MBT waste into SRF product, consumption and residual waste should be less than the carbon cost of moving the MBT waste to and landfilling it in the Bioreactor. If not, then options should be looked at for producing and consuming SRF product onsite, noting that the SRF process is a calorific enrichment process, where the product could be blended with other waste streams to produce energy or energy fuels on site and further reduce waste (by volume and CO²-e footprint value) being landfilled, and which might be more profitable for Veolia.

I believe that irrespective of Government fumbblings around Carbon Accounting, that the Independent Planning Commission, its peer organisations and Government Departments and Agencies should all be pushing for best practice Carbon Accounting and management, in all major projects, all the time. Each will have a different Carbon formula for calculating viability, but nonetheless, the only way to move forward on reducing our carbon footprint is through proactive upfront analysis, upon which informed decisions can be made.

Conclusion

The objective of this submission is to point out the imperative for the NSW Government, its Departments and Agencies, to acknowledge their responsibilities and obligations, and to act on them proactively rather than retrospectively. And to seek improvements in the Governments and Private Industries' consultation with local communities, and specifically for Veolia with the Tarago Community.

¹ Whilst it would be good to calculate the ship's CO²-e values, just not practical to do so.

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Appendix 1

SYDNEY MORNING HERALD ARTICLE: Culvert Tragedy: Coroner Blames Council

By Malcolm Brown, 19 September 2008 — 1:28am

A coroner today placed the blame for a culvert collapse, which killed five members of a family, on Gosford City Council.

Adam Holt, 30, his de facto wife Roslyn Bragg, 29, their children Madison, 3, and Jasmine, 2, together with a nephew, Travis Bragg, 9, [were killed when the road collapsed](#) in heavy rain at Somersby, 75 kilometres north of Sydney, on June 8 last year.

Outside the court, the solicitor acting for the Holt and Bragg families, Patrick Heath, said Gosford City Council and the Roads and Traffic Authority (RTA) should review their practices to prevent another tragedy.

He said the families would like to thank those who risked their lives trying to save the parents and children.

Mr Holt's father, Ken Holt, said it had to be noted that his son, who was driving the car at the time, had done his best to save his family and had died trying to do that.

Coroner Paul MacMahon said the council had assumed responsibility for the road at Somersby on the NSW Central Coast in 1995 and in 12 years had not fulfilled its obligations.

He said that there were warning signs in 2002 and 2004 when the council received an estimate and a quote for the restoration of the culvert at Piles Creek and it did not take any action.

"The Gosford City Council systems were so poor and ineffective that it lost or ignored the estimate and quote it obtained in 2002 and 2004 and its management systems did not identify the fact that they had been lost or ignored," he said.

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Even though the council knew that the pavement above Piles Creek was subsiding, no risk analysis was undertaken nor regular inspection instituted to ensure the public and the assets of the council were not put in jeopardy, he said.

"Gosford City Council cannot have it both ways. It is either a roads authority or it is not," he said. "As a roads authority it is expected to conduct itself in a competent and professional manner. The investigation of the collapse of the culvert and the road above Piles Creek shows that it did not.

"The problem appears to be that those responsible for engineering services simply did not understand the limitations of their competence and senior management of council had not developed systems that would identify such limitations," he said.

Departing from his written findings, Mr MacMahon addressed the victims' families, saying: "I can only say that it is quite clear that their deaths were both unfortunate and completely unnecessary.

"If appropriate service had been provided by Gosford City Council they would not have occurred."

He called on Local Government Minister Barbara Perry to establish an independent inquiry into the council's operations.

The coroner absolved both the RTA and Mr Holt, who was behind the wheel of the car when it disappeared into the hole, of any blame.

Mr McMahon found that Mr Holt's reaction time had been affected by alcohol and marijuana. But he was satisfied that the drugs played no relevant part in his death or that of his family.

On the day the family died, it was raining heavily and ahead of them water flooding down Piles Creek had flowed out from the perforated galvanised iron pipes, further eroding fill beneath the road as it had been doing for years.

This time the embankment gave way, creating a hole 10 metres wide and 40 metres deep, visible but not obvious for what it was for approaching cars. One driver told the coroner's inquest he thought the black line he saw in front of him was "a python across the road".

Several drivers did stop, and one driver, Dale Sharp, put his hazard lights on on the southern side and flagged down other road users approaching him. But nobody did it on the northern

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side, and one driver who arrived and saw what it was was travelling back when Mr Holt passed him.

According to the evidence, Mr Holt had been drinking and had consumed some marijuana, a combination that produced an adverse effect greater than the total effects of alcohol and marijuana when taken separately - enough to significantly impair his driving ability.

Mr Holt saw the culvert and applied his brakes, but it was too late. With the car sinking into the water, he got out of it and appealed to people at the top for help. The parents unbuckled their children's restraints and tried to save them. But before anything could be done all five were swept from the car and drowned.

The Department of Main Roads had issued a circular in 1972 stressing the need to protect corrugated iron pipes from the scouring effect of water and grit which eroded the rubber coating and exposed the metal. A prescribed solution was to line the inside of the lower part of the pipes with concrete.

The Old Pacific Highway section at Somersby was built in 1981 to 1983 to allow the F3 Freeway to follow its prescribed route. But the Old Pacific Highway's galvanised iron pipes at Piles Creek remained unlined and subject to the scouring effect of the water.

A letter from the Roads and Traffic Authority's senior scientific officer, Peter Searl, in 1984 highlighted the problem when a section of the F5 Freeway at Bargo, south of Sydney collapsed within six months of construction. He recommended that concrete lining be added to the pipes to prevent that from happening.

In 1986, an RTA divisional engineer recommended concrete lining for galvanised iron pipes under the F3 freeway and that was done. But nothing had been done to the Somersby section of the Old Pacific Highway, though there is evidence that one RTA engineer, John Francis, might have taken the matter up with the Newcastle office of the RTA.

The section of the highway was handed over to Gosford City Council in 1995. According to evidence before the coroner, the Piles Creek pipes did perforate, water got into the fill and washed it away. The road started slumping over the creek in 2000 and again in 2002. Residents noticed it over years, including one driver, Lee-Anne Italiano, who described it as a "reverse speed hump".

A Gosford City Council's Assets Engineer, Geoffrey (Ken) Plowman, did look at it and might have said he would have to get funding from the RTA under its Storm Damage Program to carry

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out necessary remedial work, though he could not remember it. All that ended up being done was a road resurface to even it out.

On March 17, 2004, when the road slumped again, there was an alarm in the council, in which emails were exchanged and Mr Plowman recommended that quotes be obtained for the work.

Tyco Water Services had been contacted and provided a quote that it could do the work for \$277,000, or on another approach \$290,000, but the paperwork got "lost" in the council's system and nothing was done.

Luke Reynolds, who was a Gosford City Council engineer, said he had seen how the galvanised iron pipes were perforated but said he was daunted by the cost of carrying out repairs, given that the entire road maintenance budget for Gosford City Council was only \$500,000 a year.

As late as September 2005, the RTA was circulating its own offices about the dangers of perforation of corrugated iron pipes, when there had been failures related to that in Queensland and at Bega. But still the council did nothing.

- with AAP