

To Lynley Hutton

Cc

From Rob. Merrifield

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Subject Investment Monitoring Intelligence Review

Objective

To identify findings from technical reviews, theme audits, procedural reviews, and any other available sources that are pertinent to the work of the Road Maintenance Task Force.

Methodology

1. Conduct a document search of reports written in the last cycle of procedural audits and technical reviews (i.e. since 2005).
2. Interview Investment Monitoring group staff to include aspects of road maintenance and its management pertinent to the work of the Road Maintenance Task Force and that have not been reported on in available Investment Monitoring Group reports.
3. Assess any other available information and report as appropriate.
4. Provide a written report setting out all findings for the use of the Road Maintenance Task Force.

Searches have been made of documents as follows:

- Individual procedural audit and technical review reports written in the last cycle of procedural audits and technical reviews (i.e. since 2005);
- Periodic summaries of reviews and audits completed in this period; and
- Theme audits completed over the period since 2005.

Individual members of the Investment Monitoring Group were interviewed separately and their consensus conclusions summarised.

Summaries of Findings and Observations Based on Audits and Reviews

Table 1 is a master summary grouping issues identified from a range of Investment Monitoring Group reports as detailed in Tables 3-6.

Table 1: Summary of Issues identified:

		Tables 3 and 4: Audit and Technical Review Reports	Table 5: Investment Monitoring Group Staff Consensus	Table 6: Theme Audit Reports
1	NZTA policy and practice	Funding constraints.	Gaps in NZTA policy and practice.	
2	Industry-wide issues		Deficiencies in the industry at various levels.	
3	AO policies and their influences on practice or achievements	<p>Funding constraints.</p> <p>Constrained AO staffing levels.</p> <p>AO policies that do not align with those of NZTA.</p> <p>Poor management, either at asset manager level or higher.</p> <p>Low priority given to safety issues</p>	AOs' policies.	
4	AO administrative practice	Lack of awareness, which may result from overloading or from lack of knowledge.		<p>Poor management practice within the industry at asset manager level or below .</p> <p>Deficient knowledge in particular fields (e.g. guardrails, street lighting).</p> <p>Hangovers from poor past practice or of obsolete infrastructure.</p>
5	RAMM issues		Practitioners' insufficient appreciation of RAMM and its value as a tool.	
6	Road safety issues		Low priority given to safety issues	

The last three summary reports submitted to senior management have been reviewed for this study, covering reports on individual approved organisations as follows:

Table 2: Summary Reports Forwarded to Senior Management:

Date of Summary Report	Working Period (from/to)	No. of Procedural Audits	No. of Technical Reviews	Total
25 February, 2010	1 July, 2009 31 Dec., 2009	11	6	17
7 April, 2011	1 January, 2010 30 June, 2010	7	5	12
	1 July, 2010 30 June, 2011	23	20	43
Totals:		41	31	72

Table 3 summarises those issues identified in the three summary reports that were considered to be significant enough to present a risk to NZTA gaining the best value from its investments in approved organisations' roading programmes.

Of the 72 reports covered by the summary reports, a total of 25 procedural audits and 31 technical reviews (a total of 78% of the reports considered) did not identify any such risk. A number of the procedural audits identified administrative errors that I conclude do not impinge on the issues considered in Table 3, below. In some cases (e.g. additional roads ex-forestry), the same issue has been identified independently by procedural auditors and by technical reviewers.

Table 3: Summary of Issues identified to NZTA Senior Management:

Issue Identified in Summaries	Identified by:		Total Times Identified
	Procedural Audit	Technical Review	
Insufficient funding of ageing assets/renewals.		4	4
Insufficient funding of traffic services.		1	1
Council's ability to fund LTP uncertain.		1	1
Unmanaged decline in road condition.		1	1
Additional roads ex-forestry create need for funding increment, not fit for purpose as a public road.	1	1	2
Inadequate management resources.		2	2
Low smart buyer capability.		1	1
Inefficient use of available staff.		1	1
High cost structure/pressure to lower levels of service.		1	1
Council policy of "like for like" renewals without regard to need or cost.		1	1
Resource consent procedures inhibit timely maintenance work.		1	1

Limited in-house understanding of RAMM.		1	1
RAMM under-used.		1	1
Safety processes and management of these inadequate.	6	3	9
Low priority given to safety features.		1	1
Road drainage needs more attention.		2	2
Poor quality pavement repairs.		1	1
Poor corridor management and quality of work.		1	1
Roads and design cross-sections too narrow for traffic.		1	1
Seal extensions not built to recognised standards.		1	1
No systematic structures inspections system.		1	1
Totals:	7	29	36

Findings of Audits and Reviews

Table 4 summarises issues identified in individual audits or reviews that have relevance to road maintenance issues and that were identified in reports findings or were subject of recommendations to auditee AOs. This review has surveyed 71 procedural audit reports, of which 40 (56%) identified no issue relevant to this survey. The equivalent numbers for technical reviews are: 63 reports surveyed; 10 (19%) with no relevant findings.

Issues 1-4 inclusive relate to staffing levels and the loads on asset managers. A theme audit of maintenance management processes in 2001 found a threshold of 2.7 asset management staff/1,000 kilometres of network were needed for AOs to be able to adequately manage their networks. No current information is available on asset management staffing levels, but it is likely that AOs identified in Table 4 are pushing their limits. Lack of support from other sections of AO's organisations can exacerbate the situation (Christchurch). AOs may rely on professional services business units or consultants to supplement the asset manager. Consultants do not always have an understanding of the ratepayer-council relationship, may bring risk-averse attitudes to their task, may adopt inappropriate standards excessive for the location, or may be used too sparingly for cost reasons.

Issues 5 and 6 bring in a political element, when councillors support complainants objecting to council policies or to good practice (Waitaki, and possibly Western Bay of Plenty).

Acceptance of no longer appropriate past programme levels or a lack of response to changing needs of the network are identified at issues 7-11.

Issues 12-17 reflect lack of recognition of a need for better management of the relevant assets.

At issue 18, Rodney District and its predecessor County have resisted advice contained in successive technical review reports to change its design standards. One influence in this resistance may be a desire to reduce cost in order to achieve viable benefit-cost ratios for capital works projects. Perverse effects of this policy include that pavement life is reduced because of the lack of side support to the material under vehicle wheelpaths.

Issue 19, significant faults in AO's RAMM databases, reflect a lack of appreciation of the value of RAMM as a management tool. This is likely to lead to sub-optimal decision-making when deciding on annual and longer term management plans.

Minor faults in RAMM databases (issue 20), appear to be a result of a lack of understanding or of overloading of relevant staff. This can be linked in to issues 1-4, commented on above.

Table 4: Issues identified in Individual Reports:

	Issues Identified in Reports	Approved Organisation	Explanation
1	Insufficient or overloaded asset management staff	Ashburton, Central Otago, Far North, Gore, Hauraki, Kaipara, Masterton	Both procedural audits and technical reviews identified AOs where staffing levels were considered insufficient to be able to effectively plan work programmes and to manage operations on the networks. This is mainly a consequence of tight budgets or, less frequently, of difficulty in recruiting suitable people for the location. Lack of succession planning was also commented on by reviewers.
2	Asset management plan (AMP) needs to be reviewed.	Christchurch Horowhenua Kaipara South Taranaki	AMP is out of date, does not include former Banks Peninsula area. Rewrite recognised as an urgent need but being avoided. Streets are being maintained by renewal, an unsustainable process. Insufficient focus on safety issues. AMP inconsistent with funding levels and does not set out responsibilities chain. Asset manager has insufficient technical support from consultant and network condition is declining out of control. RAMM database is in poor condition and is not used in programme preparation. The work programme should be reviewed, particularly corridor maintenance. A deficiency database should be set up for the planning of Minor Works projects.
3	Review management policies and/or strategies	Christchurch Far North Otorohanga	See 2 above. Network was deteriorating. Present state of drainage and bridges is a significant risk in a District liable to severe weather. Basic maintenance need to improve, plus a programme of preventive maintenance. Very slow response when bridge repair needs identified. AMP does not relate to LTCCP. Levels of service are very subjective and

		South Wairarapa	<p>should be reviewed to be more objective. RAMM database is deficient.</p> <p>Roading and Planning sections of Council operate in isolation from each other.</p> <p>Maintenance programme is driven by [annual] budget rather than needs.</p> <p>Long term deterioration is occurring in pavements and bridges, which is a significant risk to Council. Bridges inspections procedures deficient.</p> <p>RAMM not well used.</p>
4	Improve use of available processes and tools	Gisborne Whangarei	<p>Key items in AMP are not prioritised or resourced. Intervention on highest priority items not timely, e.g. implement Improvement Plan written into AMP.</p> <p>A formal cyclic inspections plan for bridges and structures is needed.</p> <p>Council is too heavily reliant on professional services consultant.</p> <p>In a performance based contract accountabilities are poorly specified and monitoring of work completed insufficient.</p>
5	Move from operational focus to strategic management	Waitaki	<p>Council needs to change from reactive management to being proactive.</p> <p>The public needs to be educated about appropriate standards and techniques.</p> <p>(Note: this is closely related to the point made immediately below in this table.)</p>
6	Improve implementation, monitoring, enforcement of Council policies intended to protect the road assets	Waitaki Buller, Western Bay of Plenty Western Bay of Plenty Wellington	<p>Council has good policies but Council is sympathetic to land occupiers with the result that the policies are not enforced.</p> <p>Rural subdivisions lead to demands for road improvements - widening, sealing, etc - that are not matched to development Impact fees, or controlled at the planning stage.</p> <p>Road openings policy needs to be upgraded to meet NZUAG code of practice.</p> <p>Road openings policy needs to be enforced.</p>
7	Ensure maintenance programme is sufficient for needs	Auckland Buller Hastings	<p>Parts of the network (especially Gulf islands) being allowed to deteriorate through insufficient work. Drainage and pavements under-funded in areas concerned.</p> <p>Work of Planning and Design teams needs to be coordinated.</p> <p>Sealed surfacings are being managed for longer lives, increasing risks of any repairs/rehab. deferrals.</p> <p>Insufficient allowances for inflation are liable to result in maintenance being deferred,</p>

		<p>Kawerau</p> <p>Taupo</p> <p>Wairoa</p> <p>Whangarei</p>	<p>leading to continuing decline of road condition.</p> <p>Pavement condition OK at present but signs of coming rehab. need. Review funding levels at next LTCCP review to ensure changing maintenance needs are met.</p> <p>Change of land use from forestry to dairy is changing demands on network. Council needs to be aware and ready to meet higher maintenance needs.</p> <p>Needs of structures are not being met. Council has "ability to pay" issues.</p> <p>Funding of flood damage repairs has limited funding for maintenance, especially urban. Backlogs of deferred work need to be identified and funded.</p>
8	Ensure maintenance programme is sufficient for needs	<p>Auckland, Buller, Central Hawkes Bay, Hastings, Kawerau,</p> <p>Central Otago</p> <p>Chatham Islands</p> <p>State Highways</p> <p>Ruapehu</p> <p>South Taranaki</p> <p>Timaru, Waimakariri</p>	<p>See comments on the need for public education at 5 above. Resealing, and to a lesser extent, rehabilitation, needs are either mis-funded (Auckland, Central Hawkes Bay) or an increased need level is foreseeable.</p> <p>Greater input is needed into pre-reseal repairs, resealing, and renewing unsealed roads.</p> <p>Resealing and bridges maintenance needs not being met.</p> <p>Janice Brass has identified in at least West Coast and Canterbury Regions that there is a backlog of resealing needs and that this is going to increase.</p> <p>Resealing and rehabilitation of pavements, renewal of worn out traffic signs all need increased investment.</p> <p>Reseals, pavement rehabilitation, and bridge renewals needs are not being fully met. Resealing needs increasing.</p>
9	Reassess the levels of service being achieved	Rangitikei	<p>Urban roughness, often associated with service boxes or road openings, has been increasing.</p> <p>Corridor issues include poor standards of provision and/or maintenance of delineation, traffic signs, hazard or bridge end markers.</p>
10	Review unsealed roads maintenance strategy	<p>Marlborough</p> <p>Waitaki</p>	<p>Council needed to either enforce the maintenance contract specification or to renew worn out pavements.</p> <p>See comment at items 5 & 6 above.</p>
11	Improve management of bridges and structures	<p>Far North</p> <p>South Wairarapa</p>	<p>See item 3 above. There is a backlog of maintenance needs.</p> <p>See item 3 above. Long term deterioration is</p>

			occurring in bridges, which are a significant risk to Council. Bridges inspections procedures are deficient.
12	Establish systematic cyclic inspections and repairs procedures for structures	Far North Gisborne Gore Hauraki Papakura Selwyn South Wairarapa	Lack of these systems appears more likely in AOs that have under-resourced asset management, or that have less satisfactory management.
13	Include retaining walls and guardrails into structural inspections procedures	Auckland Far North Hauraki Hurunui Kaikoura Kapiti Coast Manukau Queenstown-Lakes Rangitikei South Taranaki Southland Stratford Whanganui	Recommendations seeking this were a consequence of a lack of awareness on the part of asset managers.
14	Improve roadside drainage	Auckland Central Hawkes Bay Far North Horowhenua Marlborough Southland Tasman	Gulf Islands displayed water-related faults and poor control of side culverts and driveways. Increase frequency of cyclic maintenance. Insufficient work has been leading to storm damage problems. Standard achieved should be consistent and satisfactory. Review policies to safeguard outfalls. Stormwater drainage at rural townships. Shoulders and drainage maintenance has been insufficient.
15	Review safety management, including adequacy of budget	Gore Kaipara Rangitikei Selwyn Whakatane	Raise a low standard of provision of traffic services. General lack of awareness including of temporary traffic management, safety auditing of projects, RISA audit, safety management system. Respond to poor conspicuity of rural intersections. Delineation and safety of traffic at structures needs more attention.
16	Upgrade rural delineation to RTS 5 and/or traffic signs	Ashburton Central Hawkes Bay Horowhenua Hurunui	Brought about by lack of awareness and "fossilised" funding allocations.

		Kapiti Coast Masterton Rangitikei South Taranaki Waitakere Waitomo Wellington Whakatane	
17	Improve control of use of road verges and/or of work on roads, all by others	Central Hawkes Bay Rangitikei Ruapehu Southland Taranua Waitaki Waitomo	Manage corridor with awareness of problems arising from dairy farming. Educate public on need to control use of verges by Council. Require rebuilt fences to be as close to true boundary as practicable. Close fencing of carriageways and grazing of verges need better control. This links to Council's permissive attitudes referred to at items 5, 6, 10 above. Fences too close to the carriageway and gated roads reflect old, permissive attitudes.
18	Improve carriageway geometric design standards	Gisborne Rodney	Seal extensions are not always built to council's standards for width. Rural design cross-section provides minimal shoulders, which adversely affects pavement life from lack of side support under wheel paths.
19	Improve the quality of data in the RAMM database (significant issues)	Gisborne, Horowhenua, Kapiti Coast, Manukau, Marlborough, Napier, Nelson, North Shore, Otorohanga, Papakura, QLDC, South Wairarapa, Taranua, Wairoa, Waitaki, Wellington, Western BoP, Whangarei	The usual situation is that council is paying to maintain its RAMM system and database, but either the data is inadequately maintained, or is under-used by asset managers and others. Deficiencies in the database include that: Quality checks are not carried out, Default values of projected surfacing life have not been changed in light of experience, Resurfacing data is added spasmodically or incompletely, Maintenance cost data is not entered.
20	Improve the quality of data in the RAMM database (minor issues)	Central Hawkes Bay, Franklin, Grey, Hutt, Kawerau, Mackenzie, Opotiki, Rangitikei, South Taranaki, Tasman, Taupo, Tauranga, Timaru, Upper Hutt, Waitakere, Waipa	Usual defects in the databases of these include: Data not field validated, Default values of projected surfacing life have not been changed in light of experience, Minor errors not corrected.

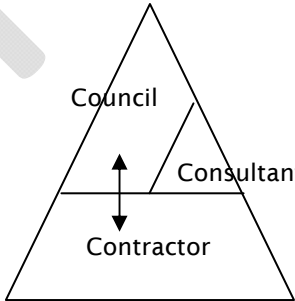
Issues Identified by Investment Monitoring Group: a Consensus View

Table 5 is a grouped summary of points identified by NZTA procedural auditors and technical reviewers working within Investment Monitoring Group. No judgement has been made on the points listed except to group them according to the major group of issues and to distinguish between individual primary and secondary points.

Table 5: Issues Identified During Interviews with NZTA Auditors:

	Grouping of Issues	Issue Identified by NZTA Auditors	Contributing Reasons and Explanation
1	NZTA policy and practice.	<p>NZTA does not define target levels of service objectives.</p> <p>On-costs: NZTA %ages are arbitrary, what are the real costs?</p> <p>Regions are weak on pavements and structures management knowledge.</p> <p>There is insufficient feedback between the rest of NZTA (NO and Regions) and Investment Monitoring Group.</p> <p>Technical auditors are not getting out in the field enough.</p>	<p>There are no accepted norms and there is a lack of consistency in practice. What are the values and costs of various mechanisms of management? What are the values and costs of various mechanisms of management?</p> <p>These points lead to a reduced two-way flow of information, increasing the risks to NZTA of sub-optimal investment.</p>
2	Industry-wide issues.	<p>Succession planning for the industry as a whole.</p> <p>Stable organisations with staff who have long experience in the position or area usually produce better results.</p> <p>Consultants still produce designs that do not reflect local circumstances</p> <p>Pressures on budgets, with maintenance being squeezed. Prioritisation in spending on road maintenance and projects;</p>	<p>Need for people with best ability and knowledge;</p> <p>Need for people with relevant understanding, practical as well as theoretical;</p> <p>Impending loss of capable and experienced people.</p> <p>e.g., low traffic volumes, low speed environments, affordability.</p> <p>What are realistic target costs? When analysing we traditionally have considered \$/Km, what does c/VKT tell us when benchmarking? What relationships can be seen,</p>

		<p>Contractor practice/quality. Do these issues arise from contractors playing the risk game or are specifications unnecessarily demanding?</p> <p>Design work to fit actual needs.</p>	<p>including with HNO? How does this reflect risks to safety and \$? What changes are there in safety achievements? Innovations come from financial constraints. Not a reason to drive funding down!</p> <p>New seals not rolled sufficiently combined with insufficient traffic control results in chips outside wheelpaths not being rolled in. Sealing outside temperature ranges specified. Omission of tack coat under asphaltic concrete. Poor quality seal repairs in advance of overlays with fallback to heavier rehabilitation</p> <p>e.g. Gore DC; rehabilitate loaded lane only and reseal whole width; Forest industry haul roads: reseal worn wheelpaths only.</p>
3	<p>AO policies and their influences on practice or achievements.</p>	<p>Asset manager function separated from operations, having no authority, and a lack of accountability back from operations. Insufficient resources to be a smart buyer.</p> <p>Pricing driving down quality of work.</p> <p>Distractions: urban/rural issues, political intrusions.</p> <p>Asset management plans need teeth: opportunities not being realised because of arbitrary cuts at times of Council annual budget setting.</p> <p>Councils obtaining assets for aesthetic or other reasons that</p>	<p>Too many single practitioner asset managers working in isolation unsupported by organisation or structures.</p> <p>Contractors cut corners, reflecting their tight pricing. Price-quality contracts can be an answer that is little used in local government.</p> <p>Councils not committed to life cycle management of assets: still think in terms of annual budget changes instead of LTCCP. Slash and burn attitudes at rates setting time.</p> <p>e.g.: CBD streetscapes; subdivisions designed to sell; streetlighting.</p>

		<p>have higher whole of life costs.</p> <p>Scope for savings and better quality from shared contracts not being picked up</p> <p>The use of multiple small contracts for maintenance is likely to drive high professional services costs.</p> <p>Linking contract areas to Ward boundaries, with increased overheads costs for multiple smaller contracts.</p> <p>Alliance contracting is squeezing out consultants.</p>	<p>e.g. shared resealing contracts; combined LA network/SH network management</p> <p>Council policies may be driven by a desire to ensure viability of smaller contracting firms and hence to be at a variance from the objectives of NZTA.</p> <p>See item above.</p> <p>Influences include pressure on costs and dissatisfaction at some consultants' performance.</p>
4	AO administrative practice.	<p>Ability to be a smart buyer of services, gearing expenditure to needs and circumstances. getting optimal programme or projects.</p> <p>Tolerance of poor data [in RAMM] leading to poor decision-making.</p> <p>Lack of monitoring which is likely to lead to unmanaged decline in levels of service, or to excessive standards.</p> <p>Procurement choices and models can influence outcomes for good or for ill.</p> <p>Where alliance contracts are in place, capital works are being negotiated into the alliance contract: should this be encouraged or not?</p> <p>Hutt CC has been using external auditors to audit contracts, superposed over normal supervisory procedures as a control on quality.</p>	<p>The critical relationship for the best outcome is the relationship between AO and maintenance contractor.</p>  <p>Short term savings may be achieved; how well is quality managed?</p>

		<p>Central Otago DC has an office based data analysis system that has proven effective in controlling the maintenance of unsealed pavements.</p> <p>Planning documents are not aligned with each other or with what is being done.</p> <p>Bridges ages vs remaining service lives; lack of follow up on repairs recommendations from inspections.</p> <p>Need for better communications with utilities.</p> <p>Try to extend service lives further.</p> <p>Rehabilitation projects that do not achieve intended lives.</p> <p>Bringing professional services supply back in-house</p> <p>Entrenched thinking, "We've always done it this way"</p> <p>Expenditure driven by old "spend it or lose it" attitudes.</p>	<p>Reinstatement standards, Record-keeping of who did what when, Programmes not being shared, partly for reasons of commercial competition.</p> <p>Too many RAMM databases still have default values that have never been updated in light of actual experience.</p> <p>Poor geometric design with narrow formations, absence of shoulders, steep batters. Completed and sealed too late in year. Poor ride quality on completed work.</p> <p>..... because of sense of ownership issues, consultants' attitudes, policies.</p> <p>Relates to overs and unders at the ends of 3-year NLTP planning periods.</p>
5	RAMM issues.	Smart buying of RAMM services: what is spent, gained, used?	<p>Is RAMM appreciated or valued?</p> <p>How do expectations match what is sought from and delivered by suppliers? Service agreements need to spell this out.</p> <p>Consultants lack an understanding of clients' needs.</p>

		Do councils analyse and use the data preserved in RAMM?	<p>RAMM data quality as a symptom of underlying issues: Insufficient time to think, Insufficient time to understand network, Resourcing issues.</p> <p>Risk and cost inter-related, different levels of expectations.</p> <p>Or do they see it as a reporting tool for NZTA only?</p>
6	Road safety issues.	<p>Lack of priority, attention given to traffic services.</p> <p>Safety issues appear to be set aside/ignored/under-valued increasingly.</p> <p>Changes driven by HNO can be for safety reasons with lower regard to cost, affordability.</p>	<p>Lack of recognition of provisions and their effects on road users.</p> <p>Reflects pressure on budgets.</p>

Findings of Theme Audits

Ten theme audit reports completed since 2004 were reviewed for findings or recommendations pertinent to this survey. Of these, five had some content relevant to this present survey:

Table 6: Issues Identified from Theme Audits:

	Theme Audit	Issue Identified by NZTA Auditors	Contributing Reasons and Explanation
1	Flood Damage in 2004 (2005)	Need to minimise effects of major flood damage repairs on routine maintenance for the rest of the network.	Better achieved by some AOs than by others. Manawatu region AOs faced with major damage co-ordinated their responses and specified that restoration work use specifically imported resources to avoid disrupting normal maintenance of unaffected areas.
2	Emergency Reinstatement (2011)	Preventive Maintenance is not being used to forestall Flood Damage.	Inconsistent practice between authorities allied to evidence of poor drainage maintenance and a low uptake of Preventive Maintenance funding.

3	Guardrails & Terminals (2006)	<p>A general lack of specialist expertise.</p> <p>Cyclic inspections not identifying defects and deficiencies for remedial work.</p> <p>Available funding in Minor Works allocations too constrained.</p>	<p>An ongoing training need identified at engineer and workforce levels. Industry training is available but wasn't being availed of. Supervisors' lack of knowledge was leading to construction errors and, in one authority, building installations that were dangerous.</p> <p>43% of defects identified were easily fixable under routine maintenance. Half of these were critical to the effectiveness of the installation.</p> <p>Pressure on available funds is making this worse.</p>
4	Street Lighting (2007)	<p>Energy tariff structures may be a disincentive to improve energy efficiency.</p> <p>Network companies reluctant to enter into agreements for the repair of cable faults.</p> <p>Some AOs have significant stocks of obsolete luminaires.</p> <p>Inventories are not as complete or as well verified as for pavements.</p>	<p>In 2007 a third of AOs were paying for energy on an annual lump sum basis.</p> <p>This can lead to excessive delays in fixing cable faults and hence outages.</p> <p>20% of luminaires were mercury vapour or fluorescent</p>
5	Pavement Management Strategies (2009)	<p>Procedural errors and gaming to justify construction FAR for rehabilitation work over base rate.</p>	<p>These has been detected during normal audits of projects justification. Not necessarily widespread.</p>

Rob. Merrifield,
Contractor.