Submission

No 9

INQUIRY INTO MANAGEMENT OF DOMESTIC WASTEWATER

Organisation: Camden Council

Name: Mr Geoff Green

Position: Manager

Date Received: 15/12/2011

JC: GG

14 December 2011

Legislative Assembly Committee on Environment and Regulation
Parliament of New South Wales
Macquarie St
SYDNEY NSW 2000

Attention: Mr Jason Arditi

Dear Jason,

RE: Inquiry into the Management of Domestic Wastewater

Please find attached submission prepared by Camden Council relating to the Inquiry into the Management of Domestic Wastewater.

Council's submission has also been forwarded electronically to the Committee.

Should you require any further information or assistance in this matter please do not hesitate to contact the undersigned on 02 4654 7752 during business hours.

Yours sincerely,

Geoff Green
MANAGER
ENVIRONMENT AND HEALTH BRANCH

Legislative Assembly
Parliament of New South Wales
Committee on Environment and Regulation

Management of
Domestic Wastewater (Inquiry)

Prepared by: Camden Council December 2011

Background

1. **This paper has been prepared as a collaborative effort by Environmental Health Officers of Camden Council having a collective professional experience in excess of 100 years in the field and in regulatory functions of local government in NSW and New Zealand.**

2. It is common to observe that about one third of operating domestic (single household) on-site systems of sewage management (OSSM) fail to pass acceptable standards and can present a relatively high risk to amenity, public health or the environment. The concerns associated with domestic OSSM and the effectiveness of relevant controls have been generally outlined in the document "Issues Paper - On-Site Sewage Management (Camden Council, August 2011)". (Refer Appendix 1)

3. Local government is charged with the responsibility for the management of OSSM within the bounds of their respective areas and within the confines of the Local Government Act and Regulations there under. In exercising its responsibilities a council must consider whether the proposed (or altered) sewage management facility and any related effluent application area will make appropriate provision for the following:

    (a) preventing the spread of disease by micro-organisms,
    (b) preventing the spread of foul odours,
    (c) preventing contamination of water,
    (d) preventing degradation of soil and vegetation,
    (e) discouraging insects and vermin,
    (f) ensuring that persons do not come into contact with untreated sewage or effluent (whether treated or not) in their ordinary activities on the premises concerned,
    (g) the re-use of resources (including nutrients, organic matter and water),

(h) the minimisation of any adverse impacts on the amenity of the land on which it is installed or constructed and other land in the vicinity of that land.(cl 29 Local Gov Regs 2005)

4. The greatest potential for significant adverse impacts from OSSM is disease transmission by direct contact or ingestion. The prevailing priorities are protection of the occupants and users of the land and the environment.

5. The focus of this inquiry is the relationship between OSSM and the protection of our food supply. There are many and diverse considerations.

   An improperly installed and/or operated OSSM at a property used for market gardening can readily contaminate commercial quantities of crops such as salad vegetables and fruit. Many such crops are consumed in a raw state. Workers directly engaged in primary production in such circumstances are also exposed to this risk.

6. Properties used for market gardening are often intensively developed and used, with crops grown in close proximity to domestic OSSM. Furthermore, proprietors of market gardens sometimes consider that effluent from the domestic wastewater stream (including sewage) has value as a fertilizer adding effluent from OSSM to the irrigation resources of the site. Many operators have little regard for the requirements to maintain buffer distances, properly maintain the overall system or the final disposal of effluent.

7. The hazards associated with wastewater management and re-use of effluent from OSSM are significantly greater than issues of amenity in a local setting. A poorly operating or un-buffered OSSM at a market garden has real potential for disease transmission causing illness amongst hundreds of people over and above the immediate occupants of the premises. Such events may well occur in a regional or even an

international setting. Some patients may not recover, or may suffer permanent disabilities

8. The responsibilities of all levels of government acting in their respective roles to protect the health of the immediate and broader community are paramount. The failure to adequately address this priority can have significant repercussions.

The Issues

a) The adequacy of safeguards to ensure food safety and to protect against the risk of localised contamination in food production areas.

9. It is clear that:

   i. The risks to food safety from exposure to wastewaters containing human wastes are well understood.

   ii. The necessity for collection, treatment and on-going monitoring of wastewater used in food production to ensure reliability of effluent quality and to guard against contamination of fresh produce.

10. It is also apparent that the bulk of the resources available for management of wastewater sources are guidelines, not regulations or standards, are not mandatory and are legally unenforceable. Furthermore, many of these guidelines specifically do not address wastewater derived from individual on-site sewage management systems servicing single households, or are so complex in their requirements as to be unworkable at that level. (Refer Appendix 2)

11. There are tens (if not hundreds) of thousands of domestic on-site wastewater management systems servicing single residential premises in the un-sewered areas of New South Wales. The performance standards applied to these systems are not as stringent as those applied to large scale centralised and de-centralised wastewater management facilities servicing reticulated sewered communities. A great many of these domestic on-site wastewater management systems operate in close proximity to food production areas.

12. A substantial resource of on-farm food safety advice is available to the horticultural sector specifically addressing the risk of using of wastewater on crops.

    A number of programs have been developed and implemented at state and national levels for use by the food industry for the control of food safety hazards e.g. HACCP (Hazard analysis and critical control points) and Freshcare - The National On-Farm Assurance Program. The resources and programs are complex, costly to implement, voluntary and are very unlikely to be taken up at the small market gardening level.

13. Field experience suggests there is minimal understanding of the risks of contaminating produce by wastewater and negligible regulation of, or obligation upon, small scale market gardeners, to implement safe food practices.

    It is not uncommon to observe:-

    - unauthorised alteration or removal of elements of on-site systems of sewage management (OSSM);
    - encroachment of crop growing areas onto effluent application areas; or
    - the direct and indirect irrigation of crops with waters contaminated or potentially contaminated by human effluent.

14. Upon becoming aware of any of the above Council Environmental Health officers often are in conflict with the land owner or occupier over the requirements for OSSM. The legislative framework provided by the Local Government Act 1993 is cumbersome, time consuming and with very poor financial incentives for people to comply and to continue to comply. Officers invariably spend large amounts of time to resolve poor practices for the occupier to revert to unacceptable practices within weeks for council leaving the site.

15. Safeguards for protection of food production areas against contamination by wastewater are not a direct responsibility of local government. Protection of food crops through the tools available to local government come indirectly from the regulation of appropriate OSSM installation and monitoring of on-going operation. The management of these systems is acknowledged as being "a particular challenge" (refer Appendix 2).

16. Inappropriate / unauthorised installation and / or operation of OSSMs are significant on-going problems for local government. They are exacerbated by laborious legislative procedures and ineffective / inefficient disincentives. (Refer part "b" - Regulation) The legislative framework does not equitably hold all market players responsible for their work. Septic tank manufactures will often supply a tank for an illegal installation and Camden Council has shown that it is exceptionally difficult, if not impossible, to successfully prosecute that sector of the industry. Similarly, plumbers and service agents shift the responsibility of their work to the owner who often has no knowledge or experience in the field.

17. The highly variable volume and quality of effluent produced by domestic OSSM and the poor controls over servicing and performance of Aerated Wastewater Treatment Systems are considerable limitations to any safeguards that may be afforded by the regulatory provisions. (Refer part "b" - Regulation)

18. There is a general condition of Council's OSSM installation consents preventing the application of domestic wastewater onto fruit and vegetable crops used for human consumption however the end use of crops and the distribution of horticultural produce within the market place are not responsibilities of local government and cannot be tracked. Should an officer become aware of such action then the officer could issue a $330 Penalty Infringement however invariably lack of awareness, poor language skills, cultural acceptance of such practices are often

cited as mitigating circumstances. Even if this action is taken councils are powerless to deal with the potentially contaminated crop.

19. On a number of occasions Camden Council has sought advice from State government bodies including Primary Industries, NSW Food Authority and NSW Health concerning the appropriate buffering of food crops from domestic wastewater application areas in order to facilitate a safeguard to crops particularly on intensively farmed small rural properties. All have been noncommittal. It has been suggested that Council should seek its own legal advice in this regard.

20. There are some 151 local government areas in NSW. Many of these have substantial un-sewered areas and experience the same problems often having to work out solutions for themselves.

21. It is understood that the NSW Food Authority has a regulatory role over some aspects of the horticultural food production industry and that powers exist under the Food Act 2003 for the Authority to ensure safeguards are in place to:

    - prevent or reduce the possibility of serious danger to public health or to mitigate the adverse consequences of a serious danger to public health, and
    - prohibit the cultivation, taking or obtaining, from a specified area, of a particular type of food. (S31).

22. It is understood that the Department of Primary Industries is an advisory body only and has no authority for regulation of horticultural food production. There is an apparent absence of regulation, measurable intervention or site presence by State organisations on most small scale farms.

23. It is not the specific intention of local government regulation in relation to OSSM to protect food for the consumer. Rather, it is to regulate the collection, treatment and appropriate disposal of wastewater on a site.

24. Inappropriate application / disposal practices can be regulated to prevent discharge of effluent other than in accordance with an Approval issued under the Local Government Act 1993 but the consequences of inappropriate application / disposal cannot be addressed. e.g.

    - wastewater may be diverted from an approved effluent application area to irrigate food crops,
    - a crop may be grown within an approved wastewater application area, or
    - an approved wastewater application area may be decommissioned and effluent seeps to the ground around a crop.

    Once aware of the breach local councils can require the appropriate disposal of all future effluent in accordance with an approval, or require the reinstatement of the effluent application area or construction of a new effluent application area <u>but it cannot direct the removal of the contaminated food from distribution. On-going monitoring and regulation is currently difficult, time consuming and often ineffectual. (refer Section C)</u>

25. Local government does have specific responsibilities and powers in relation to "food for sale" and exercises these under the provisions of the Food Act 2003 within a food premises e.g. shop or restaurant. Under these provisions food which is deemed to be "unfit" may be "seized" for the protection of the potential consumer. Substantial penalties apply and the "at risk food" is removed from distribution.

    The regulation of food safety under the provisions of the Food Act 2003 permits much greater penalties than any provisions under the Local Government Act 1993.

26. These powers of seizure do not extend to local government as a safeguard against food contamination at the point of primary production. Such powers appear to lie with the NSW Food Authority (see above). Council's concerns in this regard have been raised both informally and formally with the NSW Food Partnership State Liaison Group and the Southwest Sydney Food Working Group.

27. The management of OSSM and the provision of appropriate safe guards in relation to protection of fresh produce would be well supported by the provision of well developed standards for separation of food crops from OSSM land application areas. The expertise for such standards does not lie within local government.

28. Council is not aware of any procedure currently in place for the use of "seizure" powers, by any authority, in relation to primary production as a safeguard to ensure food safety, or of any system for the notification, or removal of contaminated or potentially contaminated crops from distribution in the marketplace.

29. The extent and implications of breaches of sound OSSM affecting food supply radiate well beyond the boundaries and authority of local government and must be managed by State authorities.

    It is clearly necessary to determine who the appropriate authority responsible for the protection of supply of food from primary industry is (are), to define their accountabilities and empower the appropriate authority(s) through effective resourcing and regulatory powers for the safety of the food chain.

b) The appropriateness of current regulatory arrangements in relation to the management of domestic wastewater

30. The practicalities of installation and operation of on-site systems of sewage management are most effectively undertaken at a local level within local government bounds. Under the provisions of the Local government Act 1993 and the Local Government (General) Regulation 2005 local councils are authorised to carry out these activities.

31. The regulatory task of on-site sewage management for local councils increased significantly in response to changes in legislation as a result of the Wallis Lakes incidents. The task is significantly under- resourced across local government and has proven to be extremely difficult. The constraints to local government achieving its OSSM responsibilities can be attributed to a number of factors including the regulatory framework, ineffective dis-incentives and penalties, and unclear lines of accountability.

    In 1998 the government released the Environment & Health Guidelines – On-Site Sewage management for Single Households. The guidelines are overdue for a comprehensive review however the Division of Local Government has not seen the review as a priority. This is a major issue that must be remedied as quickly as possible. It is considered imperative that the review should not be undertaken in a tokenistic fashion or without full industry and stakeholder consultation.

    The regulatory process for OSSM under the Local Government Act and Regulations is generally cumbersome, time consuming and inefficient.

32. In relation to the protection of food supply the LG Act does not empower councils to address the observed hazard or immediacy of risk to the environment or food crops encountered in the field. Council can only address the issue of contamination of food crops on the basis of

improper application of effluent i.e. unauthorised or not in accordance with an Approval.

33. The Local Government Act has poor financial penalties as disincentives for any observed breaches. The maximum penalty for failure to Obtain an Approval, failure to Comply with an Approval and failure to Comply with an Order in relation to OSSM under the Local Government Act is 20 Penalty Units ($2200). Similarly Penalty Infringement Notices (PINs) attract fines of only $330.

34. The service of Orders under S124 of the LG Act must observe natural justice. The process is slow and can take 3 months or more to resolution. Where Council believes circumstances constitute a serious risk to health or safety or an emergency Orders under S 137 may be used. Again, the penalties are small, the process repeats and the problem remains unresolved.

35. Whilst the PIN system affords expedient financial disincentive the penalties are minimal and do not bring about compliance in themselves.

36. Legal action places a heavy burden on both staff and financial resources and is a last resort action of Council and it is often not supported by the elected Councillors. Legal action can be very unreliable in outcome and is generally not cost effective. Council's are often hesitant to proceed. (refer Appendix 1 Issues Paper - On-Site Sewage Management - The cost of Regulation)(Camden Council, August 2011).

37. Local experience suggest that the weakness of the penalties under the legislation and the cost to Council of pursuing unauthorised or defective work is general knowledge within the industry and serves to encourage disregard for the law, the regulatory process and the protection it affords.

38. Whilst the existing tools of regulation under the LG Act slowly bring about appropriate management of OSSM the need to efficiently and effectively address immediate and substantial risks to public health generally, remain.

The regulation of food safety under the provisions of the Food Act 2003 permits much greater penalties and is more direct.

39. Efforts to engage the NSW Food Authority and the NSW Department of Primary Industry directly in the setting and enforcement of common goals to protect food crops have failed to bring about a cohesive approach or the exclusion of contaminated food from the market place.

The Role of NSW Health in Regulation of OSSM

40. Under the provisions of Clauses 40 and 41, Local Government (General) Regulation 2005, a local council must not approve of the installation of certain sewage management facilities (tanks) unless they have been accredited by the NSW Department of Health. This is the only statutory role of NSW Health in on-site single domestic wastewater management.

This role rests appropriately with the state because the production, availability and use of facilities (tanks) extend well beyond the individual boundaries of local government areas.

Management of system accreditation by a central state authority also affords consistency to the wastewater industry in terms of performance standards and testing, distribution opportunities and accountability.

41. There are currently thirty (30) Aerated Wastewater Treatment Systems (AWTS), numerous septic tanks and collection wells and a raft of specialised treatment systems accredited by NSW Health.

There is much industry "talk" concerning the validity of testing procedures, system capability and the "real world" performance of accredited systems.

42. Recently it has become apparent that the responsibility of tank manufacturers to notify NSW Health of proposed changes to the design and / or construction of accredited facilities (tanks) prior to implementing changes is not a priority with a recent spate of unauthorised changes observed during the course of installations in the Camden LGA reported to NSW Health for attention.

The problem with regulating AWTS

43. AWTS are specialised individual wastewater treatment systems requiring on-going servicing and maintenance for the life of the system.

In the absence of appropriate and competent servicing of AWTS the performance of such systems and the quality of effluent produced is no better than that of conventional primary treatment systems. (refer Appendix 1 – Background))

44. The marketing of AWTS has created a false perception in some sections of the community that the quality of effluent produced by AWTS is comparable to that of a small scale sewage treatment plant or centralised wastewater treatment system. This is highly inaccurate.

45. It is a condition of the accreditation certification from NSW Health for each AWTS that:

"The Council shall require the owner/occupier of a premises to enter into an annual service contract with a representative of (the manufacturer) or a service contractor or company acceptable to the Council."

46. Appropriate AWTS servicing:

- requires competency in a diverse range of technical disciplines including electrical and plumbing;
- must be undertaken at specified intervals, and
- include a series of mechanical, electrical, physical and chemical assessments (limited) having regard to the specific design characteristics of the system and the required performance standards

Reporting to councils regarding performance compliance with the accreditation is required at each servicing.

47. AWTS service contracting is an un-regulated trade for which no standards of competency or qualification have been established and no licensing of the contractor by the Department of Fair Trading or other such competency accreditation body is required.

This absence of regulation of service agents, together with the consequent lack of accountability / liability has greatly undermined confidence in the service industry and raised ongoing concerns within local government about the adequacy of AWTS operation, the quality of effluent produced and the risks to public health and the environment.

48. Unfortunately the obligation for servicing of AWTS (at whatever level of competency) has created a somewhat false sense of security among some system owners about the quality of effluent produced by these systems, its uses, and the need for buffering of the effluent from vulnerable activities e.g. food crops, recreational areas, water courses.

49. The absence of regulation of AWTS servicing contractors is in stark contrast to the complex and stringent regulation of the large centralised reticulated sewerage management systems and perhaps negligent given the recognition that "*reticulated sewerage systems…… are easier to*

manage, monitor and modify (than individual systems on single properties)" and *"the management of on-site recycled water systems is a particular challenge"* (refer Appendix 2). It raises very real concerns about the protection of public health generally.

50. Again there is much industry talk concerning the practices of rogue operators and much evidence to suggest that systems are being poorly serviced, altered etc.

    It is common for councils to receive complaints from system owners concerning service agents.

51. Local government, individually and collectively, is in no way equipped for the role of determining "acceptability" of service agents in the absence of an appropriate standard of competency and licensing administered by an appropriate standards authority such as the Department of Fair Trading.

    To do so expose councils to the minefields of public liability, restrictive trade practices and a raft of other otherwise legislative controls outside the domain of local government.

52. Appropriate accreditation and licensing of service agents by a responsible State authority such the Dept of Fair Trading would enable consumer confidence in operators and their accountability, support mobility of agents across all local government areas within the state, and provide a means for addressing disputes. All are currently absent.

53. Over recent years councils have put motions to the annual Local Government Conference seeking licensing and regulation of AWTS service providers. Whilst the motions have been endorsed the progression of the matter has been repeatedly blocked at State level - both NSW Health and the Department of Fair Trading - preventing the establishment of a suitably skilled licensed trade with accountability for public health, the environment and the consumer. (refer Appendix 6)

c) The adequacy of inspection procedures and requirements to report incidents.

54. The inspection of OSSM is an ongoing responsibility of local councils and one for which each council develops and implements their own program for Approvals to Operate. The task is significantly under-resourced across local government and has proven to be extremely difficult.

55. There appears to be no responsibility on any State government agency to inspect food crops and therefore no procedures specifically for the purposes of protecting food crops and consumers.

    Camden Council is not aware of any requirement to notify any authority in relation to observed or potential contamination of food at the point of primary production.

d) Any related matter.

1) Review of the responsibilities and provisions for regulating plumbing and drainage services within NSW.

56. The practice of cost shifting services and regulation from State Government to local government is again evident in the current review of the responsibilities and provisions for regulating plumbing and drainage services within NSW.

It is understood in this proposal that local councils will become the regulatory authorities for inspection of plumbing, drainage (both internal and external) and water supply in specified areas in lieu of the NSW Dept of Fair Trading and, previously, Sydney Water.

Camden Council, along with many other councils on the urban /rural fringe will inherit these responsibilities in un-sewered areas, and council staff is not appropriately skilled or resourced for such a role and does not have the capability within its structure or resources to absorb these responsibilities.

Moving Forward – Recommendations for Solutions

57. There is no shortage of research or guidance concerning the risks to public health of exposing crops (especially fresh produce) or people to water contaminated by human waste.

    There is a significant shortage of appropriate regulation of primary production for the protection of the fresh food supply.

Recommendations:

1. That NSW Legislation be revised to :

    i. Require the protection of primary production by duly authorised State Government Agencies for the security of the food supply.
    ii. Enact regulations modelled on the provisions of the Food Act 2003 requiring registration of primary producers similar to the requirements for food manufacturers.
    iii. Enact provisions for the respective state authorities to be equipped with powers to seize or dispose of crops irrigated with human effluent.
    iv. Enable the use of seizure powers for the quarantining / seizure of fresh produce on the basis of perceived risk without the need for costly, time delaying laboratory analysis.

2. The Department of Local Government Environment and Health Guidelines – On-site Sewage Management for single households be revised to incorporate (among other things) appropriate industry standards derived from the wealth of existing horticultural and primary industry expertise for production of fresh food supply.

3. Establish appropriate skills, accreditation and licensing standards for AWTS service agents by an appropriately authorised State Authority e.g. Department of Fair Trading to ensure a minimum standard of

training, competency and accountability to achieve appropriate performance standards of AWTS operation.

4. Revise the provisions for financial disincentives and penalties under the Local Government Act 1993 and such other legislation as may be necessary to provide strong reinforcement of the regulatory provisions for OSSM.

5. Revise the provisions for issuing of Notices and Orders under the Local Government Act 1993 to simplify and expedite the process of regulation.

6. Develop and implement notification procedures for the alerting of appropriately authorised NSW State government agencies of the contamination, or potential contamination, of fresh food crops.

7. Provide appropriate resourcing (advisory, regulatory and financial) to Local Government to enable the obligations of OSSM to be properly serviced.

Appendix 1

Issues Paper - On-Site Sewage Management (Camden Council, August 2011)

On-site Sewage Management and Agriculture

All types of domestic waste water are potentially highly infectious and pollutant.
The bacterial numbers in septic tank effluent are roughly ten times that found in raw sewage.
Sewage treatment in septic tanks (known as primary treatment) merely reduces the solids content of the waste water and increases the bacterial numbers in the final effluent.
Typical sewage has about 1 million bacteria per millilitre while septic tank effluent has about 10 million bacteria per millilitre.

ISSUES
ISSUE 1 - The Regulatory Process
ISSUE 2 - Who is the Appropriate Regulatory Authority?
ISSUE 3 - Performance Standards - AWTS, Accreditation and Service Agents
ISSUE 4 - Review of OSSM Guidelines

Background

On-site Sewage Management is the collection, storage, treatment and disposal of wastewater generated from a premise on that premises. Mostly this occurs from residential activity.

Across NSW the geographically greater part of the state is serviced by On-site Systems of Sewage Management. (OSSM). There are tens of thousands of OSSM across greater Western Sydney alone many of which service, or are in the vicinity of, highly productive agricultural areas - Sydney's food bowl - the Sydney Basin.

Experience drawn from site inspections has shown that there is an exceptionally high failure rate from domestic OSSM arising from poor operational practices. This failure very often occurs on properties used for growing food crops.

OSSM typically falls into two main categories based upon the level of treatment and quality of effluent achieved by the process.

"Conventional systems - typical septic tank - employ basic primary separation of solids from liquids with liquid effluent disposed of deep (greater than 300mm) in the ground. No treatment standards are set for primary treated effluent. It is highly infectious and pollutant. Primary effluent cannot be successfully disinfected.

"Aerated Wastewater treatment Systems (AWTS) - secondary level of wastewater treatment, after primary treatment, plus disinfection. Without disinfection secondary treatment is not enough to prevent the transmission of disease. Effluent quality

standards are set for secondary treated domestic sewage however even at these standards treated and disinfected effluent must not be used for drinking or ablution purposes because of the health risk.

Prior to 1998 OSSM were largely unregulated by local and state authorities after installation and were typically only tended in response to nuisance or complaint.
In February 1997 oyster leases of the Wallis Lakes District were contaminated by septic effluent seeping from OSSM to the lakes. The result was an unprecedented outbreak of Hepatitis A and the closing of the local oyster industry for several months.
In 1998 legislation was introduced in NSW to regulate OSSM for the operational life of site occupancy. Provisions under the Local Government Act 1995 and the Local Government (General) Regulation 2005 were introduced specifically for the ongoing operation or licensing of OSSM - Approvals to Operate.

In Jan 2006 Port Stephens oyster farmers were similarly affected by septic discharge / seepage through creeks and groundwater to oyster leases.

ISSUE 1 - The Regulatory Process

The regulatory task for OSSM is significantly under-resourced and has proven to be extremely difficult. This has been compounded by a lack of significant effective penalties.

Experience, again, has shown that considerable unauthorised work is undertaken in relation to the installation of new / replacement / modified OSSM. Much of this occurs due to a persistent lack of appreciation in the community of the health and pollution risks associated with poor systems and the risks of exposure to human waste either directly or indirectly; a "cost cutting / beat the system "approach to the Approvals process and a general awareness that it is simply not financially viable for Council's to pursue such work with legal action.

The Cost of Regulation

Council experience - Cost of taking a case to the Local Court - min $4000 to $5000 for legal representation over and above significant Council staff resources.

In 2008 Council took a case to the Local Court for unauthorised installation of an AWTS. The maximum penalty under the Local Government Act was $2200 (20 Penalty Units). A fine of only $200 was issued.

This is not a significant disincentive or deterrent for offenders.

Penalty Infringement Notices (PINs) exist for some related offences under the Local Government Act however the penalty value is generally only $330.

Some opportunities for PINs also exist under Protection of the Environment Operations Act however POEO is not the first line of regulation in such cases. POEO may be used for pollution offences. PIN for water pollution offences $750 (individual) and $1500 (Corporation).

ISSUE 2 - Who is the Appropriate Regulatory Authority?

Land and resource pressures.

Increasing pressure upon land in Sydney for food production together with incorrect assumptions about the value and quality of wastewater as a resource frequently results in wastewater disposal / application areas being:

- farmed over so that crops are grown directly in raw effluent or irrigated directly with secondary treated effluent, or
- encroached upon resulting in seepage of effluent directly into the growing areas, or
- effluent being discharged to dams or watercourses (so that more land is available for cropping) and redrawn for direct irrigation onto crops.

Over the years there has also been increasing pressure to subdivide larger land holdings on the urban fringes to provide rural residential and smaller farming allotments. The result has been an increasing intensity of occupation and use of the land, more OSSM and therefore greater wastewater application on the land.

The Environment and Health Protection Guidelines 1998 ("the silver book") site a number of performance objectives relating to agriculture including "treated sewage should not be used on edible crops that are consumed raw"; "OSSM should not contaminate surface waters"; "OSSM should protect community amenity -special consideration be given to vectors." Irrigation techniques that amount to flooding or ponding create pools for breeding of vectors such as mosquitoes. In some instances vector lifecycles may include hosting directly in crops. The Wallis Lakes incidents exposed the ability of human pathogens in wastewater to travel over 800 m from the source and remain sufficiently viable to cause infection. Protection of crops and agriculture in general should be an imperative.

In practice, the "Guidelines" are largely unsupported outside of Local Government and there is no agreement as to what protective measures are appropriate or whose responsibility it is to protect primary production. There is a general reluctance of other responsible agencies to provide appropriate specialist / technical advice and regulatory support.

Camden Council has actively sought advice from NSW Food Authority but without success and was informally advised by NSW Agriculture that it is not a regulatory body and that Council should seek its own legal advice when seeking to determine and enforce standards for protection of crops from domestic wastewater. Council is still seeking sound advice concerning acceptable buffers to protect crops from effluent exposure.

In 2011 the outbreak of food borne illness in Germany attributed to e-coli (indicative of human effluent contamination) in hydroponically grown salad (sprouts) crops put human waste contamination of food crops on the world stage.

Councils generally are still seeking sound advice concerning acceptable buffers to protect crops from effluent exposure.

ISSUE 3 - Performance Standards

Performance of AWTS

Each AWTS is effectively a small scale Sewage Treatment Plant (STP) and is subject to on-going servicing and maintenance. Unlike an STP which services a community and which is operated and maintained by highly skilled specialists under complex and highly regulated standards the performance of OSSM has very little accountability after installation.

Each system is highly variable due to hydraulic and chemical loading, use, age, quality and frequency of servicing and maintenance as is the quality of effluent. Whilst performance standards are set for accreditation of OSSM compliance with these standards during the operational life of a system is not generally enforced due to significant costs involved for the system owner and the lack of expertise available for such an enormous program.

There is no obligation to test microbial performance as an on-going operational requirement.

There is only rudimentary field testing, of limited parameters, undertaken during routine servicing and maintenance and no validating of fields testing in a laboratory. Hence no real reliability of effluent quality testing. test results.

Regulation of Service Providers

The servicing of AWTS by service agents is an unregulated activity with no prescribed skill base required for operation as a technician. AWTS servicing and maintenance is not a licensed trade.

There is no on-going servicing / maintenance obligation for conventional systems...

Over the last several years Council's have put motions up to the annual Local Government Conference seeking licensing and regulation of AWTS service providers. Whilst the motions have been endorsed the progression of the matter has been repeatedly blocked at State level - NSW Health and Dept of Fair Trading - preventing the establishment of a suitably skilled trade with accountability for public health and environmental quality.

Regulation of AWTS Accreditation

AWTS are regulated under the Local Government (General) Regulation 2005 for the accreditation of systems by the NSW Department of Health. Accreditation of system designs is based on performance under controlled operation and conditions. There is considerable "industry talk" concerning the translation of performance results for accreditation and real world performance of AWTS under everyday domestic conditions. There is no doubt that the performance of AWTS is highly variable as noted previously.

ISSUE 4 - Review of OSSM Guidelines

The Environment and Health Protection Guidelines 1998 - On-site Sewage Management for Single Households is the primary advisory document for OSSM in NSW. The review of the "Silver Book" as it is generally known has been listed for several years and remains outstanding.

Appendix 2

"We are well aware of the risks……."

The risks to the environment and public health from exposure to human waste are considerable and are generally well documented across a broad range of scientific, medical and water management disciplines.

In addition to the longstanding concerns arising from exposure to wastewater contaminated by human waste new categories of emerging hazards have now also been identified. *The National Guideline for Water Recycling : Managing Health and Environmental Risks (Phase 1)2006 identifies a further seven (7) categories of hazard found in sewage including prescription and non-prescription drugs, veterinary and human antibiotics, sex and steroidal hormones, endocrine disruptors and others. (Table 2.2 p35).These agents are not tested for in the wastewaters of OSSM.*

Along with many other sources at both State and Federal levels the *National Water Quality Management Strategy (NWQMS)- Australian Guidelines for Sewerage Systems - Effluent Management, 1997*, detailed the risks of exposure to human waste and the necessity for sound management of infrastructure, monitoring of effluent quality and appropriateness of reuse options. The document was highly relevant to the management of OSSM but reserved its guidance for reticulated sewerage systems servicing predominantly urban areas noting that **"reticulated sewerage systems…… are easier to manage, monitor and modify (than individual systems on single properties)" (p1).**

OSSM from single residential premises are all different as is the quality of discharge from them depending upon composition of waste sources, hydraulic loading, wellness of users, maintenance, operator awareness, quality of installation, interference, age, etc. The opportunities for balancing the extremes of inputs and out flows as occurs across a large reticulated catchment do not exist.

Following the devastation of the Wallis Lakes oyster industry in January 1998 as a direct result of contamination of local waterways by human waste seeping from septic systems in the lakes' catchment, the then NSW State Government through the Department of Local Government produced the *Environment and Health Protection Guidelines -"On-site Sewage Management for Single Households" 1998* in an effort to provide guidance for local government in the management of On-site Waste Water Systems. The "Silver Bullet" as it is known was clear at the outset that "**There has been increasing concern that on-site sewage management systems have failed to satisfy the expectations of un-sewered communities in New South Wales. Growing evidence suggests that many of these systems do not meet environmental and public health requirements". (p10)**

Again, in November 2000, the detailed NWQMS *Guideline for Sewerage Systems - Use of Reclaimed Water* spelt out the risks to people, the environment and agriculture of exposure to improperly treated domestic wastewater and placed considerable emphasis on treatment requirements, increasing safeguards, and controls and sophisticated monitoring programs. The guideline stated **"Protection of public health is paramount in the management of wastewater reuse projects".** Yet it also specifically **"(did) not deal with reclaimed water from individual household systems (e.g. sullage, grey water or effluent from household or residential aerobic treatment units or septic tanks)" (p1)** failing to address the re-use of wastewater from the rapidly increasing numbers of individually operated on-site systems of sewage management at a state and local level.

In November 2006 *The National Guideline for Water Recycling : Managing Health and Environmental Risks (Phase 1)* was released providing a very significant body of material again detailing the public health risks of effluent reuse, including agricultural applications, together with complex methodologies and standards for comprehensive management of wastewater. Unlike the earlier guidelines this document **"applies equally to on-site systems serving single dwellings as it does to large centralised treatment plants" (p10) however notes "the management of on-site recycled water systems is a**

particular challenge" (p11). Having acknowledged the need for better management of single dwelling systems, the guideline remained advisory and its complexity far exceeded single residential application. It is generally disregarded for such use.

The NSW Water for Life program also provides resources and guidelines for effluent re-use but again does not apply to effluent from single household OSSM.

Similarly, a substantial body of knowledge recognising the need for horticultural food safety has existed for some time. In 2004 the Australian Government - Department of Agriculture, Fisheries and Forestry, consolidated a raft of resources to produce *Guidelines for On-Farm Food Safety for Fresh Produce* including a section specifically addressing contamination of crops from water. At that time it was noted that **"Considerable uncertainty and confusion existed (and still exists) in horticultural industries with regard to some of the technical aspects for on-farm food safety"** (p10). The confusion remains. The document is unlikely to reach, be understood or implemented by, the small scale or poorly educated market gardener and, again, is advisory only.

There appears to be a gaping hole in the designation of responsibility for regulation of this area of the food industry.

In 2011 the *1998 DLG Guideline for Local Government* remains the principle advisory document for on-site sewage management for single residential premises despite the abundance of knowledge and guidelines developed for the centralised wastewater industry, the difficulties of the agricultural / horticultural food production sector and frequent requests from Local Councils for revision. There is still very real concern that OSSM generally fail to meet appropriate public health guidelines and that significant holes exist within the regulatory structure to make regulation of infrastructure and operation effective and to properly guard the community particularly in relation to the production of fresh food.

The risks associated with exposure to effluent are not simply limited to the occupier of the land but can, and do, extend far beyond the immediate area of application and current regulation - particularly where effluent makes its way into the environment and where it is used in the irrigation, either directly or indirectly, of food crops. Roles and responsibility for management of the greater public health risk are unclear and the tools for regulation are inadequate.

The management and regulation of grey water is also complex and fraught with similar difficulties.

Grey water is not specifically addressed in this submission however should be explored as part of the Inquiry.

Appendix 3

Motions to Local Government Association Annual Conferences 2006

Response from Minister for Local Government 2007

ORD09

SUBJECT:	**LICENSING OF AWTS SERVICE AGENTS - MOTION TO LOCAL GOVERNMENT ASSOCIATION ANNUAL CONFERENCE**
FROM:	Director Development and Health
FILE NO:	Binder: Local Government Association

PURPOSE OF REPORT

The purpose of this report is to seek Council support to put forward a motion to the Local Government Association Annual Conference for the state wide licensing of Aerated Wastewater Treatment System (AWTS) service agents by the Department of Fair Trading.

BACKGROUND

The NSW Department of Health is responsible for the accreditation of all domestic AWTS. This accreditation specifies the design, construction and performance requirements of the system. As a condition of the accreditation of these systems the Department of Health requires that these systems be serviced at regular intervals (most systems are required to be serviced every 3 months) by a representative of the company or a service contractor or company acceptable to the Council.

The Department of Health, in the certificate of accreditation for each system, specifies that each service by this service agent shall include a check of all mechanical, electrical components and functioning parts of the system, including:

the chlorinator and replenishment of the disinfectant
pumps, air blower, fan or air venturi
the alarm system
slime growth on the filter media
operation of the sludge return system
the effluent irrigation area

on-site testing for free residual chlorine, pH and dissolved oxygen.

Council is often presented with complaints from the community regarding the poor workmanship of some of the service agents that are servicing AWTS. It is not uncommon for Council to receive complaints that service agents are not conducting a complete inspection and are just dropping chlorine tablets into the system and then leaving the site.

Service agents are responsible for inspecting the entire system, including the tank(s) and the related effluent application area (irrigation area); however Council is aware that many of these service agents are also neglecting to inspect the irrigation areas. However, due to the lack of a regulated system which allows registration and therefore accountability of service agents, Council is powerless to take action.

MAIN REPORT

It is compulsory for all AWTS owners to have their system serviced; the servicing of these systems generally costs the property owner upwards of $300 per year. Due to the fact that these service agents are not required to be licensed by the Department of Fair Trading the property owners have no quality assurance that the service being conducted on their system is being completed in a satisfactory manner.

As previously mentioned, State Government is responsible for the accreditation of these systems, however once the system is accredited there appears to be a lack of accountability by the Department of Fair Trading and the NSW Department of Health in regards to the ongoing operation and performance of the systems.

The lack of accountability of AWTS service agents is a state wide issue. If a service agent operates in a certain manner in the Camden LGA then they should operate in the same manner or under the same rules within other LGAs. The licensing and regulation of AWTS service agents is a State Government function and there needs to be a change in policy to have these service agents licensed by the State. It is considered that these service agents should be regulated in the same manner as other trades such as plumbers, builders and the like. Over the past decade Camden Council has made numerous approaches to various government agencies to have this approach adopted, but all have been met with a non-committal response. It would not be appropriate for Councils to be responsible for registration of agents as this would be an unfair burden on operators who would be required to register with all councils where they do work. In the case of a local agent, this would be likely to require registration with Liverpool, Penrith, Campbelltown, Camden and Wollondilly Councils, each of which may have similar but perhaps not identical requirements.

Some Councillors would recall that Camden Council actually undertook the servicing of AWTS for some years. The creation of this service was in direct response to requests from ratepayer demands for Council to hold

these service agents accountable. Legislation does not permit Council to hold them in any way responsible for their work. It is considered that this issue has profound effect across New South Wales and the Government have chosen not to act.

It is hoped that by raising this motion at the LGA Conference, attention can be bought to bear on government to deal with this matter.

CONCLUSION

The licensing of AWTS service agents is crucial in regulating the quality of service being provided to our community. If the systems are not serviced correctly then the health of rural people across the state is put at risk, not to mention the environmental impacts related to poorly functioning systems. Since this is a state wide issue the motion to get the State Government to commit to a more regulated regime for the licensing of AWTS service agents requires the support of the Local Government Association.

The licensing of AWTS Service Agents by the Department of Fair Trading will result in:

An increase in the accountability of these service agents.
State wide standards put in place for the servicing of AWTS.
Support for Local Government in resolving issues with service agents not adequately servicing systems.
Support for owners of systems when they have not been provided with an appropriate level of service.
A regulated service being provided to the community.

By making the service agents accountable through the Department of Fair Trading for their workmanship, Local Councils and the community can be satisfied that the servicing of AWTS NSW wide is being done to a standard stipulated by the Department of Fair Trading. The licensing of service agents will also further assist in reducing the risk that AWTS have both on the environment and public health.

RECOMMENDED

That Council put forward the motion to the Local Government Association Annual Conference which calls on the NSW state government to introduce a system of licensing of AWTS service agents by the Department of Fair Trading.

RESOLUTION

That Council put forward the motion to the Local Government Association Annual Conference which calls on the NSW state government to introduce a system of licensing of Aerated Wastewater Treatment System (AWTS) service agents by the Department of Fair Trading.

Moved Councillor Campbell, Seconded Councillor Whiteman that the recommendation as above be adopted.

THE MOTION ON BEING PUT WAS **CARRIED**

ORD214/06

CRMS number 2261100, Finalised 15/08/2006 3:39:37 PM
Action: Finalised,

Link to CRMS document CRMS: 15/08/2006, 03:33:24 PM

New South Wales

The Hon. Paul Lynch MP

Minister for Local Government
Minister for Aboriginal Affairs
Minister Assisting the Minister for Health (Mental Health)

Ref: 05/0357
MIN: 07/6707
Doc ID: A94461

Local Government Association of NSW
Shires Association of NSW
18 JUN 2007
SGU ..... CORP .....
POLICY ..... RB ..... 06 JUN 2007
WPLACE ..... NO ACTION .....
FILE No. ... R95/0016-06

Ref #154

Clr Genia McCaffery
President
Local Government Association of NSW
GPO Box 7003
SYDNEY NSW 2001

Dear Clr McCaffery

I am writing in reply to your letter dated 14 December 2006 to the former Minister for Fair Trading, Ms Diane Beamer, MP regarding the introduction of a system for licensing aerated wastewater treatment system service agents, which has been referred to me for reply direct. The delay in reply is regretted.

The NSW Government has carefully considered requests from the industry and local government for a state-wide accreditation scheme for aerated wastewater treatment system service technicians. Due to the diverse range of environmental conditions across NSW, it is considered that councils are best placed to determine the acceptable level of expertise and experience required by technicians to service the ever-increasing range of on-site sewage management systems in their areas.

The acceptability of service agents is a decision that is most appropriate for local councils to determine and should be developed in consultation with the aerated wastewater treatment system industry in their area.

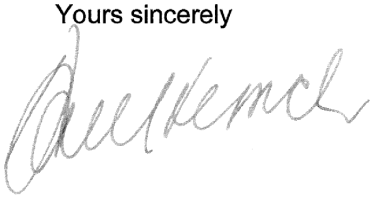
Councils are able to develop a minimum set of criteria for determining acceptable service agents in their area. Any service agent operating in the area should be able to apply to the council for inclusion on the council's list of acceptable service agents, provided they meet the minimum set of criteria. This process assists councils manage the cumulative risk associated with the management of on-site sewage management systems in their areas.

Governor Macquarie Tower, 1 Farrer Place, Sydney NSW 2000
Phone: (61 2) 9228 3333 Fax: (61 2) 9228 5551

A number of regional groups of councils have developed sets of minimum criteria that apply to their collective circumstances and address cross-boundary issues in relation to service technicians. An example of this regional co-operation is the Hunter Septic Tank Action Group, which includes representatives from a number of councils in the Hunter region.

I trust this information is of assistance.

Yours sincerely



Paul Lynch MP
Minister

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