Landfill Remediation Assessment Program

These guidelines are current as of March 2006.
The conditions of funding under this program are to be read in conjunction with the ‘General conditions of funding’.

Objective

The objective of the Landfill Remediation Assessment Program (LRAP) is to assist councils to assess former landfill sites with respect to:

- current and potential environmental harm; and
- current and potential risk to public health.

It is expected that projects funded under LRAP will provide:

- an assessment of risks to the public and the environment; and
- estimates of likely costs of actual remediation.

Program description

LRAP will assist councils to identify contaminated landfill sites which they own or control, and will assist with assessment of risks associated with these sites and estimation of costs of remedial work. Subject to availability of program funds and Ministerial discretion, assessment of other council-owned or controlled contaminated sites may be considered on a case-by-case basis.

LRAP will assist councils with up to 50% of eligible costs for approved work from July 2006 to June 2008. It will then continue until June 2011 as a component of the Environmental Infrastructure Program (EIP).

Applicants seeking support for landfill remediation assessment after June 2008 should refer to the EIP. Actual remediation works will also be eligible for support under EIP where assessments have been carried out.

LRAP will be conducted in rounds as outlined in appendix 1.

Eligible applicants

Eligible applicants are councils as defined under the ‘General conditions of funding’.

There may be significant savings available to councils that elect to collaborate for this program if a consultant is able to assess landfills across a region under a single contract. Where councils wish to take advantage of this option, a joint application can be lodged. In these cases, payment of subsidies will be made to one council, on behalf of all collaborating councils, on receipt of:

- a report or executive summary for each site; and
- an invoice itemising costs for each landfill site, verified by the councils responsible for those sites.

Eligible categories of work

Only sites which have ceased operations and are no longer receiving waste are eligible. Where sites have multiple stages, including closed and operating stages, assessment of those stages which have been closed is eligible for LRAP funding.

Eligible projects will include the work involved in:

- completing a preliminary site assessment;
- conducting a detailed site investigation where the preliminary investigation indicates a detailed assessment is required;
- assessing health and environmental risks posed by the site;
- identifying any remediation work needed; and
- where remediation work is needed, identifying the likely cost of that work.

Eligible costs include, but are not restricted to:

- drilling and excavating;
- sampling;
- testing;
- design and costing; and
- consulting fees.

The costs of implementing environmental management programs or site management plans under the Environmental Protection Act 1994 will not be funded under this program, nor will costs for initial site identification.

Prescribed forms

The following prescribed forms can be found on the Department’s website at www.lgp.qld.gov.au/funding:

- LRAP Application Form (with questionnaire included); and
- Subsidy Claim Form.

Application and assessment

Applications should be submitted on the prescribed form, which includes a questionnaire developed by the Environmental Protection Agency (EPA) to assist councils to gather the minimum information necessary for landfill site investigations, and to identify information gaps.

Questions which cannot be answered from council records, local knowledge, or other sources (e.g. local drillers, or the Department of Natural Resources, Mines and Water for soil profile and groundwater information) may form the basis of an application for funding.

All applications for funding require a detailed scope of works, itemised cost breakdowns and project personnel details for each landfill investigation. A separate application form and questionnaire is required for each site where investigation is proposed.
Landfill Remediation Assessment Program (continued)

Application and assessment (continued)

A checklist of attachments to be provided for each landfill site is contained within the application form. A summary form, which summarises and prioritises the landfills, must also be completed.

In establishing priorities for funding, the following considerations will be taken into account:

- risks to health (e.g. the presence of toxic leachate in a highly populated area would receive priority over a similar situation in a remote location);
- evidence and extent of environmental harm occurring on an ongoing basis;
- potential for future health or environmental harm;
- commitment to complete projects regardless of cost over-runs; and
- former landfill sites, which will receive priority over other contaminated sites subject to Ministerial discretion.

Timing of claims

Claims for subsidy are to be lodged:

- for up to 50% of the approved subsidy – after completion of 25% or more of the approved project; and
- for the balance of the approved subsidy – after completion of the approved project.

In some cases, the Department will consider alternative payment schedules based on achievement of agreed milestones and scheduled progress.

Site identification

Site identification will remain the responsibility of councils. To assist with site identification, the EPA has compiled a list of sites from its Environmental Management Register. Further information can be obtained from the EPA.

Use of consultants

Where contaminated land consultants are employed, councils should provide evidence that the consultant has suitable experience and qualifications, and an appropriate level of indemnity insurance. The checklist within the application form details the specific information needed from personnel undertaking contaminated site investigations. Councils can also seek advice from the EPA, which maintains a list of suitably qualified consultants.

It is important to read ‘Planning a landfill site investigation program – Hints and traps’ before choosing a consultant (see appendix 3).

Additionally, general information on landfill site investigations, remediation and management is contained in appendix 4.

Application checklist:

- Do you have documentation outlining your consultant’s relevant experience and qualifications?
- Does the consultant have appropriate indemnity insurance?
- Have you obtained evidence that the consultant is a member of one of the ‘prescribed organisations’ listed in schedule 8A of the Environmental Protection Regulation 1998?
- Will the consultant use a laboratory which is accredited by the National Association of Testing Authorities for the parameters to be tested?
- Has a questionnaire been completed for each landfill site?
- If you are making a joint application in collaboration with other councils, have all councils:
  - been named on the cover page of the application?
  - certified the individual applications for each landfill site for which they are responsible?
- Have application forms been completed and submitted?
Where to send your application

Applications should be sent to:
Department of Local Government, Planning, Sport and Recreation
Local Government Funding Branch
PO Box 15031
CITY EAST QLD 4002
Phone: (07) 3225 8695
Facsimile: (07) 3225 8685

General objectives of funding

In general, the objectives of the State in providing funding assistance to councils are to:

- facilitate equity of access to services;
- improve social, economic and environmental health across the State;
- enhance councils’ capacity to provide infrastructure; and
- support delivery of priorities identified by the State. Details of current State priorities can be found on the Premier’s website at: www.thepremier.qld.gov.au
General conditions of funding

These conditions are current as of March 2006.

1. Glossary of terms

'approved' or 'approval' final approval by the Minister or any duly authorised person. Final approval is given in writing after an initial offer of funding support is made by the Minister and agreed to by the applicant.

'approved applicant' a council or other organisation for whom funding is approved by the Minister under a specified program.

'approved project' a project for which subsidy has been given final approval (this term does not denote an approval for anything other than subsidy – refer to section 5 of these general conditions).

'authorised person' an officer or employee of a government department or other person authorised by the Minister to perform a specific function or duty.

'capital works' works of a lasting nature to be used by or to provide services to people within the State of Queensland and funded by councils. The term, where necessary, includes land, buildings, major items of plant, machinery or other equipment, but does not include component replacement or periodic maintenance.

'Chief Executive Officer' the Chief Executive Officer of the council or the Council Clerk of an Island council.

'council' or 'councils' a local governing body or other organisation eligible to apply for subsidy under a particular program (as councils are the primary recipient of the grants and subsidies, many of the guidelines use this generic term to encompass all eligible applicants).

'the Department' is the department responsible for administering the local government portfolio, unless otherwise explicitly stated. At the time when these guidelines were being prepared, this was the Department of Local Government, Planning, Sport and Recreation.

'EPA' the Environmental Protection Agency.

'environmental health' infrastructure addressing council services for:
- water;
- sewerage;
- solid wastes disposal; and
- internal roads and drainage.

'funding programs' includes the following programs:
- Water and Sewerage Program;
- Smaller Communities Assistance Program;
- Regional Centres Program;
- Rural Living Infrastructure Program;
- Environmental Infrastructure Program;
- Landfill Remediation Assessment Program;
- Environmental Infrastructure Research Program;
- Regional Collaboration and Capacity Building Program;
- Urban Drought Water Program;
- Security Improvement Program;
- Show Societies Grant; and
- Road and Drainage Grant.
1. Glossary of terms (continued)

‘funding recipient’ or ‘recipient’ means a council, show society or other organisation which receives funding under a funding program.

‘leachate’ liquid produced when water, usually from rain, filters through any porous material. It may contain either dissolved or suspended material, or usually both. In the case of landfills, the product may be toxic, contain live micro-organisms and could possibly enter groundwater, surface water or soil.

‘local governing body’ includes:
- a local government or joint local government constituted under the:
  - Local Government Act 1993;
  - Local Government (Aboriginal Lands) Act 1978; or
  - Local Government (Community Government Areas) Act 2004;
- the Brisbane City Council, constituted under the City of Brisbane Act 1924;
- an Island Council constituted under the Community Services ( Torres Strait) Act 1984;
- South East Queensland Water Corporation and Gladstone Area Water Board; and
- any other entity (e.g. a local government owned corporation) deemed by the Minister to be a local governing body for the purposes of these funding programs.

‘Mayor’ Lord Mayor, President, Chairperson or holder of an equivalent office.

‘Minister’ the Queensland Minister for Local Government.

‘NRMW’ the Department of Natural Resources, Mines and Water.

‘planning report’ a document which demonstrates the soundness of a proposed project or program on the basis of life cycle costing and sustainability in terms of social, economic and environmental considerations. A planning report is to be prepared in accordance with guidelines issued by NRMW, or in a form which meets the objectives of the guidelines acceptable to NRMW.

‘potable water’ safe drinking water.

‘prescribed form’ a form issued by the Department.

‘project’ a discrete set of activities, producing a defined range of infrastructure or other defined outputs, within a specified timeframe.

‘subsidy’ a non-repayable allocation of money provided to assist approved applicants to fund approved projects.

‘tender’ an offer specifying prices, costs and other details under which a person will enter into a contract with an approved applicant.

‘total management plans’ strategic, financial and management plans developed by councils for their water supply and sewerage undertakings, which identify the current and future resources and needs of water supply and wastewater disposal.

‘Treasurer’ the Treasurer of Queensland.

‘wastewater’ wastewater from sewage treatment processes and excludes wastewater from other sources, such as stormwater run-off.

‘work’ or ‘works’ an identifiable part, or parts, of a project, which is, or are, wholly subsidisable or wholly non-subsidisable.
General conditions of funding (continued)

2. Minister retains rights and powers

The Minister may make all such decisions and take all such actions that the Minister sees fit for:

- the furtherance or more effective achievement of the objectives and purposes of these funding programs;
- obtaining documents in respect of an approved project;
- facilitating proof of any documents or matter;
- extending periods of time;
- remedying irregularities;
- substituting new for lost or destroyed documents; and
- determining subsidy entitlements.

The Minister may require recipients to provide all such documents deemed necessary to demonstrate the appropriate management and use of funds provided by the State.

3. Alteration of subsidy rates

Where a program provides a subsidy expressed as a percentage of the costs of a project or by formula, the rate (percentage or formula) of subsidy is the maximum payable. The maximum subsidy rate will, generally, only be paid where an application proposes an optimal solution based on sound planning and a rigorous comparison of options.

The Minister may determine a lesser rate of subsidy in a particular case, or class of cases, at the Minister's discretion.

4. Ministerial delegation

The Minister may decide to delegate, either generally or in specific cases, the powers and duties of the Minister for these funding programs.

5. Subsidy approvals do not relieve councils of regulatory requirements

All approvals and payments of subsidy are conditional on the recipient observing all relevant laws and State policies.

The funding programs provide financial assistance only and do not relieve a council from:

- performing or observing all conditions and duties that may apply to the works under any Act, Law or Regulation; or
- having due regard to any relevant State or Commonwealth policies.

Approval of funding under these programs does not imply that any necessary licences or approvals required by any Acts, Laws or Regulations will be granted, or that agencies will make favourable policy decisions.

Funding recipients must independently obtain all appropriate permits, licences, consents etc., or a clear statement of requirements, from relevant parties prior to commencement of projects. Where licences cannot be obtained prior to completion of construction, the final 25% of the approved subsidy may be withheld until licences are obtained.

6. Final approval must be obtained prior to commencing works

Applicants must obtain final approval of subsidy before commencing works.

In the case of capital works, works are considered to have ‘commenced’ once actions incurring physical changes to a proposed site have been instigated.

Where commencement of a project is urgently required, the proponent may apply for a waiver of this requirement.

Retrospective approval of subsidy after commencement will only be considered in exceptional circumstances. In such cases, applicants must notify the Department immediately to indicate that a subsequent application for subsidy is likely.

7. Six-month limit on initial approvals

If applications are not progressed to final approval within six months of initial approval being granted, the application will be deemed to have lapsed unless the applicant has sought and been granted an extension of time.

This condition does not preclude an applicant from resubmitting proposals in a subsequent round of funding or at a later date.

8. Goods and services tax

For all approved projects, successful applicants are subject to the Australian Government taxation legislation and associated tax rulings with respect to goods and services tax (GST). In regard to grossing up for GST purposes, the Department is required to comply with this legislation and the relevant rulings. Accordingly, payments will have GST applied to them if appropriate.

9. Alignment with regional plans

Proposed works projects may be assessed for their alignment to regional plans. Projects that are in conflict with regional plans are unlikely to be approved for funding.

10. Alignment with State priorities

State funding is intended to support delivery of priorities identified by the State. Details of current State priorities can be found on the Premier’s website at: www.thepremier.qld.gov.au.
General conditions of funding (continued)

11. Native title clearance
Applicants are responsible for ensuring that native title issues are adequately investigated and appropriately addressed. The Department has prepared procedural guidelines which may be useful in this regard. Copies of these guidelines are available on the Department’s website at [www.lgp.qld.gov.au/funding](http://www.lgp.qld.gov.au/funding).

12. Tendering procedure
The procedure to be followed by applicants in calling and evaluating tenders and quotations for approved projects will be in accordance with the *Local Government Act 1993* or other relevant laws.

13. Project management
Funding recipients are required to ensure that projects for which State funding is approved are well managed and supervised.

14. Certification of works completed and proper expenditure
Each claim for subsidy payment should be made on the prescribed form, with certification by the approved funding recipient that the works have been completed satisfactorily, and that expenditure of the amount stated has been properly incurred on the work for which funding was approved, in accordance with the guidelines of the relevant funding program. Certification for councils should be made by the Mayor and Chief Executive Officer, or other people as agreed by the Department.

The prescribed form for claiming subsidy can be found on the Department’s website at [www.lgp.qld.gov.au/funding](http://www.lgp.qld.gov.au/funding).

15. Notification of completion within six months
A funding recipient should, within six months of completion of an approved project, notify the Department by submitting a certified claim for final payment of subsidy. If this is not possible, the recipient should notify the Department at the earliest opportunity.

16. Further expenditure not accepted
Once the prescribed form certifying completion has been submitted, further expenditure will not be accepted for subsidy purposes.

17. Forecasts of cash flows for projects
Applicants are required to provide forecasts of cash flows and milestones for each project, indicating times when subsidy claims are expected to be made.

Should project expenditures or timeframes vary from expectations after commencement, recipients are required to provide updated forecasts to the Department immediately upon these variances being identified.

As a measure to manage the Department’s cash flows, where a project is ahead of schedule, payment of subsidy may be delayed until the dates agreed upon at the time of final approval.

18. Suspension of works
Where work has been delayed for any reason, the funding recipient should immediately notify the Department, indicating reasons for the delay and anticipated time of recommencement of work.

19. If a project is not completed
Where work on a project has ceased and the project will not be completed, the funding recipient may be required to repay all or part of the subsidy received in respect of the project.

20. Subsidy on cost over-runs
The Minister may approve additional subsidy be paid on cost increases, provided suitable justification is given. In the case of cost over-runs in excess of 5%, applicants will need to demonstrate it was unreasonable to expect such costs to be predicted at the planning stage. Applications for subsidy should indicate any known potential areas of cost over-run or price escalation.

If cost over-runs can be reasonably foreseen when tenders are received or contracts awarded, and the Department is not advised, the over-runs will not be considered for subsidy.

In programs with a finite budget, it will not be possible to accede to requests for additional subsidy, regardless of the cause, when all funds from the program have been allocated.

21. Retention money
Where an approved project has been constructed under contract, any retention money held by the funding recipient to ensure the contractor makes good any defects, and which may become payable to the contractor, may be regarded as part of the final cost as at the date of practical completion for the purpose of claiming final payment of subsidy.

22. Two-year limit for payment
All final subsidy approvals will lapse upon the expiration of two years from the date of final approval, and the commitment to subsidy payment will then be discharged. The Minister may provide for an extension of time, but this will be granted only in special circumstances.

23. Rights to inspection of site
The Minister, or an authorised person, may inspect the site of any project prior to, during and/or after completion of the works.

All reasonable requests by the Minister or an authorised person for access to the site of capital works within an approved project must be met by the funding recipient.
General conditions of funding (continued)

24. Third party contributions

Unless a special need is demonstrated:

- where funding is approved for works receiving support from third parties, subsidy will, generally, be determined only against the net cost to the applicant (i.e. contributions from other sources may be deducted from the total cost to identify the amount on which funding is determined); and
- maximum subsidy rates for the Department’s programs may be adjusted to reflect other contributions, unless the other funding is provided after final approval of subsidy from the Minister, and full disclosure of this Department’s funding has been provided to the other funding agency(s).

25. Works not to be on private land

Unless approved by the Minister, subsidy will not be paid on works constructed on land which is not owned or controlled by the applicant.

26. Infrastructure owned by private sector

State subsidies may be paid in respect of infrastructure owned by the private sector, if the infrastructure would have qualified for subsidy had it been provided by a council.

A long-term contract between the private provider and the council must exist and be acceptable to the Minister and the Treasurer.

Payment will be made only to the council, unless it requests (and the Minister and the Treasurer approve) payment to another entity to facilitate innovative financing with an identified community benefit.

In assessing a council’s financial capacity to enter into long-term contract commitments, the estimated future payments relating to the capital costs of the facility will be capitalised and the result assessed as a loan.

Assistance may also be provided to a council to construct, for example, a facility which is then leased to, or managed by, the private sector.

27. Consultation

In general, applicants are expected to consult with the community, and with relevant public and private organisations where appropriate.

In some cases, the Minister may require specified consultation to be undertaken prior to final approval being considered.

28. Ineligible costs

State subsidies are intended only to assist with the direct costs of approved projects.

The remuneration of executive officers, such as the Chief Executive Officer, Deputy Chief Executive Officer and Chief Engineer, is not subsidisable.

Where a technical or professional officer of a council is directly employed for 100 hours or more of working time on the planning, designing or construction (including technical supervision) of works approved for subsidy, that officer’s remuneration for the time involved (excluding executive duties) is eligible as a charge and attracts subsidy.

Eligibility also includes administrative staff especially engaged for the work, but does not include any portion of the remuneration of any other clerical or administrative staff of the council, or general overhead charges.

Other examples of ineligible items are:

- legal expenses, other than those associated with resumptions, land purchase, tender documentation and processes related to subsidisable capital works;
- official opening expenses;
- operation and maintenance items;
- temporary works, other than those required as part of the construction of the works; and
- on-costs for council administration or engineering.

29. Crime Prevention Through Environmental Design

Applicants must incorporate Crime Prevention Through Environmental Design (CPTED) principles, where appropriate, in the development of new infrastructure. Where infrastructure is built without this consideration, that infrastructure will subsequently be ineligible for funding under the Security Improvement Program.

Details regarding CPTED are available in appendix 5.

30. Acknowledgment of the State

Funding recipients are to acknowledge the contributions of the State. This may include for capital works projects:

- erection of signage at construction sites;
- placement of a plaque or sign once construction is finished; and
- acknowledgment in publicly made statements, or appropriate documentation.

Advice on use of the Queensland Government logo for the purposes of acknowledgment can be obtained by contacting the Department’s Marketing and Communication Division on telephone (07) 3225 2351 or email mcd@dlgpsr.qld.gov.au.
**Advice regarding applications**

Applicants are encouraged to contact the Department’s Local Government Funding Branch to discuss intended applications prior to lodgement. The Department’s program staff will be able to offer advice that may save applicants unnecessary work or delays. The Local Government Funding Branch can be contacted at:

Email: localgovernmentfunding@qld.gov.au.

Phone: (07) 3225 8695

**Five-year capital works plans**

To assist with its budget management, the Department will seek advice from councils each year on potential projects likely to be undertaken during the ensuing five-year period.

A ‘five Year Projection’ form will be sent to councils in October each year, for completion and return to the Department by 31 January in the following year.

This is intended to provide guidance only, and will not be interpreted as a commitment by councils to the works identified.
**Appendix 1: Calendar of program rounds**

This schedule is current as of March 2006. The schedule outlines times when applications will be invited or programs are open to receive applications. This should be considered as a guide only, particularly for later years. Application deadlines should be checked by contacting the Department during the months leading up to the dates scheduled below.

Funds allocated to individual rounds in the table below are nominal only and should not be interpreted to indicate guarantees of funding in any specific year. Where multiple rounds of funding are indicated, subsequent rounds will be conducted only where funding remains available. In some instances it is possible that funds may be consumed by unexpected high demand in the early years of a program.

Note – this timetable is indicative only and subject to change. Any significant changes will be notified as early as practicable.

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<th>Program</th>
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<td>Landfill Remediation Assessment Program ($1.2 million)</td>
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<td>Regional Centres Program ($26 million)</td>
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Guidelines for local government grant and subsidy programs
### Rural Living Infrastructure Program ($29 million)
- Invitation issued late in 2nd quarter 2006
- Offers made 4th quarter 2006 ($10 million)
- Invitation issued 2nd quarter 2007
- Offers made 4th quarter 2007 ($9 million)
- Invitation issued 3rd quarter 2009
- Offers made 4th quarter 2009 ($10 million)

### Security Improvement Program ($10 million)
- Invitation issued 3rd quarter 2006
- Offers made 4th quarter 2006 ($2 million)
- Invitation issued 3rd quarter 2007
- Offers made 4th quarter 2007 ($2 million)
- Invitation issued 3rd quarter 2009
- Offers made 4th quarter 2009 ($2 million)
- Invitation issued 3rd quarter 2010
- Offers made 4th quarter 2010 ($2 million)

### Show Societies Grant ($10 million)
Distributed to eligible recipients shortly after the State budget is brought down, each year.

### Smaller Communities Assistance Program ($75 million)
- Invitation issued 2nd quarter 2006
- Offers made 4th quarter 2006 ($25 million)
- Invitation issued 1st quarter 2007
- Offers made 3rd quarter 2007 ($25 million)
- Invitation issued 3rd quarter 2008
- Offers made 2nd quarter 2009 ($25 million)
- Invitation issued 3rd quarter 2010
- Offers made 4th quarter 2010 ($2 million)

### Urban Drought Water Program
Open for applications on a continuous basis.

### Water and Sewerage Program
- Projects reducing water loss and consumption
  - Invitation issued 4th quarter 2005
  - Offers made by mid 2006 ($20 million)
  - Invitation issued 1st quarter 2007
  - Offers made mid 2007 ($20 million)
  - Invitation issued 1st quarter 2009
  - Offers made mid 2009 ($10 million)
- Open for applications on a continuous basis.
Appendix 2: Requirements for total management plans

These guidelines are current as of March 2006.

What is a total management plan?

A total management plan (TMP) is an integrated strategic planning framework and business plan, adopted by a water service provider for maintaining or improving the quality and cost-effectiveness of its services, in both the short and long term.

Advice on how to prepare or update a TMP may be obtained from regional offices of the Department of Natural Resources, Mines and Water (NRMW).

Eligibility for subsidies

Funding guidelines for water and sewerage infrastructure require that councils have either an approved TMP, or a document fulfilling the purposes of a TMP to a standard acceptable to the NRMW. These documents must:

- clearly identify future needs to satisfy demands for water and sewerage services;
- show that all available options to meet these needs have been adequately considered, including demand management options; and
- show that sustainability issues have been appropriately considered.

The council or board must formally adopt the TMP.

In essence, the Department seeks to ensure that funding is directed towards the optimal solutions, and that planning is in place to direct effective and efficient management of infrastructure.

From June 2007:

- A TMP must demonstrate how a council plans to minimise water consumption and loss. Sources of water savings should be clearly identified (e.g. reduction of system losses, increased re-use of wastewater, demand management initiatives).
- Councils will need to identify consumption reduction targets in their TMPs. Proposed targets need to be discussed with and endorsed by NRMW.

Where regional or other targets have been endorsed by the State, these targets will apply.

For other councils, NRMW has prepared generic minimum targets based on projected population growth. These targets will be acceptable unless the State introduces or endorses other targets. Councils, of course, are encouraged to exceed these targets if practicable.

If a council does not consider it can meet these generic minimum targets, it will need to discuss this with NRMW accepting a different target.

The generic targets are a reduction in the total volume of water taken from the source(s) of supply. The targets are:

- councils likely to experience 30% or more population growth from 2005 to 2020 – 25% reduction by 2020;
- councils likely to experience 15% to 29% population growth from 2005 to 2020 – 20% reduction by 2020; and
- other councils – 10% reduction by 2020.

Attainment of such targets will require councils to think comprehensively about minimising consumption in both existing and new developments.

Only those targets identified by councils and endorsed by NRMW will be used as a basis for funding purposes. Subsidy will only be provided for the infrastructure identified in a TMP as being necessary to meet these targets.

Progress towards these targets must be monitored. Where targets prove difficult to meet, councils should advise NRMW to negotiate new targets.

Where recognised regional water supply strategies identify alternative targets, those targets should be used.

There is a new requirement for water service providers to prepare drought management plans and systems leakage management plans, as stipulated under amendments to the Water Act 2000.

The role of the Department of Natural Resources, Mines and Water

Prior to applying for subsidy or financial assistance, a council must have prepared a planning report for the relevant water or sewerage works. NRMW will consider and approve planning reports and TMPs for subsidy purposes.

Approval by NRMW of a TMP or planning report does not constitute an approval of subsidy.

NRMW will forward advice to the Department on the extent to which the proposed works are considered to be eligible for subsidy or financial assistance. This would form the basis for proceeding with the detailed design, and making future payments of subsidies or financial assistance.

NRMW will also advise the Department, and the council, whether or not an approved TMP is considered to be in place.

The role of the Department of Local Government, Planning, Sport and Recreation

The Department is the agency responsible for subsidies and financial assistance payable to councils and, as such, will determine the level of subsidy or financial assistance applicable for any works. Councils will receive advice directly from the Department on the level of any subsidy or financial assistance approved.

The Department relies on NRMW for technical advice on the adequacy of TMPs.

Guidelines for local government grant and subsidy programs
Appendix 3: Planning a landfill site investigation – hints and traps

The following information is provided to assist councils determine the work required to ascertain whether a landfill is causing, or has the potential to cause, environmental harm.

Contaminated land investigations are site-specific, so there is no “recipe” for a preliminary investigation. Therefore, areas which should be investigated are discussed with reference to site-specific characteristics.

As contaminated site investigation is a highly specialised area, careful consideration should be given to finding the right contaminated land consultant. Information about the Environmental Protection Agency (EPA) criteria for accepting consultant’s reports and advice on choosing a suitably qualified and experienced consultant are offered below.

Why must the contaminated land consultant have certain qualifications and expertise?

Under the Environmental Protection Act 1994, a consultant must be a member of one of the professional bodies (‘prescribed organisations’) listed in schedule 8A of the Environmental Protection Regulation 1998. They must also have qualifications and experience relevant to the investigation before the EPA will accept their reports.

It is the individual who performs the investigation whose qualifications and experience are assessed, not the company. Therefore, care must be taken indetermining who is to actually conduct the work, to establish whether the EPA will accept their investigation report.

Helpful hints about how to choose a contaminated land consultant and details about the qualifications and competencies required by the EPA can be found in the information sheet ‘Choosing a contaminated land consultant’, which is available from the EPA. The EPA normally requires a minimum of five years relevant work experience, and experience in at least three of the areas listed in the information sheet.

Why should the contaminated land consultant have extensive landfill experience?

The investigation of landfill sites is more difficult than most contaminated site investigations, because groundwater assessment is usually required and engineering considerations (such as stability, erosion, subsidence and settlement) need to be examined. It is essential that people conducting the investigations have access to, and input, where needed, from people skilled in hydrogeology, chemistry and geotechnical engineering.

In some cases, such expertise exists within the consultancy company. However, in some instances, the investigator will need to subcontract certain parts of the investigation which are not within their area of expertise. If this is the case, it will be necessary to clarify who the subcontractors are, what their role is and who will be supervising them.

While the most experienced staff within an organisation will have the highest hourly charge, the investigation is likely to provide more valuable information and may be less expensive because a highly experienced person will be able to strategically locate test pits, boreholes and groundwater monitoring wells to obtain the most reliable and accurate information. Therefore, an experienced landfill investigator will provide more value for money by obtaining the same information from fewer locations than an inexperienced consultant.

It is possible to contaminate the underlying aquifer by drilling bores through the landfill. Consequently, inexperienced consultants may cause environmental harm. It is therefore imperative that a hydrogeologist or consultant with extensive groundwater experience be used to establish groundwater monitoring wells.

The calculations involved in determining groundwater velocity rely on an accurate classification of soil type. If the soils are not classified correctly, the groundwater flow may be “out” by orders of magnitude. Therefore, it is imperative that soil profiles be logged by qualified geologists or soil scientists. If there is any uncertainty about the soil classification, then samples should be collected for laboratory geotechnical testing.

How can costs be reduced?

The questionnaire for each site was designed to fulfil the purpose of a site history investigation. If all efforts are made and avenues investigated (e.g. council records, local drillers and Department of Natural Resources, Mines and Water for groundwater and soil profile information) to correctly answer the questionnaire, then it is unlikely that a consultant will obtain any additional information by undertaking site history or ‘desktop’ studies, and money could more wisely be spent on field investigations. However, if you believe that benefit would be gained from such an investigation, please provide an explanation with the scope of works.

The records investigated and information collated by council during the completion of the questionnaires should be passed on to the contaminated land consultant for inclusion in the consultant’s report about the preliminary investigation.

Most consultants charge clients for the full costs associated with mobilisation to a site, including the drill rig operator’s time and expenses in getting to the site (e.g. the consultant’s airfare, accommodation and travel time). These costs could be significantly reduced if a consultant is shared with neighbouring councils who are also participating in the program. This approach would allow maximum use of funds for actual investigation work.

Guidelines for local government grant and subsidy programs
Appendix 3: Planning a landfill site investigation – hints and traps (continued)

**What constitutes a preliminary investigation?**

The amount of work that constitutes a preliminary investigation is very subjective. Each time a consultant and drill rig are mobilised to a site, travel costs, etc. will be passed onto the client. Therefore, it is recommended that:

- all areas of possible risk or areas where information gaps exist be investigated in the preliminary investigation, so that it can be assumed that the site is not an environmental risk if the results of the sampling program are not elevated; or
- confirm the areas where problems exist, if results are elevated. If this is the case, then the health and environmental risks associated with the particular problem area could become the subject of a detailed investigation at some later stage.

Depending on the site-specific characteristics of the landfill, investigation of all or a combination of the following may be required:

- soil borings to establish natural soil conditions in the area;
- monitoring wells to establish physical and chemical groundwater properties;
- capping investigation program;
- landfill gas investigation;
- leachate analysis;
- testing of adjacent waters and sediments; and
- testing of adjacent surface soil.

All work should be done in accordance with a health and safety plan.

Many groundwater monitoring wells have been installed at landfill sites over the years but have been destroyed. Arrangements should, therefore, be made with the environmental consultant to ensure that monitoring wells are constructed for the long-term, and are stable, secured and well marked to ensure that they are not destroyed. All monitoring wells should be surveyed into AHD and N/E grid system by Global Positioning Satellite or other means.

The program aims to determine the extent of any remediation work which may be necessary, and the likely costs of that work. It is unlikely that there will be sufficient funding available to develop site-specific remediation plans and costings for every site. Extrapolations may, therefore, be required to fulfill the program objectives. To allow for such extrapolations, knowledge of the following would be required as a minimum:

- the dimensions of each landfill;
- the depth to groundwater from the landfill base; and
- soil types, thicknesses and permeabilities which form the current capping system.

**What should the contaminated land consultant’s report address?**


It is also important that the following additional information be covered in the consultant’s report:

- actual dimensions of landfill (e.g. extent of rubbish);
- whether the landfill was sited over a former creek bed or low-lying swampy ground;
- soil profile logs (in accordance with the unified classification system);
- discussion about recent rainfall events in relation to sampling events (e.g. creek water and groundwater results may be significantly lower following heavy rain than if the area has not received rain for months, leachate may be evident only following recent rain);
- description of creek, stream, or river water flow (e.g. stagnant, non-flowing, fast-flowing, well flushed);
- discussion about quality and uses of groundwater and surface waters (creek, stream or river) in the area;
- description of samples (e.g. colour, sheen, odours) and sample locations;
- description of sample pre-treatment or preservation, both in the field and at the laboratory (e.g. results of water samples will provide different information if the sample has been acidified or filtered before analysis); and
- ‘Conclusions and recommendations’ should clearly discuss whether the site is, or is likely to, pose a health or environmental risk in its present State. If the site is likely to pose a risk, then discussions about where the problem areas exist, and recommendations for remediation/management work or the scope of work and objectives for further investigation should be provided.

**How can the questionnaires help to plan scopes of work?**

The questionnaire can assist in the determination of areas which require investigation. For instance:

- if the site ceased accepting waste (Q4) more than 20–30 years ago, then gas investigations are unlikely to be required;
- if the site received less than 1,000m3 of waste (Q6), then it may be more economical to consider moving the waste (if risks are suspected) to a larger facility than to have a site investigation conducted;
- if farm chemicals were disposed of at the site (Q14), then perhaps pesticide scans, particularly organochlorines and triazines, and possibly organophosphates should be considered. Given that these tests are expensive, it is recommended that such tests be run on samples which are most likely to contain pesticides. If results of a couple of strategic samples do not show that pesticides are present, then further pesticide sampling is probably not warranted;
Appendix 3: Planning a landfill site investigation – hints and traps (continued)

How can the questionnaires help to plan scopes of work? (continued)

- if the site is within 100 m from a creek or river (Q18), then the collection of sediment and water samples from the creek or river is likely to provide valuable information;

- if thicknesses and permeabilities of soil layers which form part of the capping over the landfill are uncertain (Q22), or if you wish to ascertain whether the existing capping is sufficient to minimise the generation of leachate, then investigation of the soil layers over the landfill will be necessary. Bear in mind that such investigation will create infiltration points for rain and surface water to enter the landfill and generate leachate. Therefore, care will be required in re-instating the capping immediately after investigation;

- if surface vegetation is not healthy (Q44), and attempts have been made in the past to establish healthy vegetation, then soil sampling may determine whether sufficient nutrients exist or whether some contaminant is present which is impeding vegetation growth. However, such investigations would be futile if upgrading of the capping system is required;

- if the groundwater depth is not known (Q46), and local drillers and Department of Natural Resources, Mines and Water were unable to provide depth estimates, then one or two boreholes should be constructed to determine the groundwater depth. More detailed groundwater investigations are probably only necessary if the groundwater table is within 10 m of the landfill base. If the soil profile under the landfill is predominantly sand, then groundwater up to 20 m deep may require investigation;

- if the soil profile under the landfill (Q47) is not known, then investigations should be undertaken to ascertain this information. Three or four strategically placed soil borings or test pits may be sufficient if the profiles at each location are consistent. If the profiles are not consistent, then additional locations may be warranted. Consideration should also be given to the possibility that the landfill may have been sited over a former creek bed or low-lying swampy land. Therefore, while it is not generally sound environmental practice to bore through rubbish, it may be prudent to locate a couple of boreholes through the centre of the landfill to ascertain soil profile data. Aerial photographs from before landflling commenced would be useful in determining where low-lying areas or creek beds exist; and

- operations at landfills in Queensland have generally not been supervised. Therefore all types of waste, including regulated waste, may have been disposed. The costs associated with testing surface waters and groundwater for a wide range of parameters at each sample location would be prohibitive. Whilst testing for a wide range of parameters is required to ascertain whether environmental harm exists, the presence of leachate (Q50 and Q56) should be confirmed before commissioning expensive tests. For instance, it may not be possible to ascertain whether surface water is rainwater or leachate. Therefore, testing for parameters such as pH, BOD (biological oxygen demand), TOC (total organic carbon), ammonia, nitrate and phosphate will confirm whether leachate is present. Specific expensive tests, such as pesticide scans, phenols, and other semi-volatile organic scans could be conducted after it has been confirmed that the sample contains leachate.
Appendix 4: Landfill site investigations, options, remediation and management

These guidelines are current as of March 2006.
A glossary of terms is included at the end of this appendix.

Councils would be aware that they have both statutory (Environmental Protection Act 1994) and common law obligations in respect of closed landfill sites.

Closed landfills may require management and infrastructure programs, such as rebuilding a final capping profile or retro-fitting leachate management systems, to minimise the potential for causing environmental harm. This guideline aims to:

- assist clients to assess the risk of closed landfill sites causing environmental harm; and
- identify for planning purposes the issues that may affect actual, proposed or likely future land use options at closed landfill sites.

Volume and temporal figures given in this guideline are indicative.

Factors which contribute to environmental harm

While the level and depth of investigation for site assessment is dependant on the landfill history (e.g. types and volumes of waste disposed) and site area constraints, certain environmental factors often pose a greater risk of contributing to environmental harm. These include:

- landfill settlement and stability of landfill processes;
- leachate management;
- groundwater assessment;
- landfill erosion and stormwater contamination;
- landfill gas management; and
- landfill buffer zone.

Landfill settlement and stability of landfill processes

During landfilling procedures for a wide range of waste streams, waste components can become well mixed and later undergo a range of physical, chemical and biological processes. For example, landfill settlement physical processes will continue until decomposition and compression processes stabilise. Most landfill settlement occurs during the first five years of post-closure, but this period could vary due to the following mechanisms:

- weight compaction and compression from subsequent layers of deposited waste;
- ongoing biological and chemical decomposition processes of the waste; and
- waste types and the amount of machinery compaction of the waste and soil cover surfaces applied during placement.

Landfill settlement may result in ponding of water on the surface and increased infiltration, thereby promoting generation of leachate. Estimating the amount of settlement still to occur is important for the purpose of constructing an effective final capping profile. For example, loosely compacted, highly organic waste will biodegrade quickly and to a higher degree, displaying higher settlement rates than heavily compacted building and demolition waste.

The appearance of cracking in the landfill capping, parallel or concave to batter slopes, or in the upstream part of a gully infill, can indicate instability of the landfill mass and part is becoming detached, or the landfill itself (or part thereof) is moving downslope.

Landfill processes may continue decomposing waste and changing its form over a period of many years (with many contaminants being stabilised). The rate of decomposition is determined by several factors including:

- the composition of the waste stream;
- the moisture content of the waste stream;
- the degree of compaction of the waste;
- the geological and hydrogeological regime of the site;
- the design of the site (e.g. lined or unlined); and
- the climate (e.g. temperature, rainfall and evaporation rate).

A final capping landform should be installed and maintained (after settlement occurs) to manage stormwater and erosion processes and to manage leachate production.

Leachate management

Evidence of leachate can be found:

- in stormwater leaving the site;
- in stormwater pooled at the site as a result of escapes through the batters; or
- after detection monitoring produces evidence of groundwater contamination.

Ongoing leachate generation indicates that the landfill decomposition processes are still active. It also indicates that infiltration is occurring by some combinations of mechanisms, commonly:

- surface rainfall events;
- surface or groundwater through-flow for parts of the landfill;
- groundwater proximity to, or in the landfill base; or
- groundwater seasonally rising into the waste pile.
Appendix 4: Landfill site investigations, options, remediation and management (continued)

Leachate management (continued)
The input data required by modelling packages to estimate infiltration rates through capping layers (e.g. Hydraulic Evaluation of Landfill Performance) includes:
- cover layer thickness;
- total porosity (measure of the volume of void space per volume of soil);
- field capacity (volumetric water content of the soil remaining following a prolonged period of gravity drainage);
- wilting point (lowest volumetric water content that can be achieved by plant transpiration);
- soil water content;
- saturated hydraulic conductivity (coefficient of permeability);
- landfill footprint area; and
- landfill buffer zone.

Whatever percentage of rainfall that may infiltrate the cover (e.g. 5-20%) there is potential for a proportion of that to be absorbed within the waste pile or evaporated.

Leachate generation available for off-site/groundwater transport may be considerably less than that infiltrated. Leachate generation rates and potential for site attenuation capacity to be exceeded by excess leachate can be estimated as a function of waste stream properties and environmental inputs including:
- composition and volume of the waste pile (including amount of organic waste and the length of time since this waste was disposed);
- soil geology and landfill unit topography;
- climate and rainfall variation of events;
- infiltration rates and evaporation rates;
- proximity to groundwater resources; and
- landfill footprint area or potential contaminated area.

Leachate remediation works at a former landfill can include retro-fitted drainage channels, sumps and pumping and collection systems, together with detection monitoring for relevant water resources.

Groundwater assessment
Many former landfill sites have limited information available concerning adjacent groundwater resources and its potential for beneficial use. A groundwater assessment program should be considered for former landfill sites:
- in constrained site areas; or
- with large municipal waste volumes landfilled (e.g. greater than 200,000 tonnes deposited over ten years, and with some commingled regulated waste).

Investigations should include, but not be limited to:
- proximity to the waste pile (e.g. the depth to the uppermost aquifer and other interconnected aquifers);
- groundwater quality and any indication of leachate contamination;
- present and potential groundwater use within a one kilometre radius of the site;
- the predicted extent of the leachate/groundwater attenuation zone surrounding the landfill; and
- soil properties and thickness of underlying strata.

This information may be available from:
- recently closed former landfill sites that have undertaken groundwater assessment as a part of the Environmental Protection Act 1994 licensing process;
- other State department records (e.g. Department of Natural Resources, Mines and Water); and
- adjacent properties with similar hydrogeological systems and groundwater bores installed.

Landfill erosion and stormwater contamination
Inadequate final cover contours, settling processes and lack of vegetation can accelerate erosion of landfill cover systems and expose the buried waste in the worst cases. Subsequently, the surface run-off may contain high sediment loads or high biological oxygen demand. In order to minimise the quantity of leachate generated by rainfall infiltration at the former landfill:
- stormwater should be at least diverted around the footprint of the landfilled waste; and
- the cover system landform should be contoured to minimise ponding.

Installation of diversion drains that minimise surface water flow velocities, and retention ponds for settling sediment loads (or other equivalent measures) may be necessary to manage erosion and sediment transport processes.

Monitoring programs may be required to provide accountability for off-site water releases.
Appendix 4: Landfill site investigations, options, remediation and management (continued)

Landfill gas management

- Landfill gas emission can be identified through odour and evidence of vegetation degradation or distress. Landfill gas emission pathways include all forms of cover material, preferential pathways in landfill batters or void landfill walls, or in base liner systems and leachate management systems.
- Landfill gas monitoring and control may be required at larger landfills which have received biodegradable waste streams. Landfill gas monitoring, collection and distribution measures are particularly important if a post-closure land use involves public access or impact sensitive places, or industry is located nearby.
- Landfill gas generation rates reach a peak after a number of years into the post-closure period, and then taper off. The rates can be modelled and monitored. Inputs to the models include annual and cumulative waste volumes, waste composition, waste depth to area ratio, climatic regime and the period of waste disposal at the site. Monitoring and collection programs for the release of landfill gas from a landfill should be implemented so that the concentration of landfill gas must not exceed:
  - 25% of the lower explosive limit for methane when measured in facility structures (but excluding facility structures used for landfill gas control and landfill gas recovery system components); and
  - the lower explosive limit for methane at the landfill facility boundary.
- Modelling in south-eastern Queensland indicates that monitoring and provision of collection systems may apply to municipal landfills accepting greater than 20,000 tonnes of waste per annum for a period of at least ten years. This is dependant on the criteria above (e.g. if the period for disposal is longer for the same volumes, the generation rate is lower and more gas could vent through attenuation). For example, typical model results showed that:
  - at approximately 200,000 to 300,000 tonnes of ongoing waste deposited, landfill gas generation rates dictate that monitoring should be initiated; and
  - at approximately 500,000 tonnes, collection and venting systems should be installed subject to monitoring outcomes.
- Landfill gas volumes available for venting will vary with the design and infrastructure. Containment designs can minimise attenuation through landfill batters, leachate systems etc., compared to natural attenuation landfills.

Landfill buffer zone and adjacent land uses

- Maintaining a zoning based landfill buffer zone depends on the outcomes from adjacent land use changes and the policy, practice and precedents within council planning sections. The uncertainty of future planning outcomes has resulted in:
  - a number of ‘new’ housing estates or other impact sensitive places being located within 150 metres of medium and larger former landfills; and
  - a recommendation that buffer distances should be specified in future planning approvals where relevant (e.g. the footprint of any landfill unit that accepted putrescible or regulated waste must extend no closer than 100 metres from a site or change of land use boundary).
- An effective on-site buffer zone can provide:
  - an aesthetic barrier such as trees, shrubs and other vegetation or earthen embankments to screen the landfill and protect visual amenity values;
  - a mitigation measure for air emissions and water resource protection;
  - an area surrounding the landfill unit that is relevant to the landfill’s attenuation capacity and adjacent land uses;
  - a recognition of due diligence procedures to manage potential nuisance impacts from landfill activities to, for example, impact sensitive places; and
  - sufficient area to effectively manage any retro-fitted infrastructure needed at the site.
- Indicative attenuation buffer distances surrounding a landfill in an unconstrained site area could be:
  - smaller landfill – 30 metres;
  - medium landfill – 30 to 50 metres; and
  - larger landfill – 50 to 200 metres.
- Problems with ineffective buffer zones surrounding former landfills include:
  - persistent complaints about odour, vermin and aesthetic amenity;
  - attenuation of landfill gas, leachate or contaminated stormwater impacting on adjacent land or water resources; and
  - a lack of area to manage environmental impacts (e.g. install remediation works).

Guidelines for local government grant and subsidy programs
Appendix 4: Landfill site investigations, options, remediation and management (continued)

Glossary of terms

‘attenuation’ the dilution of contaminants in solution (such as leachate) by passing through a porous medium (such as permeable soils) by natural mechanisms (such as dispersion by mixing with water and removal by ion exchange, chemical precipitation, adsorption filtration or biodegradation).

‘attenuation capacity’ the volume of waste that a particular land area (constrained by social values, a cadastral boundary, climate, an air-shed, soil properties and landform, water regimes and resources and an estimated landfill management period) can contain through physical, chemical and biological processes. If contaminants attenuate (or other environmental harm is caused from the disposal of waste) outside that particular land area, then attenuation capacity is exceeded.

‘attenuation factor’ a particular environmental criteria that may contribute to limiting a site’s attenuation capacity (e.g. noxious and offensive odours transported off-site, high leachate generation rates, contaminant levels in waste).

‘attenuation zone’ the area around a release to groundwater in which the concentration of contaminants in the release is reduced to ambient levels through physico-chemical and microbiological processes.

‘impact sensitive place’: • a house, unit, mobile home, caravan or caravan park, residential marina or other residential premises;
• a motel, hotel or hostel;
• a kindergarten, school, university or other educational institution;
• a medical centre or hospital;
• a protected area;
• a public park or gardens; or
• a place used as an office for business or commercial purposes.

‘leachate’ liquid produced when water, usually from rain, filters through any porous material. It may contain either dissolved or suspended material, or usually both. In the case of landfills, the product may be toxic, contain live microorganisms and could possibly enter groundwater, surface water or soil.

‘smaller landfill’ an indicative landfill category based on waste volumes disposed at a landfill yearly (less than 5,000 tonnes).

‘medium landfill’ an indicative landfill category based on waste volumes disposed at a landfill yearly (5,000 tonnes to 20,000 tonnes).

‘larger landfill’ an indicative landfill category based on waste volumes disposed at a landfill yearly (greater than 20,000 tonnes).
Appendix 5: CPTED and safety audits

Crime Prevention Through Environmental Design

The emphasis of Crime Prevention Through Environmental Design (CPTED) is on identifying which aspects of the physical environment affect peoples’ behaviour, and then using these factors to allow the most productive use of space with a minimum of crime and loss of personal freedom.

The three main features of CPTED to evaluate when intending to implement a crime prevention strategy are:

- territorial reinforcement – incorporates designing the ‘ownership of space’. An example of territorial reinforcement is the use of gardens along one side of a footpath denoting the commencement of private space. This produces a feeling that a user should not overstep a psychological boundary and also that a community is cared for;

- natural access control – used in conjunction with territorial reinforcement, and focuses on providing psychological cues to deter unauthorised entry. Design features which can be used include gardens, footpaths, stairs, changes to ground levels, tactile walking surfaces (e.g. gravel), and landscaping. Most people will walk around rather than through these barriers even if they are only psychological; and

- natural surveillance – incorporates designing space (public, private and semiprivate) so that it can be easily surveyed by users. This includes designing buildings with windows overlooking pedestrian routes, apartment complexes in the inner city, and offices which overlook car parking areas. This strategy also includes training workers such as post office and shopping centre employees to watch over the area they work in. This not only uses good design of space, but also the people that use that space on a daily basis.

Safety audits

Safety audits aim to minimise opportunities for crime, particularly violent crime, in public areas through improvements to the design and physical layout of the local environment.

In a safety audit, people work together to inspect the public spaces they use, and to determine what actions can be taken to make their community safer.

Small teams undertake an audit by examining things like the location and adequacy of lighting, public transport stops, street signs, public telephones, and the nature of safety and security in parks, gardens and shopping centres.

The types of action which can be taken as a result of an audit may be as simple as reporting a broken street light or installing better street signs, or asking a local trader to light dark spots in a car park.

Information on the conduct of an audit can be downloaded from: www.police.qld.gov.au.
Appendix 6: Workbook for problem solvers

Security Improvement Program

Step 1 – Scanning

Scanning is the first step in problem solving. Scanning simply means problem identification. The first purpose of scanning is to see if a problem really exists and whether any further action is necessary.

1.1 Briefly describe the problem

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

1.2 Where is the problem located?

House/unit number: _______________________________________________________
Street name: ____________________________________________________________
Suburb name: ____________________________________________________________
Statistical local area number: _____________________________________________
Other location (describe): _________________________________________________

1.3 What type of location is it?

☐ Private residence
☐ Private space
☐ Business premises
☐ Public space
☐ Other (describe)

1.4 When does the problem occur?

Day of week
☐ Monday
☐ Tuesday
☐ Wednesday
☐ Thursday
☐ Friday
☐ Saturday
☐ Sunday

Time of day
☐ Morning
☐ Afternoon
☐ Evening
☐ Night

1.5 What kind of problem is it?

☐ Chronic problem
☐ Flare-up problem
☐ Continual low level problem
☐ Close proximity problem
☐ Other problem (describe)

1.6 How serious is the problem?

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<th>3</th>
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<th>5</th>
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<tr>
<td>Minor</td>
<td>Moderate</td>
<td>Major</td>
<td>Serious</td>
<td>Grievous</td>
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1.7 Who has the primary responsibility for resolving the problem?

☐ Police
☐ Federal government
☐ Federal agency
☐ State government
☐ Local council
☐ Non-government agency
☐ School
☐ State agency
☐ Business owner
☐ Business centre manager
☐ Transportation company
☐ Offender
☐ Victim/complainant
☐ Private property owner
☐ Club or association
☐ General public

Guidelines for local government grant and subsidy programs
Step 2 – Analysis

The second stage, analysis, is the heart of the problem solving process. The purpose of analysis is to learn as much as possible about the problem in order to identify its potential cause.

2.1 Who is involved in the problem?
- Victim
- Complainant
- Offender
- Informant
- Third party (describe)

2.2 Who is responsible for the occurrence of the problem and why?

2.3 What is the harm that has been done?
- Personal injury
- Risk of personal injury
- Property damage
- Risk to property
- Other (describe)

2.4 Why does the problem occur?

2.5 What has been the previous response to the problem?

2.6 Is this problem linked to other incidents?

2.7 Are there features or characteristics of the location, which contribute to the problem or allow it to persist?
- Yes  No
  If yes then describe:

2.8 After having examined all elements of a problem, it is important to formulate a final problem statement, which clearly defines the problem and identifies its underlying cause.

Problem statement

Nature of the problem:

Underlying cause of the problem:
Appendix 6: Workbook for problem solvers (continued)

Step 3 – Response

The response stage of problem solving is aimed at addressing the underlying causes of a problem. A response should aim at reducing the number of incidents, reducing the seriousness of the problem, designing better methods of handling the problem or removing the problem from police consideration.

3.1 What is the primary objective of the response to the problem?

3.2 What source of information will be used to measure the objective?
- Calls for service data
- CRISP reports * (see below)
- ABS statistics
- Case study data
- Other data source (describe)
- Intelligence reports
- Survey data
- Interview data
- Impressionistic data

* CRISP (Crime Reporting Information System for Police)

3.3 What strategy will be used to address the problem?

3.4 How long will the strategy be in place?
- Start date: ________________
- End date: ________________

3.5 Who are the individuals involved in implementing the strategy?

1. __________________________
2. __________________________
3. __________________________
4. __________________________
5. __________________________

3.6 What are the key tasks involved in implementing the strategy?

T1. __________________________
T2. __________________________
T3. __________________________
T4. __________________________
T5. __________________________

3.7 Who will monitor the response?

- Committee
- Strategic policing cell
- Intelligence officer
- Community consultative committee
- Research officer
- Other (describe)

- Police
- Officer in charge
- Designated member
- Neighbourhood Watch Group
- Council officer

3.8 What additional human, material and financial resources will be needed to implement the resources?

1. __________________________
2. __________________________
3. __________________________
4. __________________________
5. __________________________
Appendix 6: Workbook for problem solvers (continued)

Step 4 – Assessment

The final step is used to determine whether the strategies implemented to resolve the problem have achieved desired outcomes. Assessment is an important component of problem solving as it allows you an opportunity to fine tune a particular response or formulate an entirely new approach to the problem.

4.1 Overall, how successful was the response in reducing or eliminating the problem?

1. ________________
2. ________________
3. ________________
4. ________________
5. ________________

4.2 What evidence is there that demonstrates the effectiveness of the response? (if applicable)

1. ________________
2. ________________
3. ________________
4. ________________
5. ________________

4.3 What other evidence is available to demonstrate the effectiveness of the response?

1. ________________
2. ________________
3. ________________
4. ________________
5. ________________

4.4 What modifications could be made to enhance the effectiveness of the response? (if applicable)

4.5 Overall, how would you rate the level of organisational, managerial or individual support given to implementing the response?

1. ________________
2. ________________
3. ________________
4. ________________
5. ________________

4.6 Does this problem require ongoing monitoring?

☐ Yes ☐ No

If yes – On what basis should the problem be monitored?

☐ Weekly ☐ Monthly ☐ Annually ☐ Day of next review: ________________

Guidelines for local government grant and subsidy programs