

### INTRODUCTION

## Across Brisbane, many sporting and community clubs lease facilities or sites that are located on closed landfill.

Using former landfills or 'tips' as sporting fields and other recreational areas is a positive and valuable use of land. Careful management of closed landfill sites is important to avoid potential environmental harm or health issues that may arise from the way you use the site. We all have a role to play in minimising risks when using these sites.

The purpose of this guide is to provide information about closed landfills and the additional responsibilities of lessees on closed landfill sites. The guide also outlines the requirements for undertaking any potential work on closed landfill sites, including upgrades and day-to-day site management activities.

To ensure that Brisbane City Council and lessees continue to meet Queensland Government laws, it is essential that lessees seek Council approval for any excavation, building or development works on a closed landfill site. Any proposed change to the use of the site also requires Council approval and may require further site risk and contamination assessment which can impact cost and timelines for works.

Before you start planning works or changes to the site, please phone Council on 3403 8888 and ask to speak to the Community Facilities team. The team can provide you with essential pre-planning advice, grant application assistance, guidance on technical information and identification of site constraints, and appropriate site management processes.

# RESPONSIBILITIES OF LESSEES ON CLOSED LANDFILL SITES

## As the lessee of a closed landfill site you are responsible for a range of day-to-day activities, onsite works and maintenance.

When dealing with land that is or may be contaminated (including all closed landfill sites), you must meet the general environmental duty (GED) and also obtain any permits that may be required to carry out development on the land or to remove contaminated soil. Under the *Environmental Protection Act 1994*, everyone has a GED to not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm.

Landowners and occupiers of contaminated land which is listed on the Environmental Management Register or Contaminated Land Register, or suspected of being contaminated, must ensure they meet their GED when using the land to ensure any risks to human health and the environment are known and managed. For more information, visit qld.gov.au and search 'managing contaminated land'1.

To ensure both Council and lessees continue to meet our respective GED, before you start planning any works or changes to a closed landfill site, please contact Council's Community Facilities team.

#### Key lessee responsibilities

- 1. Provide safe and accessible facilities.
- Maintain compliance with lease conditions, and in particular, follow the Application for Works (AFW) process for any proposed works or site development and comply with all AFW conditions.
- Notify Council's Community Facilities Operations team immediately if you see or suspect:
  - subsidence
  - large surface holes or potential voids
  - landfill leachate
  - exposed waste
  - landfill gas odours.

Pages five and six of this guide provide more information about these risks.

- 4. Maintain air vent spaces underneath buildings and do not enclose undercover areas.
- 5. Always protect and maintain the clay capping or soil cover barrier over waste (landfill cap).
- Do not carry out unauthorised excavation or activities that may damage the landfill cap or expose waste.
- 7. Obtain a soil disposal permit before removing contaminated soil from the site. For more information, see Appendix 2.
- 8. Engage trained professionals, using approved vehicles, to manage, remove and transport hazardous materials from the site. Refer to Appendix 3 for more information on how to find trained professionals.
- 9. Ensure new and upgraded underground services, including sewer, water and electrical, are surveyed and relevant documentation is kept.
- 10. Manage day-to-day safety by informing site workers, contractors, subcontractors and club members about closed landfill site risks.
- 11. Carry out maintenance to sustain good grass cover.
- 12. Ensure subcontractors and site workers are aware that the site is a closed landfill and job-specific risks are managed through safe work practices.
- 13. Notify sub-lessees of landfill risks and responsibilities and provide them with a copy of this guide.
- 14. If the site has a Statutory Site Management Plan in place, ensure that all conditions are complied with. More information is provided in Appendix 5.

Queensland Government, Managing contaminated land, The State of Queensland, 1995-2019, viewed July 2019, gld.gov.au/environment/pollution/management/contaminated-land/assessing/duty

# WHAT IS A CLOSED LANDFILL SITE?

A closed landfill site is land that has previously been used as a rubbish dump, landfill or 'tip' and may be constructed with the following elements.

- Landfill liner an impervious clay or plastic liner designed to prevent contaminants entering groundwater.
- Waste pile a multi-cell or single-cell section of waste that may be compacted.
- Landfill cap a clay, soil or mixed geotextile cover over the waste pile. Cap depth may vary or may not be present at all.
- **Surface drains** grassed drainage lines to direct water to receiving environments.

- Landfill leachate collection system underground pipe network collecting leachate for disposal to sewer for treatment.
- **Leachate** contaminated water that has filtered through buried waste.
- Landfill gas a mixture of methane, carbon dioxide and other trace gases produced when organic waste decomposes.

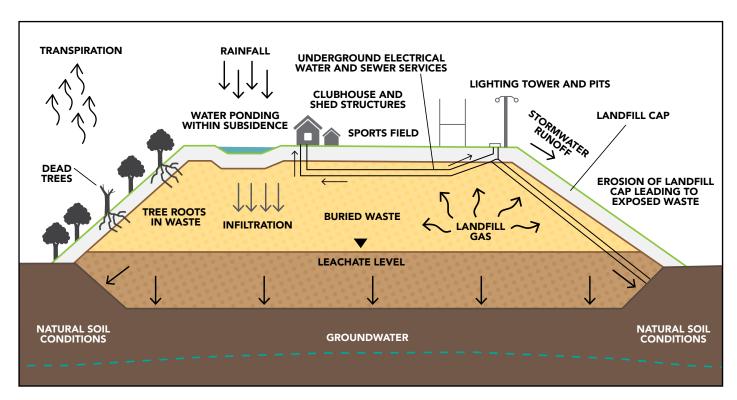


Figure 1: Landfill cross-section (not to scale)

## **UNDERSTANDING LANDFILL RISKS**

Generally, day-to-day use of sporting fields and open space parklands on a closed landfill site is safe and presents a low risk to users and the community.

Lessees should be aware of landfill risks during their day-to-day operations and maintenance.

Examples of closed landfill risk aspects are included below.

- Contaminated soil and fill causing skin irritation, injury or sickness.
- Contaminated water causing skin irritation, injury or sickness.
- Sharp or dangerous objects causing mild or serious injury.
- Working in and around explosive or toxic air environments.
- Asbestos-containing materials in soils or on the ground surface causing injury or sickness.
- Landfill surface collapse causing subsidence or voids and surface holes causing potential trip, fall or injury hazards.
- Spread of contaminated soil or waste to clean land resulting in increased contamination and high clean-up costs.
- Release of leachate to the environment resulting in land or water pollution, clean-up costs and possible fines.
- Significant increase in project costs to manage risks, contaminated soils or waste disposal.

#### Common landfill risks

As previously outlined, a closed landfill site can present hazards that pose potential risk to the environment and site users' health and safety. More information about typical hazards is detailed below.

#### Soil contamination and hazardous waste

Soil contamination exposure can occur through any works which cause site disturbance. Human contact with waste and contaminated soil poses potential health hazards, including physical injury (for example, from broken glass or rusted metal) and possible reactions to chemicals. The key to minimising contact with buried waste is to protect the capping material.

Any site development should be planned to limit disturbance to waste and the landfill cap, and take into account the level of soil contamination at the site. It is essential that lessees and design and construction workers understand environmental and safety constraints to be considered during planning and construction.

Lessees responsible for projects with approval to excavate must ensure that contaminated soil being removed from the site is managed under a soil disposal permit issued by the Queensland Government. Lessees must retain any documentation associated with this permit, so there is evidence that waste was managed appropriately. More information on soil permits can be found in Appendix 2.



#### Subsidence and voids

Subsidence is caused when the underlying landfill decomposes, leaving the ground surface uneven. When combined with water, this can cause erosion of the waste underground, resulting in large void spaces and potential surface collapses. If not properly managed, subsidence has the potential to cause significant damage to lessee facilities and pose safety risks to site users.

Voids usually start as a small, round hole found across the grassed surface area. Some voids can be caused by the failure of underground stormwater pipes, where the stormwater has removed a lot of the waste to form large, underground voids.

Large voids must be fixed by experienced Council landfill staff. Lessees or contractors must not attempt to rectify or fix large voids. Council will carry out an investigation to determine the cause of the void and may need to instigate further upgrade works on underground pipes and networks.

#### **Landfill leachate**

Leachate is contaminated water that has filtered through buried waste. Ideally, leachate should be collected and disposed to sewer via a landfill leachate collection system installed by Council.

Leachate can be generated by uncontrolled surface water, excessive ponding and damaged stormwater pipes, allowing waste to become saturated. Leachate can be held in large volumes within the landfill and eventually break out of the sloped landfill sides (batters), destabilise trenches or flood into areas of excavation leading to health risks and environmental harm.

Leachate is often orange or brown and green in colour and can contain a wide variety of contaminants. If you see something you suspect to be leachate, contact Council as soon as possible for investigation and sampling. Any proposed site works must consider the possibility of leachate exposure and release.

#### Landfill gas

Landfill gas is a composition of many different gases produced as waste breaks down. The main gases of concern are methane, hydrogen sulphide and carbon dioxide, which pose risks of poisoning, suffocation and explosion. Methane and carbon dioxide are odourless, however traces of hydrogen sulphide often cause landfill gas to smell of sulphur or rotten eggs.

Landfill gas escapes through cracks in the landfill cap or horizontal and vertical movement through the waste and soil layers, and along stormwater drains and other underground services, such as electricity conduits and water services.

Serious landfill gas risks may occur if landfill gas migrates and accumulates in enclosed spaces and trenches.

#### Landfill gas and electrical systems

Given its explosive potential, the presence of landfill gas in and around electrical systems creates a specified hazardous area zone, as defined by Australian Standards, which requires special certification of all electrical systems. This certification can only be provided by an authorised electrical safety officer, a qualification that most standard electricians do not hold. If landfill gas is detected in proximity to your electrical services, you may need to conduct electrical upgrades. More information about compliance and certification of your electrical systems is included in Appendix 3.

#### Trees on landfill sites

Trees on landfill have a tendency to fall over (especially during or after storms) because the waste below ground can't support them. When trees on landfill sites fall over, they can expose large amounts of waste and create a hazard for site users.

Please contact Council on 3403 8888 or at communityfacilities@brisbane.qld.gov.au if you, your club members or contractors notice:

- significant subsidence
- large surface holes or potential voids
- suspected landfill leachate
- capping breaches or exposed waste
- landfill gas odours
- fallen trees and exposed waste.

### **UNDERTAKING WORKS**

Lessees wishing to undertake works on their site or building must submit an Application for Works (AFW) to Council and receive written approval before proceeding.

An AFW is required for any site improvement works and development. Types of activities that will trigger the need for an AFW include those listed below.

- Application for grants.
- Fence installation, repair or replacement.
- Soil disturbance for trenching, installing footings, concrete slabs or any other form of excavation.
- Dealing with exposed waste (e.g. asbestos management and clearance).
- Footpath installation and repair.
- Upgrading or installing lighting networks, including transferring to light-emitting diode (LED) bulbs.
- Electrical service installations.
- Building expansion or constructing new buildings.
- Field re-profiling, resurfacing and irrigation installation.
- Construction of sheds, slabs, tanks and pads.
- Installation of stormwater harvesting and drainage infrastructure.
- Construction of retaining walls, grandstands and car parks.
- Planting any vegetation and establishing food gardens.
- Removing trees or shrubs.
- Installing signage.

AFWs are assessed on the project type, the site risks, condition of the site and the land-use type. Generally, smaller projects are assessed and approved subject to standard conditions. However, larger and more complex projects may be required to undergo further contaminated land assessment and subsequent approval stages to ensure specific conditions are met before moving to the next stage of the works/development.

Planning, design and onsite works can be considerably time-consuming and costly. Depending on the nature and scale of your works, you may be required to also undertake a development application. Any development application requirements will be identified during the AFW process.

Council and lessees have a shared responsibility to ensure that the activities and community use of closed landfill sites is appropriate and does not pose increased risks to human safety or the environment. AFWs ensure potential risks associated with the project and all Queensland Government laws are adequately addressed. More information about AFWs and the AFW process can be found in the appendices.

Before you start planning works or changes to the site, please contact Council on 3403 8888 and ask to speak to the Community Facilities team. The team can provide you with essential pre-planning advice, grant application assistance, guidance on technical information and identification of site constraints, and appropriate site management processes.

#### Onsite works and maintenance

The table below outlines example projects, works and activities, and provides a guide to the possible requirements, conditions and costs.

If you wish to undertake onsite activities with a risk of Level 1 Basic or above, you must submit an Application for Works (AFW) to Council before works start. Figure 2 and the appendices provide more information about the AFW process.

Please note this table is a guide only and the risk and level of assessment will depend on site conditions and project scale. Before you start planning works or changes to the site, please contact Council's Community Facilities team to discuss your idea.

Risk level	Project type	Example activities	Example Application for Works (AFW) requirements and conditions	Potential contaminated land costs*
0 Low	Sports field maintenance	Mowing, small-scale top dressing (less than 100 mm), aeration, no-dig gardening, weed spraying, re-turfing with no soil disturbance.	AFW not required. Works to follow lessees' safe work procedures for field maintenance. No excavations or soil disposal authorised.	Not applicable
1 Basic	Ground disturbance (minor to moderate)	Minor to moderate excavation or digging involved with:  • excavation for post installation (e.g. fence posts, goal posts, site screens)  • small-scale field re-profiling  • laying concrete slabs  • gardening, landscaping and stump-grinding  • repairs or minor modification to existing underground irrigation, drainage, electrical systems.	Site contamination investigation: the lessee is required to engage a contaminated land consultant to conduct a contaminated land investigation to determine contamination type and extent (if any) within soil disturbance area, and to provide advice about risk mitigation measures (for example, capping requirements, stormwater management onsite).  Construction Safety Plan: the contractor must prepare a Construction Safety Plan (including safe work method statements) and Environmental Management Plan to manage contamination risks identified by the contaminated land consultant.  Soil disposal permit: if triggered by the contaminated land investigation, a soil disposal permit must be obtained	\$5000-\$15,000
	Installation of point source loads	Grandstands, water tanks, large event equipment and vehicles.	from the Queensland Department of Environment and Science. Refer to Appendix 2 for more information.  Project completion: the lessee must submit all compliance and project completion documentation as specified in the AFW letter of support issued by Council.	

Risk level	Project type	Example activities	Example Application for Works (AFW) requirements and conditions	Potential contaminated land costs*	
2 Intermediate	Ground disturbance (large-scale)	Major excavation (deep and/or widespread) for:  • installation of field lighting poles (may also be triggered by switch to LED lighting)  • large-scale field re-profiling  • existing building modification (e.g. increase in floor area of existing buildings requiring footings or service installation)  • large-scale network trenching for installation of underground services.	Submit an AFW to Council  Site contamination investigation: the lessee is required to engage a contaminated land consultant to conduct a contaminated land investigation to determine contamination type and extent (if any) within soil disturbance area. Geotechnical advice from a structural engineer may also be required.  Contaminated Land Management Plan: the contaminated land consultant is required to prepare a Contaminated Land Management Plan outlining detailed advice about risk mitigation measures.  Construction Safety Plan: the contractor must prepare a Construction Safety Plan (including safe work method statements) and Environmental Management Plan to manage risks identified in the Contaminated Land Management Plan.  Soil disposal permit: if triggered by the contaminated land investigation, a soil disposal permit must be obtained from the Queensland Department of Environment and Science.  Project completion: the lessee must submit all compliance and project completion documentation as specified in the AFW letter of support issued by Council.	\$15,000-\$30,000+	
3 Detailed Contamina- tion Assessment	Large, multi-faceted, high-impact projects trigger detailed site investigations due to a wide range of activities causing extensive site disturbance and excavation. This level of assessment would normally be applied to a large-scale development of building and services, major landfill re-capping works and proposals to change land use to sensitive land uses (e.g. childcare, community gardens, caravan parks), which may also trigger a Development Approval. This level of assessment may also apply to smaller-scale excavation and development projects which are proposed on complex sites with significant closed landfill issues and constraints. Should a Development Assessment application be triggered through the Application for Works, the applicant must ensure that information in both submissions is consistent. Potential costs associated with contaminated land issues are expected to exceed \$30,000.				

<sup>\*</sup> Please note local, state or federal grants may be available to support lessees. Contact Council's Community Facilities team for more information. Costs are examples only – project costs are subject to a range of factors, including site conditions and project scale.

Figure 2: Undertaking and completing site works – the Application for Works (AFW) process



<sup>\*</sup> Appendix 4 – Process for successful development on closed landfill sites

<sup>^</sup> Appendix 1 – Application for Works

## APPLICATION FOR WORKS

#### What is required?

Lessees are required to complete the <u>Application for Works on a Community Lease Site online form</u> when they wish to undertake site improvement works or maintenance works.

The online form requires a detailed scope of works with all relevant information about the proposed works, the need for the works, how works will be completed, site maps, diagrams and quotes. Council may require further information to better understand the impacts the proposed works may have on the site. Once the Application for Works (AFW) has been reviewed, if approved, Council will provide the lessee with a letter of support with conditions.

In order to facilitate the timely processing of your application and give it the best chance of being supported, the detailed scope of works should include the following information.

- Detailed overview of the project and what it is going to achieve, highlighting details of ground disturbance.
- Project personnel, including details on who will complete the project and who will be in charge.
- Site maps and aerial photos, indicating the proposed location of the project and the extent of the works or impacts expected on the site.
- Floor plans, service layouts/schematics and levels, where possible.
- Total expected cost (or estimate) of the project, including all earthworks.
- Indication of project constraints, available by checking Council's online mapping service for zones and overlays within the project area.

#### Project and site constraints

Closed landfill sites may present significant constraints to any project and can mean taking a different approach to project design and implementation to works on a non-landfill site. Landfill-specific project constraints and risks must be considered at the project planning stage, to ensure safety, environmental and asset risks can be appropriately mitigated and managed.

Examples of site risks and constraints include:

- excavation, movement and disposal of contaminated soils and waste
- landfill gases causing toxic and hazardous environments
- landfill leachate (contaminated water)
- odour impacts during works
- choosing materials for a potentially corrosive/landfill environment
- the need for specialised electrical systems
- building or works stability and additional geotechnical issues
- ensuring suitable capping over buried waste.



#### Changes in land use and activities

Council and lessees have a shared responsibility to ensure that the activities and community use of closed landfill sites is appropriate and does not pose increased risks to human safety or the environment.

It is important to ensure all proposed changes to lease activities are notified and registered with Council through the submission of an AFW, and that Council reviews the proposed use to determine if there are additional approvals or requirements for amendments to conditions of land use. The applicant may also need to submit a Development Approval application, contaminated site assessments and Queensland Government compliance permits.

Under Queensland legislation<sup>2</sup>, sensitive land use is any of the following:

- caretakers' accommodation
- child care centre
- · community care centre
- community residence
- detention facility
- dual occupancy
- dwelling house

- dwelling unit
- educational establishment
- health care service
- hospital
- hotel
- multiple dwelling
- non-resident workforce accommodation
- relocatable home park
- residential care facility
- resort complex
- retirement facility
- rooming accommodation
- rural workers' accommodation
- short-term accommodation
- tourist park.

To find out if you trigger the need for Development Application approval, please contact Council on 3403 8888 and ask to speak to a planning information officer.

<sup>2.</sup> Queensland Government, Queensland legislation, *Planning Act 2016*, Planning Regulation 2017, The State of Queensland (Office of Queensland Parliamentary Counsel), 2014-2019, viewed July 2019, <a href="legislation.qld.gov.au/view/pdf/2017-09-01/sl-2017-0078">legislation.qld.gov.au/view/pdf/2017-09-01/sl-2017-0078</a>

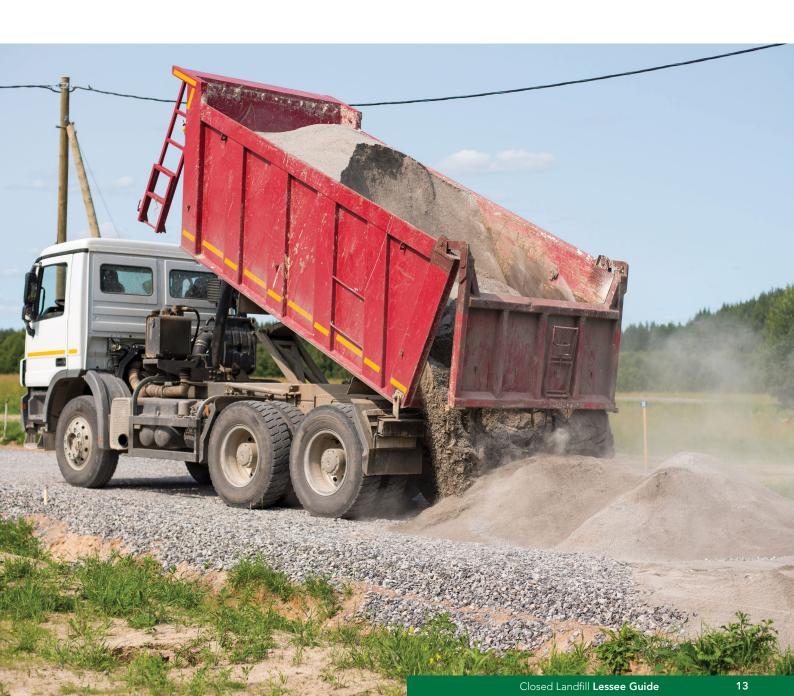
## SOIL DISPOSAL PERMITS

Under Queensland environmental law, a soil disposal permit is required before removing contaminated soil and waste from contaminated land.

The purpose of a soil disposal permit is to reduce the spread of contamination onto clean land. Truck movements and soil deposits are checked and audited by the Queensland Government. An application for a soil disposal permit is required to be completed by the person/s tasked with project management or transporting the contaminated soil and submitted to the Queensland Government for approval.

Soil disposal permits require information about the contamination status of the soil which is determined by soil testing and analysis by a suitably qualitied person (see Appendix 3).

For more information, visit <u>qld.gov.au</u> and search 'soil disposal permit' or call the Queensland Government on 13 74 68.



## APPENDIX 3 SUITABLY QUALIFIED PERSONS

Work and certification of works at closed landfill sites require the skills of a range of suitably qualified persons, with demonstrated technical expertise to complete site investigations, assessment, design, validation reports and electrical work.

The following provides information on the expected qualifications and checks for working at closed landfill sites.

#### Contaminated land consultant

For contaminated land assessments, Queensland legislation requires a suitably qualified person<sup>3</sup> (often referred to as a contaminated land consultant) who has the necessary qualifications and experience to assess contaminated land (specifically closed landfills). A suitably qualified person ensures that risks to human health and the environment have been appropriately investigated and can provide recommendations for appropriate risk-mitigation strategies associated with a project.

If your Application for Works (AFW) conditions require site investigations and assessments of contaminated land, you will need to engage a suitably qualified person with a range of demonstrated technical expertise from a specialised professional company. It is good practice to obtain at least three separate quotes and ensure that your chosen suitably qualified person has:

- a good working knowledge of Queensland legislation, policies and guidelines related to contaminated land and specifically closed landfills
- a network of expert support people available for any knowledge areas for which they do not have adequate qualifications and experience
- a good reputation within the contaminated land professional community
- adequate professional indemnity insurance
- demonstrated experience in delivering project outcomes on time and within budget.

Some ways to engage a suitably qualified person include:

 conducting an online search using the term 'contaminated land consultant'

- approaching professional associations such as:
  - Australasian Land and Groundwater Association
  - Australian Contaminated Land Consultants
     Association
  - Environment Institute of Australia and New Zealand
  - Site Contamination Practitioners Australia
  - Soil Science Australia.

## Electrical services in hazardous areas

Closed landfill sites can generate hazardous gases, including methane, for more than 40 years after site closure. Depending on the waste types deposited at the closed landfill site, landfill gases can build up in service pits, trenches and building spaces to toxic and explosive levels.

Hazardous areas, defined by Australian Standards, are designated by a qualified hazardous area assessor. These areas can be categorised into different levels, which trigger different requirements for carrying out work and meeting electrical system compliance. General electrical servicing in a non-hazardous area can be carried out by a competent and licensed electrician. However, if the area of work is within, for example, an underground pit or service conduit with a constant or intermittent presence of an explosive gas, then additional qualifications are required to work in these areas. Fixings and electrical assets and certification of electrical systems in explosive/hazardous areas differ to those located in a normal oxygen atmosphere.

The Queensland Electrical Safety Regulation requires that an accredited auditor inspect electrical installations in defined hazardous areas prior to connection or reconnection to a source of electricity if:

- the installation is being connected for the first time
- electrical installation work has been performed within a hazardous area.

<sup>3.</sup> Queensland Government, Suitably qualified persons, The State of Queensland, 1995-2019, viewed July 2019, qld.gov.au/environment/pollution/management/contaminated-land/qualified-persons/engaging-qualified-persons

#### **APPENDIX 4**

# PROCESS FOR SUCCESSFUL DEVELOPMENT ON CLOSED LANDFILL SITES

The following checklist provides a basic process for lessees to follow when proposing services and infrastructure on a closed landfill site. This process is recommended, to ensure your project is a success.

#### 1. Planning stage

- Review this Closed Landfill Lessee Guide, the lease conditions and lease boundaries relevant to the project.
- Review planning zones and overlays via Council's website at <u>brisbane.qld.gov.au/planning-building</u> or by phoning Council on 3403 8888 and asking to speak with a planning information officer.
- Develop a detailed project proposal and include the following information:
  - project activities
  - expected costs
  - project outcomes
  - a detailed site map showing existing and proposed placement of new assets and services.
- Inform Council's Community Facilities team about the proposed project and request further site information from Council's records to help determine site constraints and project considerations, including information about the Statutory Site Management Plan if there is one for the site.
- Identify project approvals and permits, including application requirements or reports.
- Finalise the project proposal information and submit an Application for Works (AFW) to Council's Community Facilities team.
- Provide further information to Council, if requested, to allow the AFW assessment to be completed.
- Confirm site constraints with relevant site contamination investigations, surveys and reports.

#### 2. Pre-commencement of works

- Obtain project approvals and permits.
- Complete project plans and milestone tracking, contracts and payment agreements.
- Develop a Construction Safety Plan, including safe work method statements, and an Environmental Management Plan.

#### 3. Delivery stage

- Pre-worksite meeting and toolbox talk on safety and project risk management.
- Commence and complete construction.
- Check project activities are being carried out in accordance with plans and conditions.
- Check and audit safe work method statements.
- Check compliance with soil disposal permit and retain documentation.

#### 4. Closure stage

Final check on project compliance with approval conditions.

- Collate and submit project documents, including as-constructed plan for all assets and services.
- Collate and submit electrical certifications on all electrical work.
- Collate and submit soil disposal information to confirm compliant soil movements and disposal.
- Submit all compliance and project completion documentation as specified in the AFW letter of support issued by Council. This may include:
  - photos and graphs
  - certifications
  - testing and monitoring reports.

# GENERAL ROLES AND RESPONSIBILITIES

#### Contractors and subcontractors

- Ensure all site works and developments consider the subsurface waste environment, contaminated soil management, potential for hazardous environments and confined spaces, and are supported by the development of documented project-specific safe work method statements and procedures.
- 2. Certify electrical, structural or major works to confirm site development, asset construction and services meet safety and legislative requirements.
- 3. Ensure works onsite do not damage or reduce the clay or soil barrier over waste.
- 4. Reinstate clay barriers that are impacted or removed by site works.

#### Council

- 1. Manage lease compliance through regular auditing and proactive consultation with lessees.
- 2. Monitor site uses to ensure they are compatible with a closed landfill land use.
- 3. Facilitate stakeholder education and engagement to support the development of assets and provision of services to the community.
- 4. Manage lease boundaries to ensure coverage of land use, approved operations and use of the site.
- Coordinate the Application for Works (AFW) process, ensuring key stakeholder involvement, conditioning, oversight of project compliance and record management.
- Lead stakeholder review and input into the AFW and other site development-related applications and queries from lessees.
- 7. Complete an annual site lease review.
- 8. Monitor and audit environmental and activity-specific risks and compliance of closed landfill sites.
- 9. Complete maintenance work on leachate and gas management networks to ensure continuous emission management and compliance.
- 10. Report to the Queensland Government, where required.
- 11. Provide evaluation and assessment advice to internal and external stakeholders to support the AFW process, supporting safe and responsible development of closed landfill sites.
- 12. Provide technical assistance and guidance on managing closed landfill aspects and project-specific work approvals.
- 13. Educate Council officers and lessees to ensure environmental and safety protection measures are in place for operations and development within a closed landfill site, through consultation and targeted site investigation to understand and manage site risks.

#### Queensland Government – Queensland Department of Environment and Science

The Queensland Government<sup>4</sup> is responsible for making sure contaminated sites, including sites that have been used for activities that are likely to cause contamination, are managed in a way that protects public health and the environment in Queensland.

The Queensland Government does this by:

- administering the Environmental Management Register and the Contaminated Land Register, including adding, removing or amending details about land on these registers
- assessing site management plans for contaminated land
- assessing disposal permit applications for contaminated soil
- appointing appropriate auditors for contaminated land and conducting quality assurance of auditor performance
- responding to pollution incidents or notifications related to contaminated land
- providing guidance about the regulation of contaminated land to local government, industry, and the community.

<sup>4.</sup> Queensland Government, Managing contaminated land, The State of Queensland, 1995-2019, viewed July 2019, qld.gov.au/environment/pollution/management/contaminated-land/assessing



