

ASSESSMENT REPORT

Section 75W Modification – Gas Pipeline Jacks Gully Alternate Waste Technology Facility (05_0098 Mod 3)

1. BACKGROUND

The Macarthur Resource Recovery Park (MRRP) (formerly known as the Jacks Gully Waste and Recycling Centre) is located off Richardson Road, Narellan, in the Camden local government area (refer Figure 1).

Camden Council originally operated the site as a putrescible landfill until 1975 when WSN took over the operation of the site. Since this time, Camden Council has also issued development consent for a Materials Recycling Centre (MRF), a Gas Power Station and a Composting Facility at the site. The landfill no longer accepts municipal waste and only one cell is currently open to accept residual waste from the Alternative Waste Technology (AWT) facility as described below.

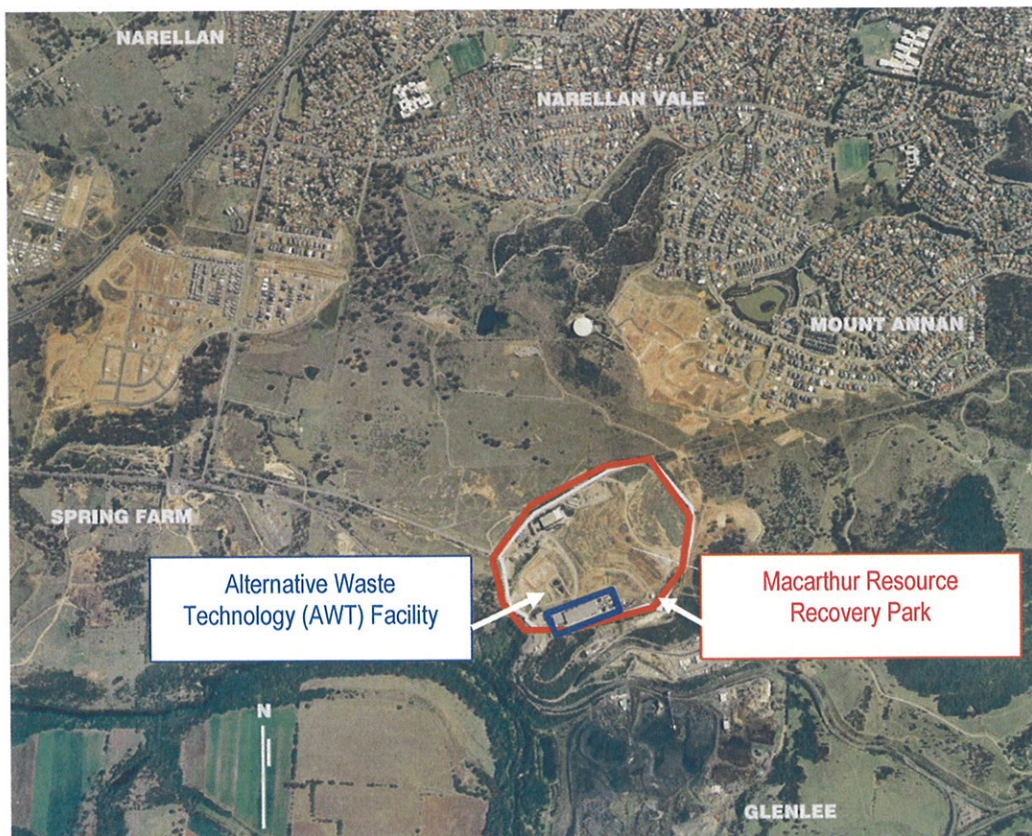


Figure 1: Site Location

On 7 September 2006, the then Minister for Planning granted approval for the construction and operation of an AWT facility at the MRRP (refer Figure 2). The AWT facility is approved to process up to 120,000 tonnes of solid and organic waste a year, and produce compost and a range of recyclables. In addition, the approval provides for methane, which is produced as part of the biological waste treatment process, to be collected and fed to a gas holder. The gas is then fed to two 1.4 megawatt gas engines to generate renewable “green” electricity for export to the grid.

The construction of the AWT was completed in 2009 (See Figure 2 below). The facility has been through a commissioning phase and has subsequently commenced operations.



Figure 2: The AWT Facility

Odour has recently been an issue at the MRRP and AWT facility which has generated a number of complaints from local residents. Both the Department and the DECCW have investigated this issue and have determined that the odour impacts are largely the result of WSN's operational management practices on site and not the result of the assessed performance of the AWT facility. This has included operating the AWT facility with roller doors open and not closed, thereby compromising the ability of the facility to capture and manage odour emissions.

WSN has formally acknowledged that the site is a source of odour and has subsequently sought to address this issue through the implementation of more stringent management practices. This included reducing the hours of operation of the AWT facility to between 10am and 4pm and the construction of a pipeline from the landfill site at the MRRP to the AWT facility in order to capture odorous gas released from the site.

However, the pipeline which had been built by WSN was built without an approval and is therefore unlawful. In May 2010, the Department issued a Penalty Infringement Notice to WSN for carrying out development of the pipeline without approval from the Minister.

In March 2010, WSN submitted an application to modify Project Approval 05_0098 under Section 75W of the EP&A Act to:

- extend the greenwaste facility, and
- regularise an existing pipeline extending from the landfill site at the MRRP to the AWT facility.

The application was subsequently amended in June 2010 and now only relates to the regularisation of an existing pipeline extending from the landfill site at the MRRP to the AWT facility.

2. PROPOSED MODIFICATION

WSN seeks to modify Project Approval 05_0098 under Section 75W of the EP&A Act to regularise an existing pipeline extending from the landfill site at the MRRP to the AWT facility. This component is designed to capture excess gas from the landfill for conversion to electricity and to address odour issues at the site for which the Department in conjunction with the DECCW has taken regulatory action.

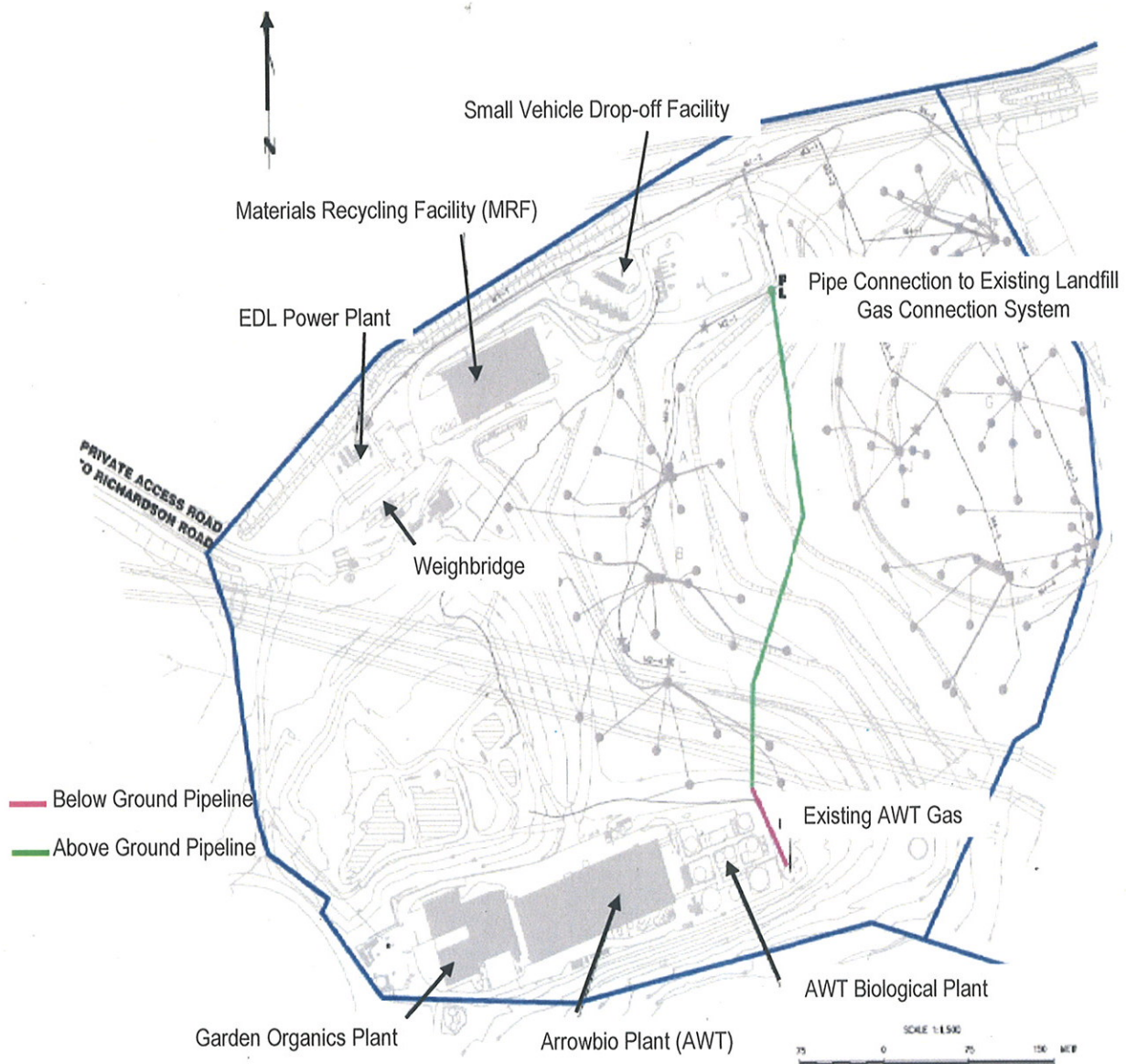


Figure 3: MRRP - Proposed Gas Pipeline to AWT Facility

Methane, generated as part of the biological waste treatment process in the AWT facility, is collected and fed to a gas holder. The gas is then fed to two 1.4 MW AWT gas engines to generate electricity for export to the grid. At present, insufficient gas is being produced at the AWT facility to operate both the gas engines.

Gas from the former landfilled areas of the MRRP is currently piped to the Power Plant where two (1 MW) engines generate renewable energy and surplus gas is flared off. The flaring of surplus gas transforms methane into carbon dioxide and significantly reduces the highly negative climate changing potential of methane. In order to take best advantage of the gas resource and minimise flaring operations, WSN proposes to transfer surplus landfill gas that cannot be processed in the Power Plant to the AWT gas engines for processing to energy. To achieve this, a new pipeline from the AWT gas holder to the landfill has been installed. The pipeline is yet to be commissioned.

The project consists of approximately 670 metres of pipeline primarily installed underground, connecting the existing landfill gas collection system to the boundary of the AWT facility. The gas connection from the AWT boundary to the existing AWT gas holder consists of an above ground stainless steel pipeline with associated control panels. The layout of the proposed pipeline is shown in Figure 3.

If approved, the pipeline would transport the excess landfill gas, purchased from EDL Operations Pty Ltd (who operate the Power Plant, the operators of the Power Plant. This landfill gas would then be imported into the AWT gas holder and would be mixed with AWT process gas in the existing gas holder under normal operation. The proposal would permit maximum utilisation of excess landfill gas.

3. STATUTORY CONTEXT

The Minister for Planning was the consent authority for the original major project application, and is consequently the consent authority for this modification application under section 75W of the Act.

On 25 January 2010, the Minister delegated his powers and functions as an approval authority to modify certain modification requests under section 75W of the EP&A Act to the Executive Director, Major Projects Assessment. This modification application meets the terms of this delegation. Under these circumstances, the Executive Director may determine the application under delegated authority.

4. CONSULTATION

Under Section 75W of the EP&A Act, the Minister is not required to notify or exhibit the application. However, following a review of the modification application, the Department determined that the proposed modification should be referred to the Department of Environment, Climate Change and Water (DECCW), Camden City Council (Council), the Roads and Traffic Authority (RTA), Industry and Investment (I&I), and Integral Energy. Consultation with other neighboring sites was considered unnecessary, as the environmental impacts of the proposal would essentially remain unchanged from the approval project.

Of the submissions received from public authorities no objections were raised. A summary of the authorities feedback is detailed as follows;

DECCW	The DECCW supported the proposal to connect the existing landfill gas collection system to the AWT gas holder. They advised that WSN should aim to maximise gas extraction to ensure that fugitive emissions of landfill gas are minimised and that the extraction of excess landfill gas is likely to further improve odour management from Jacks Gully landfill.
Council	Council does not object to the concept of the use of landfill generated gas within the AWT power generation system. However, they raised concerns as to whether the Minister had the power to consider the proposal as a modification under the AWT Facility approval (as apposed to the Council's Part 4 development approval for the gas power station). The Department held discussions with Council in this regard and Council accepted that it is within the Minister's powers to determine the modification.
RTA	The RTA raised no objection to the proposed pipeline connection.
I&I	I&I raised no objection to the pipeline and advise that the pipeline is exempted from needing a license under the <i>Pipelines Act 1967</i> .
Integral Energy	No submission was received from Integral Energy.

The Department has considered the authorities submissions in the assessment of the proposed modification.

5. ASSESSMENT

The Department considers the key issues for the proposed modification to be:

- compliance and certification;
- hazards; and
- odour.

5.1 Compliance and Certification

The application seeks to regularise an existing but unapproved pipeline primarily installed underground, connecting the existing landfill gas collection system to the AWT Facility gas holder. The proposal would permit the transfer and utilisation of excess landfill gas to generate additional renewable energy.

In accordance with Section 149B of the EP&A Act, where a construction certificate has not been issued for an 'unapproved' structure, a building certificate should be obtained from the relevant local Council (ie. Camden Council) to cover all aspects of construction and compliance.

The Department considers that the provision of a building certificate(s) for the existing structure would ensure that the structure has been built to acceptable standards of structural sufficiency, safety, health and amenity. The Department has therefore recommended a condition that requires WSN to obtain a building certificate(s) from Camden Council within 3 months of approval of this modification application (05_0098 MOD 3).

The Department is satisfied that the modification application can be approved, subject to WSN:

- obtaining and providing copies to the Director-General of all necessary building certificate(s) from Camden Council for all structures the subject of modification application; and
- ensuring that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the Building Code of Australia.

5.2 Hazards

A Hazard and Operability (HAZOP) Study was prepared to assess the biogas systems for the Jacks Gully AWT facility and landfill gas supply. Based on a review of the study, the Department determined the following:

- the pipeline is located in a rural section of Camden LGA, with residential areas approximately 1.5 kilometres to the north, the Mt. Annan Botanical Gardens and Hume Highway to the east and open countryside to the west and south;
- the 670 metre long pipeline has largely been constructed underground with 100 mm diameter stainless steel and as such corrosion is not a concern. However, third party damage could still occur, causing leaks from the line;
- the pipeline would operate at a very low pressure (approximately 3-5 Kpa) and would not cause any accumulation of methane gas as the gas is lighter than air and would dissipate to the atmosphere without forming a flammable cloud; and
- the HAZOP study identified a number of issues due to the specific requirements of the AWT plant. Against each of these issues, measures for WSN's actioning were identified. Many of these were related to the requirement for procedures, signage or regular inspection. However, a number were related to the requirement for updated hardware equipment or clarification of system design details.

The Department considers that given the nature of the works and the isolation of the pipeline from sensitive receptors, the hazards and risks associated with the pipeline and its equipment such as gas leaks that could cause fire, are low and acceptable subject to:

- the implementation of the proposed safeguards and actions listed in Appendix A of the HAZOP study report dated August 2009; and
- the preparation of a Commissioning Procedure and a Safety and Operating Plan (SAOP) for the pipeline.

5.3 Odour

As discussed above, odour management has been an ongoing issue at the MRRP and the AWT facility for which the Department in conjunction with the DECCW has taken regulatory action. An odour assessment was undertaken to determine the potential impacts associated with transferring landfill gas to the AWT facility gas holder. The assessment found that the modification would not result in increased odour impacts in the locality, rather the transfer of excess landfill gas to the AWT facility would result in more effective odour management from the landfill site.

Both the Department and the DECCW concur with these findings and consider that WSN should aim to maximise gas extraction to ensure that fugitive emissions of landfill gas are minimised. The extraction of excess landfill gas would result in more effective management of the odour profile of the MRRP.

The Department considers that the air quality monitoring requirements in the existing consent are sufficient to address potential odour impacts. It is WSN's responsibility to consult with the DECCW with regard to updating the existing EPL for the AWT facility to incorporate the operation of the pipeline.

6. CONCLUSION

The Department considers the proposed modification would not increase the environmental impacts of the proposed AWT facility. There are minimal environmental impacts associated with in the proposal to transfer and utilise excess landfill gas to generate additional power at the AWT facility. The Department considers

there are significant environmental benefits associated with the proposal which include improving odour management and allowing for surplus gas to be diverted to renewable energy.

Consequently, the Department believes the proposed modification should be approved.

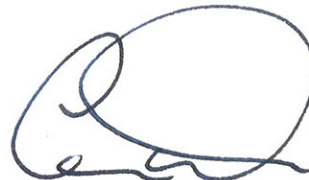
7. RECOMMENDATION

Under delegation of the Minister, it is **RECOMMENDED** that the Executive Director, Major Projects Assessment;

- consider the findings and recommendations of this report;
- approve the proposed modification under Section 75W of the EP&A Act;
- sign the attached instrument **Tagged A**.

Christine Chapman
Major Projects Assessment


Chris Ritchie
Manager - Industry
Major Projects Assessment
20/8/10


Chris Wilson
Executive Director
Major Projects Assessment
26.8.10