ASSESSMENT REPORT

Section 75W Modification
Advanced Waste Treatment Facility (06_0185 MOD 3)

1 BACKGROUND

SITA Australia Pty Ltd (**SITA**) operates an advanced waste treatment facility (**AWTF**) and landfill on the site of a former quarry at 1725 Elizabeth Drive, Kemps Creek, about 14 kilometres (**km**) southeast of Penrith in the Penrith local government area (see **Figure 1**).

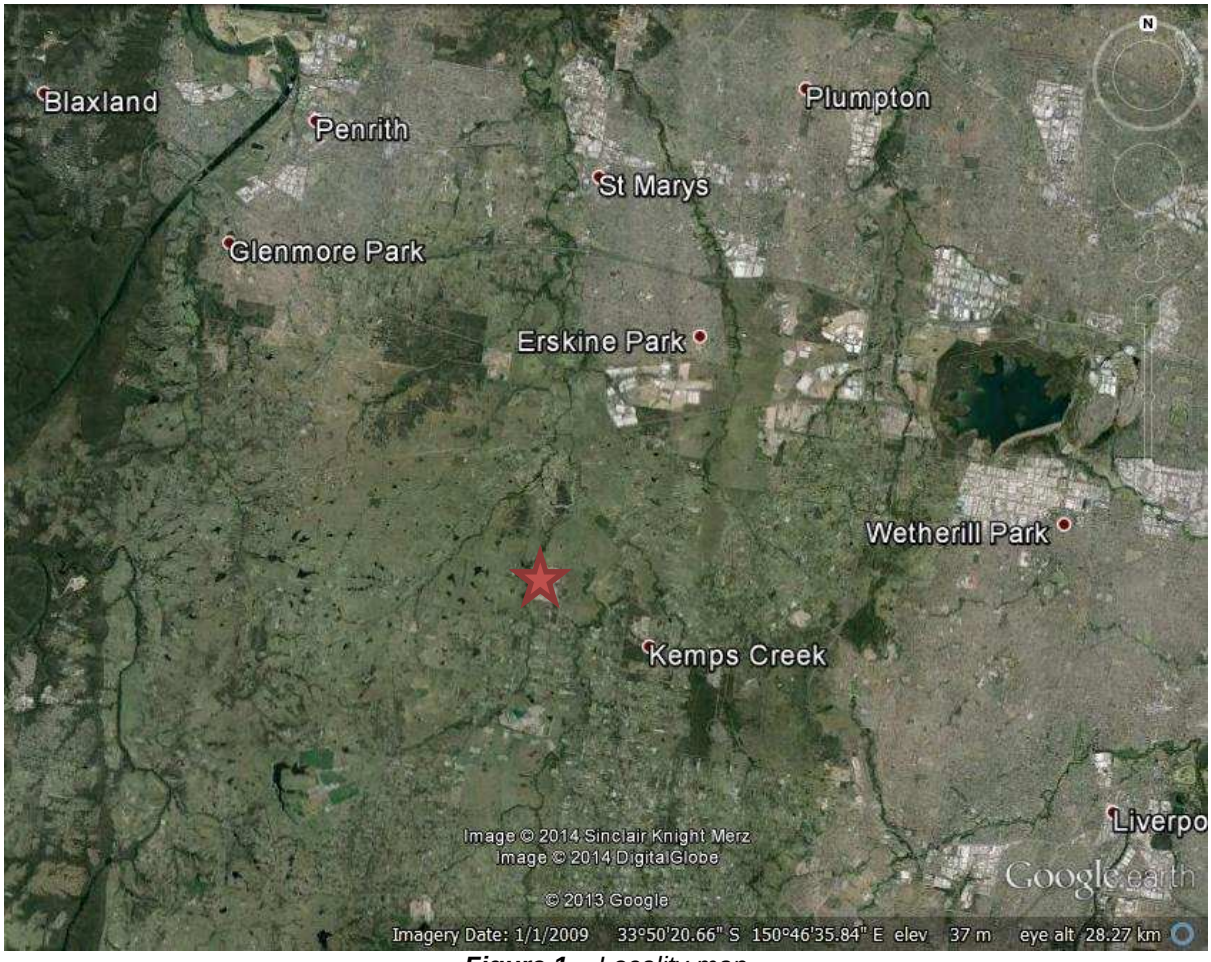

***Figure 1** – Locality map*

The AWTF and landfill are operated in an integrated manner under 2 separate approvals. The landfill was approved by Penrith City Council (**Council**) in 1990 and it operates with an Environment Protection Licence (**EPL**) to backfill the old quarry voids with non-putrescible waste. The AWTF was approved by the then Minister for Planning in 2008. It operates with a separate EPL as a composting and resource recovery facility.

The AWTF occupies an area of about 8 hectares (**ha**) in the northwest of the site (see **Figure 2**). It currently operates at its approved processing capacity of 134,400 tonnes per annum (**tpa**) of Municipal Solid Waste (**MSW**), Source Separated Organic material (**SSO**) and bio-solids.

In summary, waste is delivered by truck to a receival hall where it is mechanically separated into putrescible and non-putrescible fractions. The sorted waste streams are hand-picked for additional recyclable material, before the putrescible fraction is directed to composting tunnels. Once composted, the material is then laid out in windrows on external pads to mature, before it is sold for mining rehabilitation projects.

The AWTF produces up to 45,000 tpa of compost and recovers 8,000 tpa of recyclable material, while all residual waste is directed to the landfill on the site for final disposal. The AWTF approval has previously been modified to extend the approved operating hours.

1.1 Site and surrounding land uses

The site is legally known as lot 1 DP 542395 and lot 740 DP 810111. It is an approximately rectangular site of 84 ha. The western boundary is defined by the bank of Badgerys Creek.

The site is mostly zoned RU 2 – Rural Landscape under the *Penrith Local Environmental Plan 2010*, while a riparian corridor flanking the western site boundary is zoned E2 – Environment Conservation. The nearest residences (as measured from the AWTF) are 960 metres (**m**) to the west and 730 m to the southeast (see **Figure 3**).

1.2 Ongoing odour issues

Operation of the AWTF has resulted in several odour related complaints from nearby land owners. In February 2013, the Environment Protection Authority (**EPA**) published a report titled *Western Sydney Regional Odour Assessment*, which identified SITA's AWTF as one of a number of sources of odour emissions in the region, where odours were detectable at elevated levels beyond site boundaries.

The 2013 report noted that SITA's external compost maturation areas were a likely source of such odour emissions. Consequently, SITA has investigated a number of odour management measures to minimise odour emissions from these maturation areas. These investigations have led to the current modification proposal, described below in Section 2.

1.3 Other applications – AWTF Expansion

SITA is also currently seeking State Significant Development (**SSD**) approval to increase the processing capacity of the AWTF to 220,000 tpa. This proposed development involves upgrades and additions to the AWTF, modifications to the site layout, upgrades to the storm water and leachate facilities, and longer indoor operating hours (up to 24 hours per day).

The application and Environmental Impact Statement (**EIS**) were exhibited during May 2013 and the Department received 14 submissions, including 6 objections from the public. SITA is currently preparing a response to the issues raised in the submissions, although it anticipates that the current modification application would be determined prior to the SSD application so that the odour minimising modifications could be implemented as soon as possible.

Figure 2 *– Existing AWTF and landfill*

Figure 3 *– Site map showing the nearest residences*

2 PROPOSED MODIFICATION

The proposed modification is described in detail in the Proponent's Environmental Assessment (**EA**), which is attached at **Appendix B**. The proposed modification is intended to improve odour management at the site and it involves:

- upgrading the compost maturation pads from compacted earth to concrete to improve drainage and to prevent leachate from pooling;
- using impermeable plastic covers over the compost windrows during rainfall to reduce leachate production and prevent the compost from saturating; and
- constructing a bio-cell, which uses mechanical ventilation to accelerate the compost maturation process (see **Figure 4**).

The bio-cell would be a covered and partially enclosed concrete structure; 50 m long, 30 m wide and 7 m high, with 5 separate compartments. Partially matured compost would be transferred from a windrow to a bio-cell compartment (in batches) where mechanical ventilation would accelerate the final stages of compost maturation by sustaining aerobic conditions and precise moisture control. The bio-cell would have capacity to refine about 2,000 tonnes of compost every 2 weeks.

3 STATUTORY CONTEXT

3.1 Approval Authority

The approval for the SITA Advanced Waste Treatment Facility was granted under Part 3A of the *Environmental Planning and Assessment Act 1979* (**the Act**). The effect of section 75W is continued for such approvals by clause 2 of schedule 6A of the Act.

Consequently, the Minister for Planning and Infrastructure is the approval authority for the modification application. However, under the Minister's delegation of 14 September 2011, the Director, Industry, Key Sites & Social Projects may determine the modification application as Council did not object, the Proponent has not disclosed any political donations, and there were no public submissions by way of objection.

3.2 Modification

The Department is satisfied that the application can properly be characterised as a modification to the original development consent, and can therefore be assessed and determined under Section 75W of the Act.

The Department notes that there is no change to the approved processing capacity of the AWTF and consequently, no increase to the impacts from the site. In some aspects such as odour management, the modifications are likely to improve performance of the AWTF.

3.3 Consultation

The EA for the modification was made publicly available on the Department's website. The Department also invited submissions from the EPA and Council. Consultation with other agencies and adjoining landowners was considered to be un-necessary owing to the limited reach of predicted impacts associated with the proposed modification.

The EPA raised no objection to the proposal (see **Appendix C**). It recommended that waste descriptions in the consent be changed to correspond to those in the EPL. The Department notes that the waste descriptions in the consent and the EPL serve separate purposes and need not align. The EPA also suggested additional conditions in respect of leachate barriers. The Department notes that leachate management is already well governed by the Leachate Management Plan for the site. Council did not respond to the Department's invitation for submissions. The Department assumes that it would not object due to the minor nature of the proposal, and the likely improvement in odour performance at the AWTF.

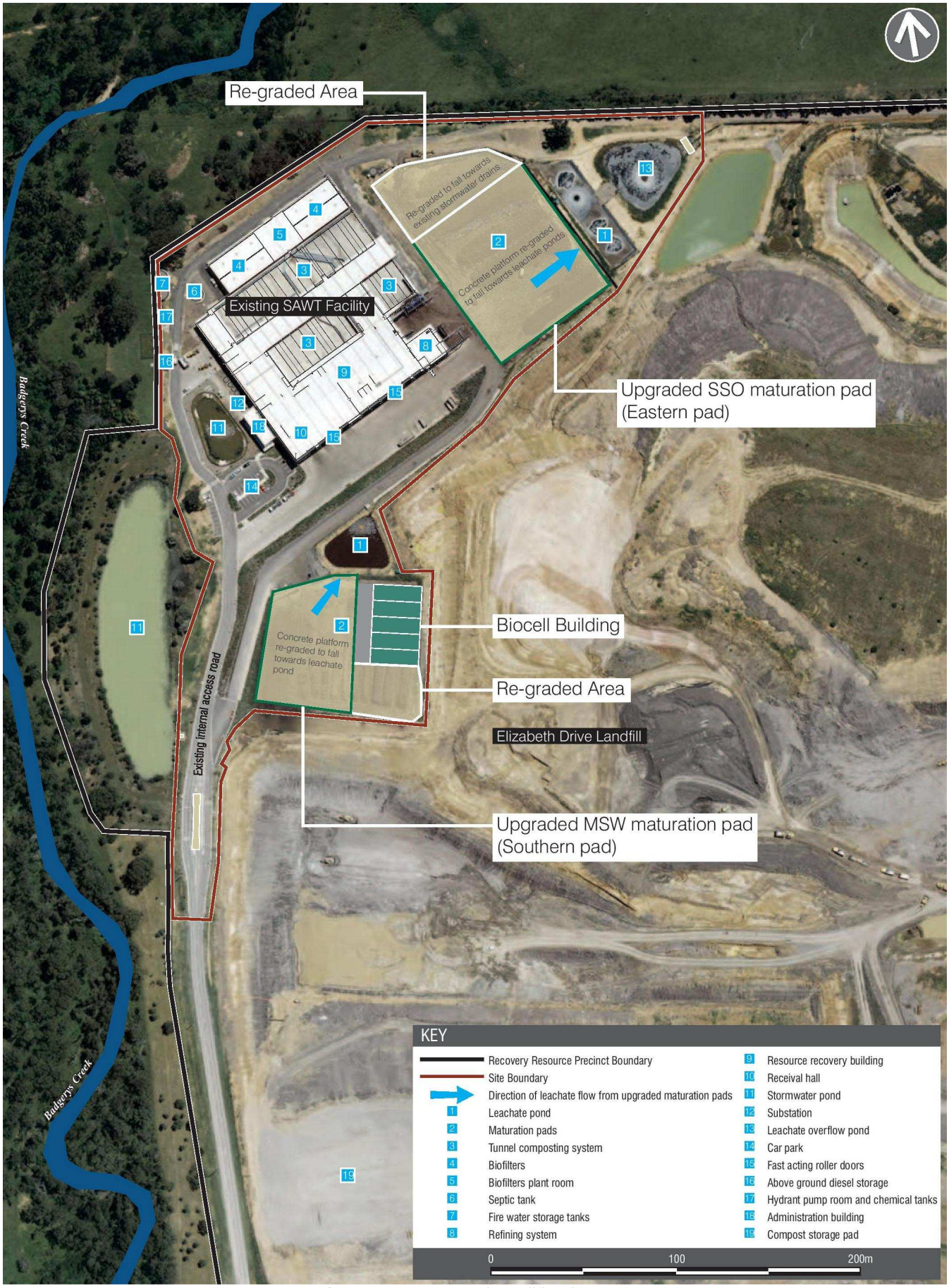

Figure 4 *– Proposed modification*

4. ASSESSMENT

In its assessment of the modification, the Department has considered the following:

- the EA for the proposed modification (see **Appendix B**);
- Submissions made in respect of the modification (see **Appendix C**); and
- the Director-General's assessment reports for the original project application and earlier modification approval.

The Department assessment of the proposed modification is outlined in **Table 1** below.

Table 1: *Assessment of issues*

Issue	Consideration	Recommendation
Odour	• The proposed modification is intended to address key areas of odour generation within the existing compost maturation process at the AWTF. • Odour from this process is likely the cause of odour complaints about the facility from nearby landowners, and was considered likely to be responsible for detectable off-site odours in the EPA's *Western Sydney Regional Odour Assessment 2013*. • Key areas of odour reduction in the modification include: o concrete maturation pads, which would eliminate standing leachate from depressions in the existing earthen maturation pads; o plastic covering for the compost windrows (during rainfall), which would reduce leachate generation, and improve moisture control in the compost material; and o a bio-cell, which uses mechanical ventilation to maximise aerobic conditions in the compost material, thereby accelerating the final stage of maturation and also producing less odorous compost. • A significant benefit of the modification would be improved operational reliability during bad weather, preventing the accumulation of wet compost in stockpiles (and attendant odours) resulting from rainfall. • The Department is satisfied that the proposed modifications are relatively minor and could be implemented quickly. They have the potential to noticeably reduce odour emissions from the AWTF. • Odour management at the AWTF is already governed by a suite of existing approval conditions. The Odour Management Plan should be updated to reflect the new composting processes. • Any ongoing odour concern with the site would be captured by the annual reviews or tri-enniel independent audits, which are required by the existing conditions. • The Department does not consider that further approval conditions are necessary.	Require applicant to: • update the existing Odour Management Plan to reflect the new composting processes and structures.
Noise	• The proposed biocell includes mechanical ventilation fans, which would operate 24 hours per day. • SITA has committed to install fans (and fan silencers) that minimise the generation of noise from the biocell and comply with its existing noise related approval conditions. • SITA has also committed to measure the noise performance of the fans (once installed) and install any additional reasonable and feasible noise controls that may be necessary. • The existing noise conditions were established under the EPA's current Industrial Noise Policy and the Department	Require applicant to: • update the existing Noise Management Plan to reflect the additional infrastructure and commitments. update the existing Construction Noise Management Protocol.

Issue	Consideration	Recommendation
	considers that they remain appropriate for the facility. • Any ongoing noise concerns with the biocell, and indeed the overall facility would be captured by the annual compliance reviews and tri-enniel independent audit. • The existing Noise Management Plan should be updated to include SITA's commitments in respect of noise generation from the biocell. • Construction work for the maturation pad upgrades would occur over a period of about 6 weeks, and would be staged to allow continual operation of the AWTF. The bio-cell would take about 16 to 20 weeks to construct. • The existing approval includes provision for a Construction Noise Management Protocol, which should be updated for the proposed construction work. • SITA requested the addition of a morning shoulder period (6am to 7am) to the construction hours specified in the approval. • However, SITA did not submit any supporting documentation and the Department does not consider it appropriate to allow construction outside the standard hours in the EPA's *Interim Construction Noise Guidelines.*	
Surface water	• While there would be no change to the overall size of the AWTF footprint, the additional hard stand and roof areas would result in higher rates of stormwater run-off. • However, the roof areas and compost covers would result in run-off that is much higher quality and less affected by leachate. • Surface water management on the site is governed by an existing Soil, Water and Leachate Management Plan, and the EPL, both of which would need to be updated with a new site water balance and details of the modified hardstand areas. • Any ongoing water management issue would be captured by the annual reviews or tri-enniel independent audits, which are required by the existing conditions. • The Department does not consider that further approval conditions are necessary.	Require applicant to: • update the existing Wastewater Management Plan to reflect the new rendering plant.

5. CONCLUSION

The Department has assessed the proposed modification in accordance with the requirements of the Act. This assessment has found that the maturation pad upgrades and bio-cell installation can be carried out with minimal additional environmental impact. Approval of the modification would allow SITA to swiftly install this infrastructure, which is likely to significantly improve the odour performance of the compost maturation process and help to address a known odour problem at the site.

The existing suite of approval conditions include a range of ongoing impact mitigation and auditing requirements, which would apply to the new infrastructure. All existing relevant management plans could readily be updated to reflect the location and specifications of the maturation pads and biocell.

Consequently the Department believes the proposed modification is in the public interest should be approved subject to some minor changes to the existing conditions of approval, as set out in the recommended notice of modification at **Appendix A**.

6. RECOMMENDATION

Under delegation of the Minister, it is RECOMMENDED that the Director – Industry, Key Sites & Social Projects:

- approve of the proposed modification under Section 75W of the Act; and
- sign the attached instrument (Appendix A).

David Mooney
A/Team Leader

C. Ritchie 24/1/14.

Chris Ritchie
A/Director
Industry, Key Sites & Social Projects

APPENDIX A – NOTICE OF MODIFICATION

APPENDIX B – ENVIRONMENTAL ASSESSMENT

APPENDIX C - SUBMISSIONS