NSW GOVERNMENT | Planning & Environment

ASSESSMENT REPORT

Section 75W Modification
Modification to Waste Management Facility – Hazardous and Restricted Waste (06_0095 MOD 4)

1. INTRODUCTION

This report assesses a modification request by Wild Environment on behalf of Toxfree Australia Pty Ltd (the Proponent). The proposal seeks to increase the processing capacity of Electronic Waste (E-waste) at the facility, install a weighbridge and amend the light vehicle car parking at the existing waste management facility (WMF) at 40 Christie Street, St Marys. The request has been lodged pursuant to section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

2. BACKGROUND

The Proponent operates a WMF at Lot 431 DP 854814 known as 40 Christie Street, St Marys (see **Figure 1**). The site is located in the Penrith local government area (LGA), in an area characterised by industrial land uses. The site is bound by Christie Street to the north and immediately adjoins industrial allotments to the south, east and west.

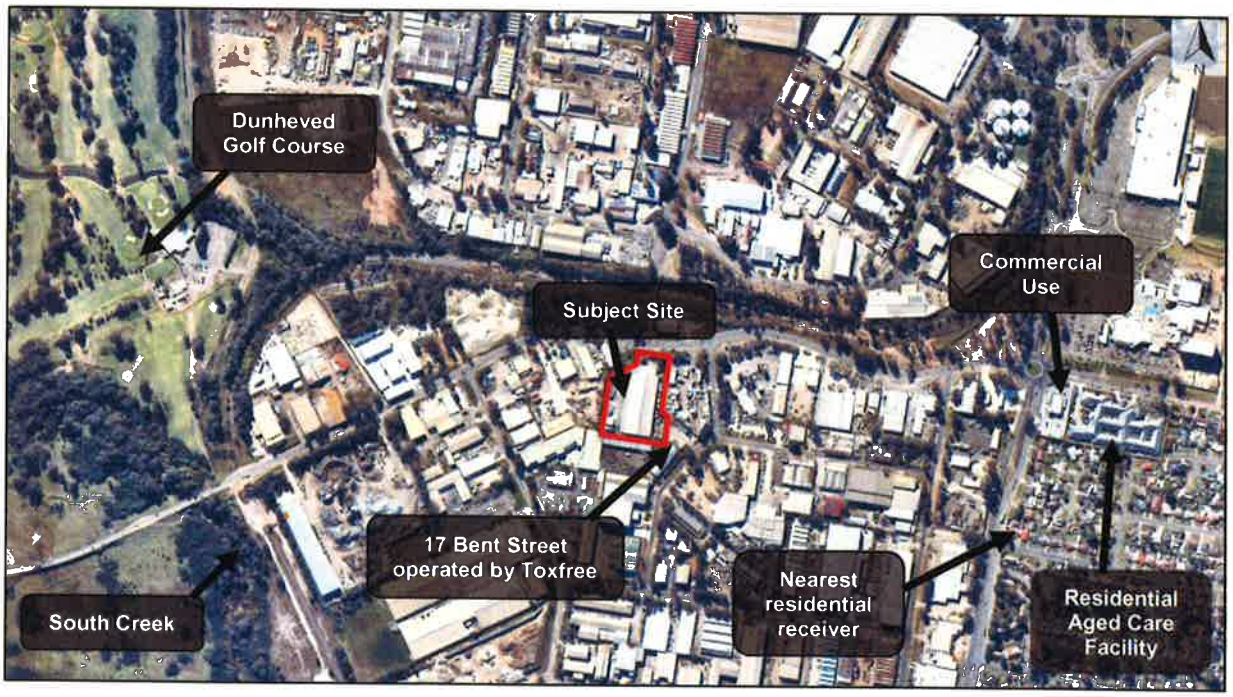

Figure 1: *Site Location*

The nearest residential receiver is approximately 570 metres (m) to the south-east of the subject site located in a low density residential area predominantly characterised by detached single storey dwellings. Approximately 620 m to the east of the site is a residential aged care facility.

Land 600 m to the west consists of green open space zoned for recreation and environmental conservation purposes. This includes the Dunheved Golf Course and South Creek which are located approximately 610 m and 600 m from the subject site, respectively.

The subject site consists of a warehouse with ancillary office space, undercover outdoor storage, hardstand, light vehicle car parking, two driveways and some vegetation at the site boundaries (see **Figure 2**).

The Proponent is seeking to modify the project approval in response to increased demand on the WMF's current capacity to process E-waste materials. Currently, the facility receives and processes fluorescent lamps however does not have the capacity to process other types of household E-waste. The Proponent has stated that the proposed modification would facilitate the safe processing of E-waste and reduce the amount of hazardous materials being illegally dumped or sent to landfill.

Figure 2: *Existing Site Layout*

3. APPROVAL HISTORY

On 22 December 2006, the then Minister for Planning granted approval to MP 06_0095 for the fit-out of an existing building and operation of a WMF (MP 06_0095) pursuant to Part 3A of the EP&A Act. The approval permitted the following:

- receipt, processing and storage of up to 5,000 tonnes per annum (tpa) of chemical waste, classified under the Australian Dangerous Goods Code (ADGC) between the hours of 6 am to 6 pm
- fit-out of an existing warehouse
- construction and operation of a flammable goods storage area
- transportation of residual waste to specialised recycling facilities.

On 6 July 2007, the then Minister for Planning granted approval to MP 06_0095 MOD 1 which included:

- alterations to the site layout
- storage of up to 10 litres (L) of ADGC Class 6.1, Packaging Group I material
- modification of the on-site gas detection system to include cyanide detection.

On 3 March 2010, the then Director, Mining and Industry (delegate for the Minister), granted approval to MP 06_0095 MOD 2 which included:

- chemical immobilisation and solidification (CIS) treatment of selected hazardous wastes
- modifications to the internal layout of the WMF
- additional treatment technologies
  - oil filter crushing

- aerosol crushing
- container cleaning
- fluorescent tube crushing
- secure product destruction.

On 9 May 2016, the Proponent lodged modification request 06_0095 MOD 3. The modification request is currently under assessment by the Department and is not related to the processing of E-waste. The modification request seeks to:

- establish an Acid/Alkaline Neutralisation treatment system
- expand the scope of treatment capability of the existing CIS process to handle a variety of waste streams already approved to process (subject to immobilisation permits)
- use a solidification treatment process for selected liquid/sludge/solid, non-dangerous goods hazardous wastes streams
- extend the operating hours to 5 am to 10 pm
- increase the storage limits of existing approved wastes
- delete Schedule 3 Condition 13(a) of the current Project Approval 06_0095.

The modification request is on hold while the Proponent investigates suitable air quality control measures to mitigate fugitive emissions and appease the requirements of the NSW Environment Protection Authority.

4. PROPOSED MODIFICATION

The Proponent has lodged a modification request pursuant to section 75W of the EP&A Act to modify the St Mary's WMF to process 7,200 tpa of E-waste through a BluBox system, install a weighbridge and alter the existing car parking and access arrangements. The modification is described in full in the Environmental Assessment (EA) included in **Appendix B** and is illustrated in **Figure 3**.

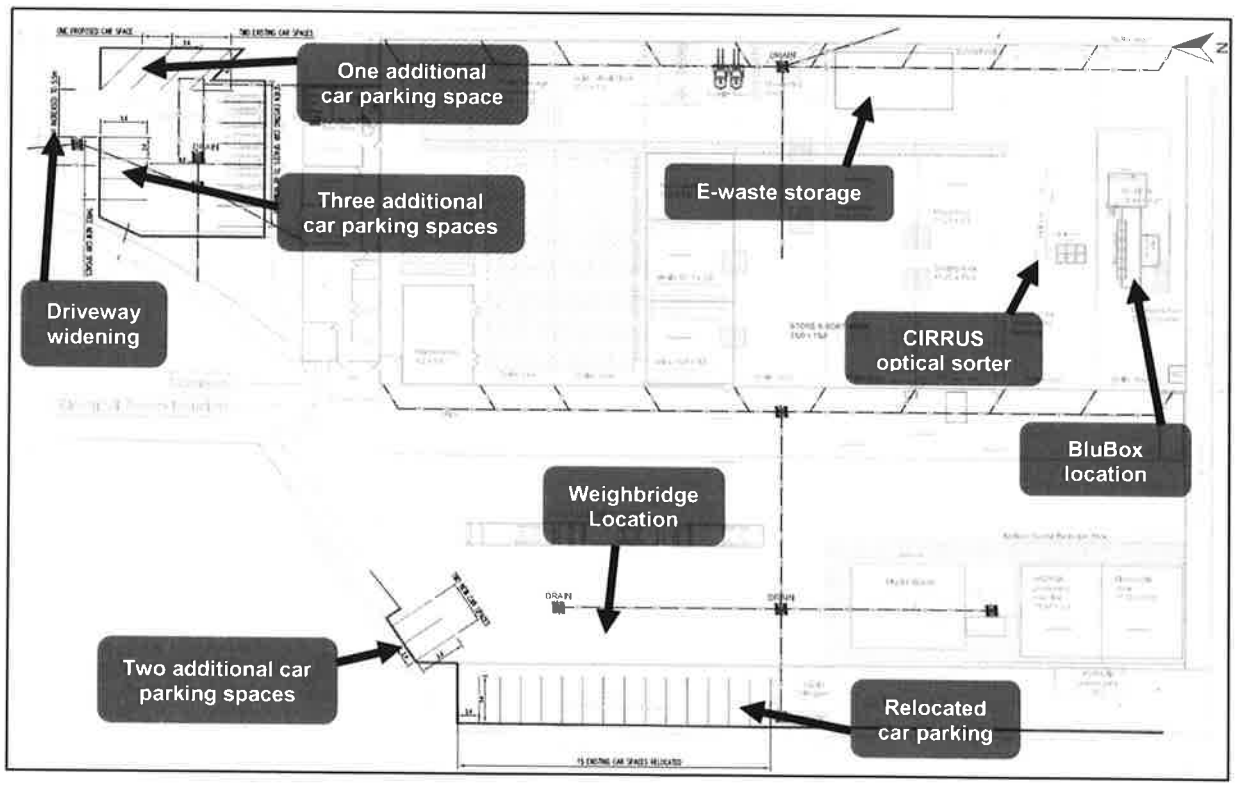

Figure 3: *MOD 4 proposed amendments*

The Proponent has submitted the modification request primarily in response to the growing quantities of E-waste in Australia and the need for safe processing of these materials. The Proponent has identified market growth in new technologies, increasing awareness of the need to recycle these materials and E-waste collection initiatives (e.g. E-waste collection bins at universities) as key factors contributing to the increasing need for E-waste recycling.

The Proponent has stated that the proposed amendments would result in six construction jobs and up to two additional operational jobs. Construction works are proposed to be undertaken during the approved operational hours and anticipated to take no more than four weeks.

It is anticipated that the modification would result in additional vehicle manoeuvrability and safety impacts. These impacts are assessed in detail in **Section 7** of this report and the Department is satisfied that subject to mitigation measures and conditions of approval, these impacts can be adequately managed.

4.1 Capacity

The modification request seeks consent to process up to 7,200 tpa of E-waste on site, including flat panel displays (FPD's). This capacity is in addition to the 5,000 tpa of other wastes currently approved to be received, treated and stored on site.

4.2 E-waste Processing

For the processing of E-waste, two primary pieces of machinery known as the "BluBox" and "CIRRUS" are proposed to be installed. The machines are manufactured off site then delivered and installed on site. Both machines are to be installed at the southern end of the existing building as illustrated in **Figure 3**.

All E-waste is proposed to be delivered to the site utilising existing truck movements delivering other waste types to the site from a variety of industrial, domestic and commercial sources. However, it is anticipated the proposed modifications would involve up to four additional truck movements per day. The Proponent has also provided that BluBox outputs from Toxfree's Dandenong (VIC) facility would be transported to the subject site for processing within the CIRRUS unit.

Both un-processed E-waste and processed E-waste outputs would be stored in the area currently occupied by the existing lamp processor which is to be removed and either re-sold or disposed of at a licenced facility. Lamps would now be processed by the BluBox.

E-waste outputs include glass, lamp end caps, fluorescent powder, circuit boards, aluminium and mixed plastics (see **Figure 4**) which are proposed to be sold to recyclers as recyclable material goods.

4.2.1 BluBox

The BluBox unit is used for sorting and processing of E-waste containing lamps with mercury (fluorescent, LED, halogen and incandescent) and Flat Panel Displays (FPD) (e.g. televisions, tablets, smartphones). E-waste is placed into the BluBox separately as illustrated in **Figure 4**. Outputs from the lamps will be end caps, glass and fluorescent powder. FPD's will have two outputs, classified as magnetics and non-magnetics, which get further sorted by the CIRRUS machine (discussed in **Section 4.2.2**).

The Blubox has a maximum daily processing capacity of 18 tonnes. The primary function of the BluBox is to separate the hazardous materials from the non-hazardous materials and yield materials for further processing off site. The machine is contained within a 40-foot shipping container under constant negative pressure. Within the machine is an active carbon filter which captures mercury released during the processing of E-waste materials. Zig-zag and cyclone separators capture any fluorescent dust released. All remaining product is then separated and sorted into the outputs shown in **Figure 4**.

Mercury and other fines captured by the filter are stored in 205 litre drums. Once a drum is full, it is immediately removed from the site for recycling at CMA Ecocycle in Victoria.

4.2.2 CIRRUS

The CIRRUS unit is an optical sorting machine proposed to be used for the sorting of the magnetic and non-magnetic FPD outputs from the BluBox (see **Figure 4**). CIRRUS is a fully-automated machine with in-built modes of product identification including flight detection with illuminated reference and over-the-belt detection with reflective reference. This is the final stage of E-waste processing on site. Sorted outputs, including aluminium, mixed plastics, liquid crystals, poly(methyl methacrylate) (acrylic glass) and printed circuit boards are then on-sold to recyclers.

The CIRRUS machine has a maximum daily processing capacity of 18 tonnes.

4.3 Weighbridge

The modification request includes the installation of a 22 m x 3.5 m in-ground weighbridge within the existing loading dock area as shown in **Figure 3**. The weighbridge is proposed to be used for both incoming and outgoing vehicles. The Proponent has suggested the purpose for installing the weighbridge is to comply with the EPA's requirements for waste tracking.

The Proponent has advised given the size of the site and because all vehicles would be managed by the Proponent, a weighbridge office is unnecessary and instead will be monitored via the existing office adjoining the heavy vehicle driveway.

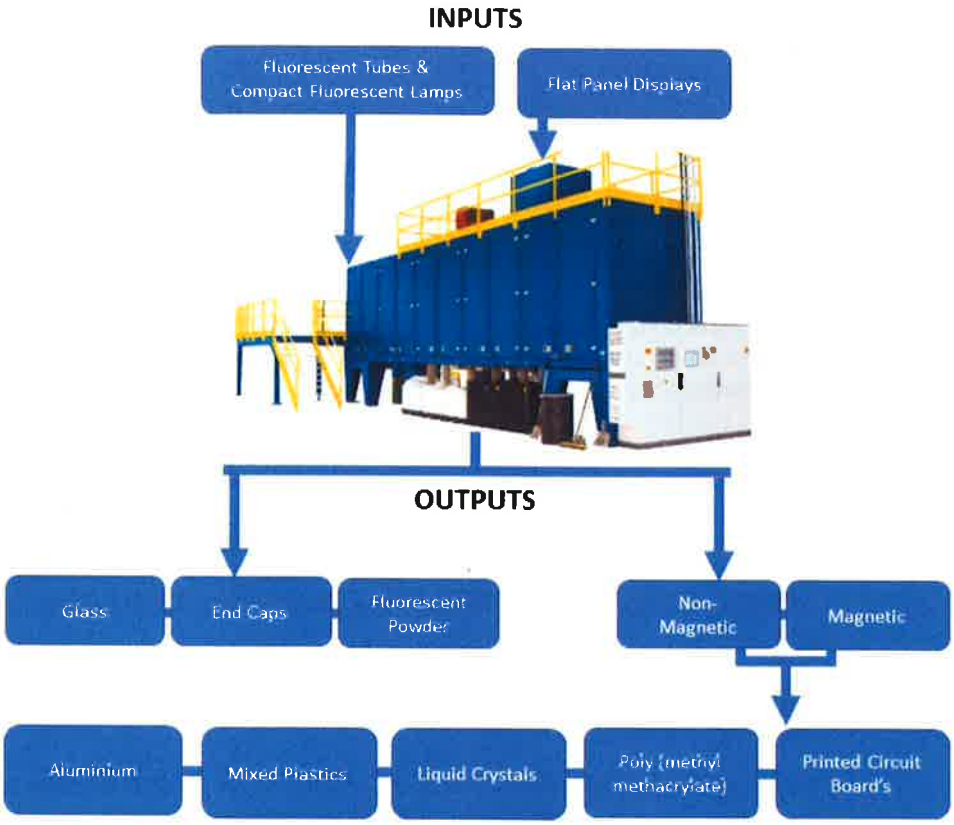

***Figure 4**: BluBox Inputs and Outputs*

4.4 Car parking and access

The modification request includes the addition of four new car parking spaces for light vehicles in the north-eastern car park, two new car parking spaces for light vehicles within the loading dock and the widening of the light vehicle driveway to 5.5 m to allow two-way movements.

The modification request also includes the relocation of the 15 existing car parking spaces located within the loading dock area. These car parking spaces would be shifted approximately 3 m west, over newly constructed hardstand. This would provide additional space within the loading dock area to facilitate installation of the proposed weighbridge (discussed in **Section 4.3**).

5. STATUTORY CONTEXT

5.1 Section 75W and modification of a Minister's Approval

The project was originally approved under Part 3A of the EP&A Act. The project is a transitional Part 3A project under Schedule 2 to the Environmental Planning & Assessment (Savings, Transitional and Other Provisions) Regulation 2017. The power to modify transitional Part 3A projects under section 75W of the Act as in force immediately before its repeal on 1 October 2011 is being wound up however, as the request for this modification was made before the 'cut-off date' of 1 March 2018, the provisions of Schedule 2 (clause 3) continue to apply. Consequently, this report has been prepared in accordance with the requirements of Part 3A and associated regulations, and the Minister (or his delegate) may approve or disapprove the carrying out of the project under section 75W of the EP&A Act.

5.2 Approval Authority

The Minister for Planning is the approval authority for the request. Under the Minister's delegation of 11 October 2017, the Director, Industry Assessments, may determine the request under delegation as:

- the relevant local council has not made an objection
- a political disclosure statement has not been made
- there are no public submissions in the nature of objections.

5.3 Section 75W

In accordance with Clause 12 of Schedule 6A of the EP&A Act, section 75W of the Act as in force immediately before its repeal on 1 October 2011 and as modified by Schedule 6A, continues to apply to transitional Part 3A projects.

The Department notes that:

- the primary function and purpose of the approved project would not change as a result of the proposed modification
- the modification is of a scale that warrants the use of section 75W of the EP&A Act
- any potential environmental impacts would be appropriately managed through the existing or modified conditions of approval.

Therefore, the Department is satisfied the proposed modification is within the scope of section 75W of the EP&A Act and does not constitute a new development application. Accordingly, the Department considers that the request should be assessed and determined under section 75W of the EP&A Act rather than requiring a new development application to be lodged.

6. CONSULTATION

Under section 75W of the EP&A Act, the Department is not required to notify or exhibit the modification request. Upon receipt, the request was placed on the Department's website and following a review of the documentation, the Department did not consider that further consultation was necessary. Notwithstanding, the Department sought comments from Penrith City Council (Council), the Environment Protection Authority (EPA), Fire and Rescue New South Wales (FRNSW) and Roads and Maritime Services (RMS).

Council did not object to the modification however raised a number of concerns regarding engineering, noise, air quality, hazards, contamination and waste.

EPA did no object to the modification or raise concerns. However, in their submission, the EPA recommended that the four roller doors be kept closed or fitted with fast opening/closing shutters to be utilised form 5 am to 7 am and 10 pm to 11 pm.

FRNSW did not object to the modification and recommended a condition of approval requiring the Proponent to undertake an updated Fire Safety Study.

RMS did not object to the modification or raise any concerns.

6.1 Response to Submissions (RTS)

On 8 September 2017, the Proponent provided a RTS report addressing the issues raised during the notification period. The Department reviewed the report and determined further information was required. Final RTS documentation was submitted on 15 November 2017.

The key design changes proposed in the RTS included relocation of the weighbridge and the addition of on-site detention. The RTS included:

- swept path diagrams depicting heavy vehicle manoeuvring around the weighbridge
- stormwater report
- waste management plan
- weighbridge plans
- line marking plan
- pollution incident response management plan
- emergency management plan.

The RTS report and supporting documentation was forwarded to Council and the EPA for comment. The RTS was also made publicly available on the Department's website on 23 November 2017.

The Department received a submission on the RTS from Council who raised further concerns regarding Water Sensitive Urban Design (WSUD). The Proponent further amended the stormwater plan in response to Council's comments which Council was generally satisfied with.

7. ASSESSMENT

The Department has assessed the merits of the proposed modification. During this assessment, the Department has considered the:

- EA and assessment report for the original application
- existing conditions of approval (as modified)
- EA supporting the proposed modification (**Appendix B**)
- submissions from State government authorities and Council (**Appendix C**)
- Proponent's response to issues raised in submissions
- relevant environmental planning instruments, policies and guidelines
- requirements of the EP&A Act, including the objects of the EP&A Act.

The Department considers the key assessment issues are vehicle access and manoeuvrability.

The Department's assessment of other issues is provided in **Table 1**.

7.1 Vehicle Access and Manoeuvrability

The proposed amendments include the installation of an in-ground weighbridge which has the potential to impact vehicle manoeuvrability and safety within the loading dock area, especially considering the hazardous nature of waste being transported and the proximity of the ignition source exclusion zone.

The 22 m x 3.5 m in-ground weighbridge is necessary for the facility to comply with the EPA's requirements for waste tracking. When the Proponent lodged the modification request, the proposed weighbridge location was in "Location A" depicted in **Figure 5**. The Department requested a swept path analysis which demonstrated heavy vehicle conflicts with the existing boom gate, ignition source exclusion zone and outdoor storage area as well as providing minimal margin for driver error in manoeuvres adjacent to the western façade of the building. The Proponent subsequently amended the plans and included an options analysis, illustrating swept path analysis manoeuvres for semi-trailers (the heaviest vehicle to access the site) for "Location B" and "Location C" as depicted in **Figure 5**. The Proponent determined "Location C" to be favourable and amended the proposal to reflect this.

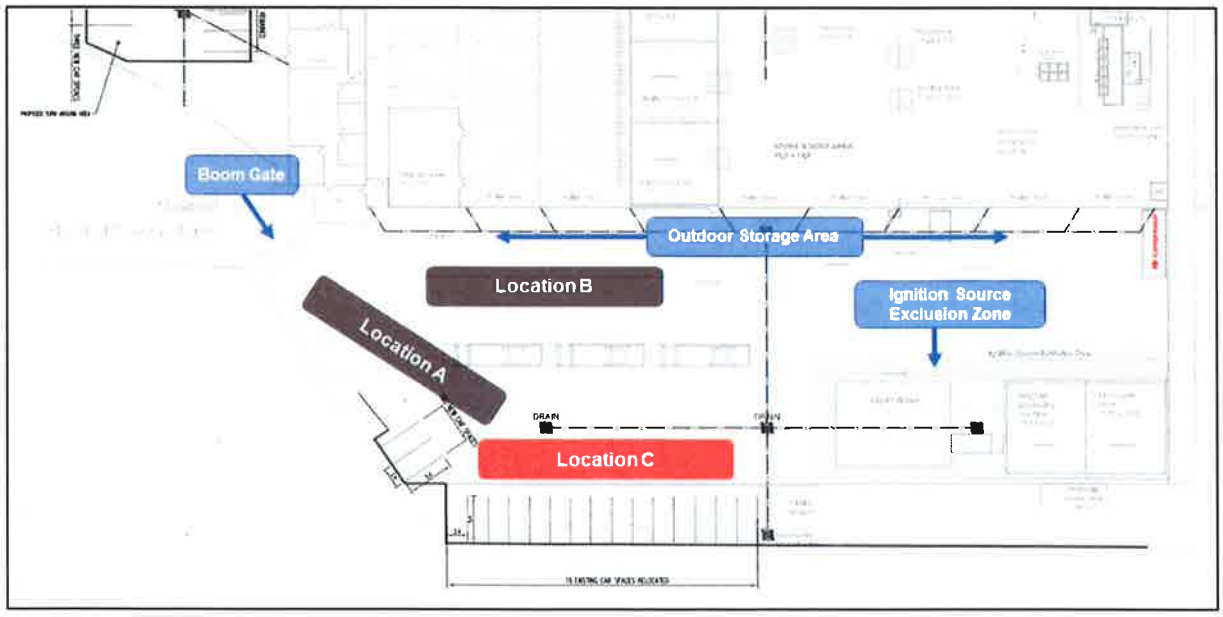

***Figure 5**: Proposed Weighbridge Location and Alternatives*

Of the options presented, the Department notes the swept path analysis for "Location C", as proposed, demonstrates heavy vehicles could manoeuvre through the site with minimal impacts to existing site infrastructure. The installation of the proposed weighbridge requires the relocation of the existing car parking spaces located within the loading dock area and includes the addition of two new car parking spaces (see **Figure 3**). The swept path diagrams show heavy vehicle conflicts with the two new proposed car parking spaces. The Proponent has advised the Department vehicles parked in these spaces could be moved as required. However, it is the Department's view that the small size of the site and the frequency of heavy vehicles entering and exiting the site would pose a safety risk should these spaces be retained. Subsequently, the Department has recommended a condition prohibiting the use of these parking spaces.

The swept path analysis submitted also demonstrates that some required heavy vehicle manoeuvres would be complex (as shown in **Figure 6**) due to the restricted size of the site and may have the potential to cause conflicts with other vehicles accessing the site. This would be compounded by the one-way nature of the site access, limited queuing area in the driveway and other loading requirements of the site. It is the Department's view that protocols are necessary to avoid traffic conflicts especially considering the potentially hazardous nature of the wastes. It is therefore recommended a condition be imposed requiring an Operational Traffic Management Plan (OTMP) be prepared and submitted to the Secretary for approval prior to construction of the weighbridge. The OTMP should address the management of light and heavy vehicle conflicts, scheduling of vehicle arrivals and departures, management of multiple vehicles on site at any given time and accident management/response.

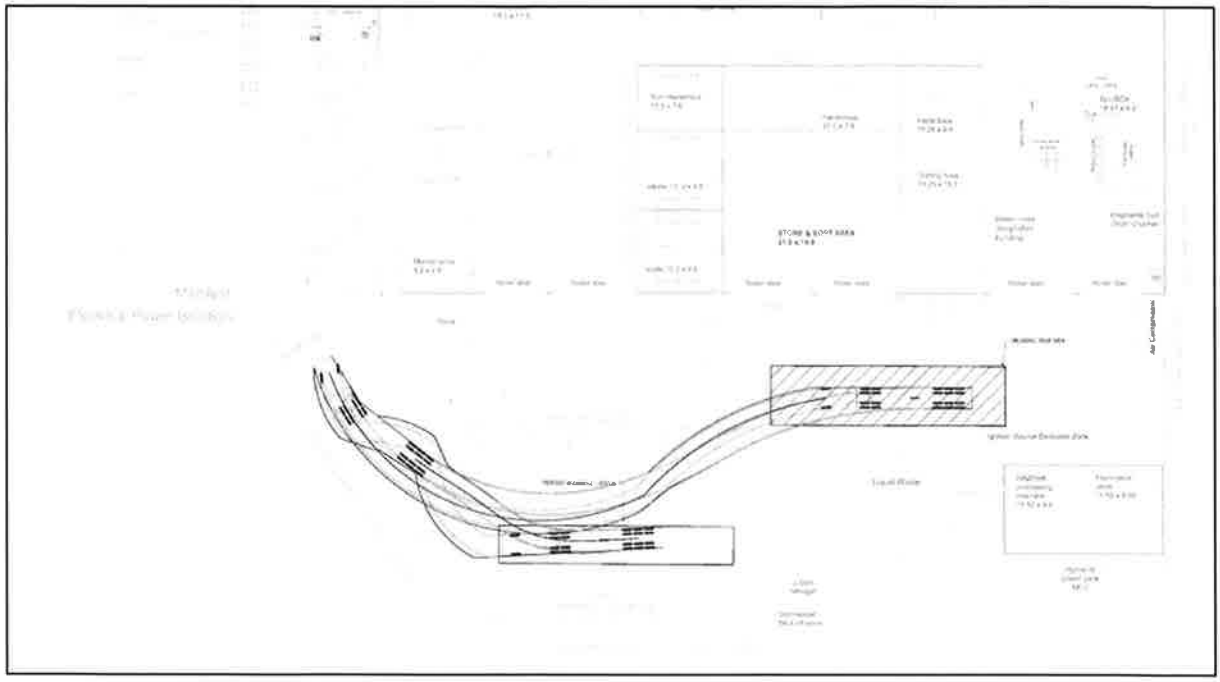

***Figure 6**: Swept Path Diagram Demonstrating Loaded Vehicle Entry onto Weighbridge*

The Department notes the proposed car parking rate is not consistent with the Penrith Development Control Plan (DCP) 2014. However, given the Proponent is seeking to increase the number of car parking spaces on site and the maximum number of staff in any one shift would be 25 whereas the total number of car parking spaces available on site would be 28, the Department considers there would be adequate car parking on site.

The Department's assessment concludes that the impacts of the weighbridge on internal vehicle manoeuvrability could be adequately managed through mitigation measures including the implementation of an OTMP and the Proponent has provided an appropriate amount of car parking.

7.2 Other Issues

The Department's assessment of other issues is provided in **Table 1**.

Table 1: *Assessment of Other Issues*

Issue	Assessment	Recommendation
Air Quality	• Processing of E-waste would produce mercury fines which has the potential to impact air quality. • E-waste is proposed to be processed wholly within the BluBox which is fully enclosed and under negative pressure at all times, including in standby mode. Negative pressure ensures mercury fines and other particulate matter cannot escape by keeping internal air pressure lower than the external air pressure. • The Proponent predicts up to four 205 litre drums containing mercury fines would be generated each year. These drums would be air tight, only temporarily stored on-site and removed for off-site recycling once full. • The BluBox system includes a mercury monitor which warns staff when mercury levels are approaching unsafe levels and when an exceedance has occurred within the BluBox. The BluBox also contains a carbon filter which captures mercury vapor and treats exhaust air generated during processing. Exhaust air is constantly treated, even during emergency machine shutdowns. • In their submission, the EPA raised no concerns regarding air quality. The EPA specified they agree with the Proponent's conclusion that the proposal would not impact air quality because the BluBox machine is an enclosed unit, under negative pressure, which is located within an enclosed building and contains an active carbon filter. • Given all air would be filtered prior to discharge, fines would be contained wholly within the BluBox and mercury drums are proposed to be removed from the site once full, the Department considers air quality risks to be minimal as a result of the proposed development subject to satisfactory air quality monitoring measures being implemented.	Require the Proponent to: • update the Environmental Management Plan required by Schedule 4, Condition 1 to include air quality mitigation and management measures • monitor and track air quality performance.
Stormwater	• The proposed car park extensions will increase the impervious surfaces on site and have the potential to impact stormwater drainage. • The Proponent's initial assessment concluded there would be no impacts to stormwater and drainage. The Department and Council did not agree with this assertion and required the Proponent to prepare stormwater plans, including hydraulic calculations, as part of the RTS to address the proposed increase in hardstand area. • The final stormwater report submitted with the RTS concludes that post-development flows would be less than pre-development flows where the stormwater design incorporates on-site detention (OSD). The Department notes the Proponent did not provide detailed OSD plans however considers it acceptable for the Proponent to submit a detailed stormwater management plan prior to the commencement of construction works. • Council has reviewed the final stormwater report and has recommended conditions requiring compliance with Council's Water Sensitive Urban Design (WSUD) Policy and satisfactory maintenance of the stormwater system. • The Department's assessment concludes that the proposed stormwater measures are adequate, subject to conditions requiring the preparation and implementation of a detailed stormwater management plan.	Require the Proponent to: • submit a stormwater management plan, including detailed OSD plans, to the Certifying Authority for approval prior to construction. • maintain the stormwater management system • comply with Council's WSUD Policy.
Hazards	• Mercury fines would be produced as a result of processing E-waste. • The Proponent has stated that all E-waste would be processed wholly within the BluBox which is designed to maintain negative pressure which stops fines, including Mercury, from escaping. The Mercury fines would be stored in 205 litre drums which would be removed for recycling off site once full. • The Proponent has submitted a Preliminary Hazards Assessment (PHA) which identifies the release of mercury fines as a result of drum spillage to be of moderate to high risk. The PHA assessed this scenario and concluded that if a drum were spilled on a windy day, a person would have to breath in the dust for one hour, without wearing personal protective equipment, before the level of mercury	Require the Proponent to: • update the facility's Emergency Plan, consistent with HIPAP No. 1 • undertake a Construction Safety Study consistent with HIPAP No. 7 • update the facility's Safety Management

Issue	Assessment	Recommendation
	would exceed the maximum provisional tolerable weekly intake recommended by the World Health Organisation. • The proposal was also referred to the Department's Hazards Team who concluded the proposed risk level would be acceptable subject to the implementation of management measures consistent with the Department's Hazardous Industry Planning Advisory Papers (HIPAP) No.'s 1, 7 and 9.	System, consistent with HIPAP No. 9.
Noise and Vibration	• Additional truck movements and the processing of E-waste has the potential to create additional noise impacts compared to the existing site noise levels. • The Proponent submitted a Noise Impact Assessment (NIA) which identifies the existing primary source of noise associated with the site to be truck and forklift movements. • The NIA predicts the primary sources of additional noise would be shredding of E-waste as it enters the BluBox, conveyors and rattling of materials during sorting (CIRRUS) and additional truck movements. • The NIA concludes that despite additional noise sources, the proposed development could comply with the relevant Industrial Noise Policy (INP) criteria at the nearest industrial and residential receivers. • In their submission, the EPA identified that noise modelling was based off the building's roller doors being open and subsequently recommended a condition be imposed requiring roller doors to be closed or fitted with fast opening/closing shutters to be operated from 5 am to 7 pm and 10 pm to 11 pm where practicable to provide further noise mitigation to residential receivers. • The Department notes a separate modification application, MOD 3, is currently under assessment by the Department which includes extending the existing hours of operation to 5 am to 10 pm, seven days per week. Although extended hours of operation are not part of this proposal, the NVIA submitted does consider night time impacts up to 11 PM. • As the present hours of operation, being 6 am to 6 pm, are not proposed to be amended under this modification, there would be little relevance in requiring the installation of fast acting roller doors for periods in which the facility is closed. As such, the Department has recommended a condition only requiring the doors to be shut between 6 am and 7 am where practicable (ie not receiving deliveries). • The Department is satisfied that the proposed development would comply with the relevant noise criteria and the proposal would result in minimal additional impacts.	Require the Proponent to: • keep roller doors closed during early morning and late evening periods.

8. CONCLUSION

The Department has assessed the proposed modification in accordance with the relevant requirements of the EP&A Act. The Department considers the proposed modification is appropriate on the basis that:

- it would contribute to achieving NSW's waste reduction and recycling targets
- it will facilitate the use of the land for industrial purposes
- it will result in minimal environmental impacts
- satisfactory mitigation measures would be put in place to manage potential impacts.

The Department is satisfied that the modification should be approved, subject to conditions.

9. RECOMMENDATION

It is recommended that the Director, Industry Assessments, as delegate for the Minister for Planning:

- consider the findings and recommendations of this report
- determine that request MP 06_0095 MOD 4 falls within the scope of section 75W of the EP&A Act
- modify the approval MP 05_0095
- sign the attached modification of approval (**Appendix A**).

Recommended by:

Nikki Matthews 20/02/2018

Nikki Matthews
Planning Officer
Industry Assessments

Recommended by:

20/2/18

Kelly McNicol
Team Leader
Industry Assessments

Decision
The recommendation is Approved by:

C. Ritchie 9/3/18

Chris Ritchie
Director
Industry Assessments
as delegate of the Minister for Planning.

APPENDIX A – INSTRUMENT OF MODIFICATION

The Notice of Modification is on the Department's website at:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8487

APPENDIX B – ENVIRONMENTAL ASSESSMENT

The modification application and all supporting information is available on the Department's website at:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8487

APPENDIX C – SUBMISSIONS

All submissions received are available on the Department's website at:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8487