

ASSESSMENT REPORT
DEVELOPMENT APPLICATION No.X04/1497
EXTENSION OF BLAXLAND WASTE
MANAGEMENT FACILITY
ATTUNGA ROAD
BLAXLAND

25 May, 2005

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Introduction	Nexus Environmental Planning Pty Ltd has been commissioned by Blue Mountains City Council to undertake an independent assessment of Development Application No.X04/1497 for the extension of the Blaxland Waste Management Facility. This report presents the assessment made by Nexus Environmental Planning Pty Ltd and concludes that the site is suitable for the proposed development, the proposal has planning merit and should be approved by the Council.
Reason for report	Council is applicant.
Applicant	City Solutions Group of Blue Mountains City Council.
Owner	Crown. Land under care, control and management of Blue Mountains City Council.
Application lodged	8 October, 2004.
Property address	Lot 303, DP 751662 and Lot 376, DP 823999, Nos.30 & 35 Attunga Road, Blaxland.
Site description	<p>The Blaxland Waste Management Facility ("WMF") is located within the City of Blue Mountains in the township of Blaxland.</p> <p>The Crown owns the site and Blue Mountains City Council is currently charged with the care, control, and management of the site. The following information about the site is compiled from the Environmental Impact Statement which accompanies the development application.</p> <p>The WMF is situated in a valley located within the catchment of Cripple Creek. The site covers an area of approximately 31 hectares including the current landfill mound which is approximately 400m long and 150m wide, associated operational areas, an adjacent quarry, and areas of bushland, all of which are within the site.</p> <p>The northern slopes of the valley adjacent to the existing landfill mound have been utilised for the quarrying of sandstone material for operation purposes. A photograph of the quarrying operations is shown as Figure 11-4 of the EIS.</p> <p>The footprint of the current landfill is approximately 7 hectares. Under the current proposal, the existing landfill would be extended into the quarry to the north of the existing landfill mound, and would cover an additional 4.3 hectares.</p> <p>The site is bounded by partially cleared open forest and woodland</p>

to the west, north, and east of the site. The entrance to the WMF and the weighbridge area are located along the southern boundary of the site.

Light industrial development is located to the south west of the site along Attunga Road. The nearest development to the site is factory units located on Attunga Road, approximately 450m from the southern edge of the proposed landfill extension.

The minimum distance from the edge of the proposed landfill extension to the nearest residential property (to the north west of the site) is about 450m, while houses on Spurwood Road are about 500m from the proposed development.

The proposed landfill extension is approximately 150m further than the current landfill from residential properties in Attunga Road.

Existing site operations

The Environmental Impact Statement ("EIS") which accompanies the development application, at its Chapter 7, provides details of the current operations carried out on the site. The following extract is taken from Chapter 7 of the EIS.

"The Blaxland WMF is currently operated by Theiss Services (the Contractor) under contract to the Proponent [Blue Mountains City Council]. The primary activities on site are receiving and weighing of waste delivered to the facility by council waste collection vehicles, commercial waste operators and small vehicles/householders. The current landfill disposal area is on the top of the landfill mound, as illustrated in Figure 7-1 [of the EIS].

The Proponent's staff operate the site weighbridge, and collect fees from vehicles entering the facility. The Contractor is paid a fixed fee to operate the landfill, which is not related to the quantity of waste received. This provides an incentive to divert waste from the landfill where feasible."

"Green waste received at the facility is shredded periodically and spread over the landfilled areas, while clean fill is stockpiled and used for landfill daily cover. Construction and demolition waste is sorted where practicable and concrete is recovered. Within the limits of the existing areas and staff available, materials such as these are recovered and diverted from landfill, or used as engineering materials on site, such as for creating hardstand areas and repairing access roads.

Source separated recyclables are collected within the compound,

along with tyres, car batteries, gas bottles and waste oil. When sufficient quantities of recyclables are accumulated, subcontractors transport them off-site. Waste oils and other liquids are stored in a flammable goods storage unit, located onsite. Gas bottles are stored in the gas bottles storage unit and car batteries are stored on a bunded and covered pallet.

The Blaxland WMF is open from 8:00 am to 5:00 pm seven days per week. It is closed on Good Friday and Christmas Day to the general public."

"Site layout

Figure 7-2 [of the EIS] shows the [existing] site layout. Entrance to the site is from Attunga Road, which can be accessed from the Great Western Highway via Wilson Way and Railway Parade.

The site is connected to mains water, electricity and telephone services, but there is no existing connection to sewer. The nearest sewer line is in Attunga Road, near the existing Rural Fire Service Station."

"Site facilities include:

- *One weighbridge (used for both incoming and exiting vehicles);*
- *Employee amenities and office building (portable structures);*
- *Parking area (for employee and maintenance vehicles only);*
- *Machinery shed and compound;*
- *Wash Bay;*
- *Recyclable materials storage;*
- *Stormwater management ponds; and*
- *Leachate collection ponds.*

Signs at the facility entrance explain the charging structure, operating hours and types of wastes accepted. They also provide information relating to site access and safety controls. The main access road and entrance to the site are sealed. Roads within the landfill area are not sealed, but a water truck periodically travels

along the roads and sprays them with water to minimise dust emissions.

A 1.8 m high chain-wire security fence secures the site entrance. Thiess Services and Blue Mountains City Council control access to the site."

"7.3 Waste sources and composition

Waste [is] received at the Blaxland WMF from a variety of sources, including domestic properties, commercial businesses, and Council works. It includes:

- *Kerbside collected domestic waste;*
- *Waste delivered to the facility by local residents;*
- *Commercial and industrial waste;*
- *Building and demolition waste;*
- *Soil and clean fill;*
- *Asbestos;*
- *Recyclable materials including metal, papers, plastics, and glass; and*
- *Green waste.*

Kerbside collected domestic waste and clean fill comprise the greatest percentage of materials by weight received at the Blaxland WMF. Significant quantities of green waste and commercial/industrial waste are also received.

Table 7-1 [of the EIS] shows a breakdown of waste into the various categories used by Blue Mountains City Council employees at the gatehouse to classify each load passing over the weighbridge. Quantities shown have been rounded to the nearest 100 tonnes, and some materials for which less than 100 tonnes were recorded are not shown."

"7.4 Permitted waste

The Blaxland WMF is currently licensed as a Solid Waste Class 1 Landfill and is permitted to accept the following waste material for landfilling (NSW EPA Licence Number 10039, Section L5.3):

Waste, including putrescible waste, that is assessed as inert waste or solid waste following the technical assessment procedure outlined in Technical Appendix 1 of the Waste Guideline or that is specified as inert waste or solid waste in Schedule 1 of the Protection of the Environment Operations Act 1997 and asbestos waste (including asbestos waste in bonded matrix asbestos fibre and dust waste resulting from removal of thermal or acoustic insulating materials or from processes involving asbestos material, and dust from ventilation collection systems).

Under the existing licence, a maximum of 100,000 tonnes per annum of the above waste types can be accepted at the Blaxland WMF site. A copy of the current EPA licence for the site is provided in Appendix D [of the EIS]."

"7.4.1 Hazardous waste

Liquid, hazardous, and chemical wastes are not accepted at the site. There is a domestic household chemicals collection held twice yearly, where residents can drop off their household chemicals for disposal at the Blaxland WMF. This waste is currently taken away and treated by Cleanaway at its Treatment Facility, at Newcastle."

"7.4.2 Tyres

Disposal of tyres in the landfill can only occur where:

- *The tyre has a diameter of 1.2 metres or less; or*
- *The tyre has been shredded or had its walls removed; or*
- *The tyre was delivered to the premises as part of a domestic load.*

Stockpiling of tyres is limited to a maximum of 50 tonnes at any one time, and the piles must be located in a clearly defined area away from the tipping face. There is a limit on tyres of 5 tyres per day per customer."

"7.4.3 Recyclables

The following source separated recyclable materials are accepted free of charge at the site. These include:

- *White goods;*
- *Scrap metal;*
- *Glass containers;*
- *PET and HDPE;*
- *Paper and cardboard;*
- *Aluminium;*
- *Engine oil;*
- *Car batteries; and*
- *Gas bottles.*

There are limited opportunities to store these materials with the current site layout."

Further details of the management and operation of the existing landfill on the site are contained in Chapter 7 of the EIS.

Proposal

The proposal is to extend the existing Blaxland WMF to accommodate the future waste disposal needs of the Blue Mountains City Council. Full and comprehensive details of the proposal are contained in the Part B of the EIS. A summary of the proposal is provided in the Executive Summary of the EIS as follows:

"The proposal is to extend the existing landfill located within the Blaxland WMF on Attunga Road, Blaxland, which would provide approximately one million cubic metres of additional disposal capacity. This should meet the Blue Mountains community's landfill disposal needs for the next 15-20 years, based on current landfilling rates.

However, with improved on and offsite recycling/recovery practices and increased waste diversion from the site, the life of the landfill could extend beyond this period.

Extending the existing landfill at the Blaxland WMF would involve the following:

- *Excavating the lower sections of the existing quarry area to the north of the current landfill and lining them with a synthetic liner and leachate collection system, to prepare*

them for the first stage of landfilling;

- *Re-diverting Cripple Creek to the north of the existing landfill mound, to overcome current surface water pollution from landfill leachate;*
- *Creating a temporary small vehicle dropoff/recycling area within the existing site to ensure that small vehicles do not need to enter the new landfill extension area;*
- *Landfilling within the extension area in five discrete stages over 15 - 20 years;*
- *Closing and rehabilitating the existing landfill and progressively rehabilitating completed sections of the proposed landfill extension;*
- *Managing landfilling and other site operations using practices outlined in the LEMP; and*
- *Monitoring for potential environmental impacts in accordance with the EPA licence."*

Development controls

Current Zoning

The section of the site where the existing WMF is located and the proposed extension is to be located is contained within the "Recreation - Garbage and Quarry" zone pursuant to the Blue Mountains Local Environmental Plan 1991. Smaller sections of the total site, outside the area the subject of the proposal, are zoned "Light Industrial" and "Environmental Protection" as detailed in Chapter 10 of the EIS.

Proposed Zoning under Draft Local Environmental Plan 2002

Pursuant to the draft LEP 2002, the site upon which the existing and proposed landfill operations are located is designated as "Area subject to LEP 1991". As such, the provisions of draft LEP 2002 are not considered further in the assessment of the proposal.

State Environmental Legislation

There are a number of State Acts which apply to the proposed development. Below is a summary of the relevant Acts and the manner in which they affect the proposed development.

- **Development consent is required under Part 4 the Environmental Planning and Assessment Act 1979.**

The proposed development is listed in Schedule 3 of the **Environmental Planning and Assessment Regulation 2000** as Designated Development and, as such, an EIS is required to be submitted with the development application. The required EIS has been prepared by the GHD.

- The existing landfill on the site operates pursuant to Licences Nos.10039 and 4525 of the **Protection of the Environment Operations Act 1997**. Conditions of those licences will need to be varied if consent to the proposal is granted by the Council.
- The **Water Act 1912** provides for licences and approvals relating to changes to a watercourse. As such, a licence may be required to divert Cripple Creek as proposed.
- The realignment of Cripple Creek will involve dredging and reclamation activities to be undertaken. As such, a permit is required in accordance with the **Fisheries Management Act 1994**.
- The **Threatened Species Conservation Act 1995** requires a detailed assessment of the impact the proposed development will/may have on threatened species, populations or ecological communities or their habitats. This aspect of the proposal is discussed in a later section of this report.
- The **National Parks and Wildlife Act 1974**, among other things, provides for the protection and management of Aboriginal sites in New South Wales. An assessment of the impact the proposed development may have on Aboriginal heritage sites is required and has been provided in the EIS.
- The **Native Vegetation Act 2003** deals with the clearing of native vegetation. The proposed development will involve the clearing of 0.8 hectares of native vegetation, however, sub-section 25 (f) of the Act states that clearing work undertaken as part of a Designated Development is exempt from the provisions of the Act.
- Part 3A of the **Rivers and Foreshores Improvement Act 1948** states that:
 - (i) excavation or removal of material from the bank, shore or bed of a stream, estuary or lake, or land

which is not more than 40m from the top of the bank or shore of protected waters,

- (ii) building erosion control works or other structures in a river, estuary or lake, or
- (iii) the placement of fill material in a river, estuary or lake,

requires the approval of the Department of Infrastructure Planning and Natural Resources. Sub-section 22H (1) (b) of that Act, however, states that Part 3A does not apply to work carried out by a public or local authority and, as such, no permit is required for the proposed works adjacent to Cripple Creek.

State Environmental Planning Policies

The proposed development is subject to the following State Environmental Planning Policies:

- **State Environmental Planning Policy No.11 - Traffic Generating Development** contains Schedules 1 & 2 which list certain types of development which require any development application for those developments to be submitted to the Traffic Authority for comment. The proposed development is listed in Schedule 1 as:

"(k) junk yards or depots or regional depots, within the meaning of the Waste Disposal Act 1970,"

As such, the development application must be forwarded to the Roads and Traffic Authority for comment. This has been done by the Council.

- **State Environmental Planning Policy No.33 - Hazardous and Offensive Development** aims to ensure that appropriate measures are employed to minimise the impacts of development which are deemed to be either hazardous or offensive. The development proposal is not hazardous but is potentially offensive and, as such, consideration of SEPP 33 must be undertaken by the Council in its consideration of the proposed development.

- **State Environmental Planning Policy No.44 - Koala Habitat Protection** aims:

"... to encourage the proper conservation and

management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and reverse the current trend of koala population decline."

SEPP 44 applies in the Blue Mountains to land which has an area of more than 1 hectare. As such, the Council must assess the proposed development against the provisions of SEPP 44. The EIS, at its Chapter 15, addresses the provisions of SEPP 44.

- **State Environmental Planning Policy No.55 - Remediation of Land** aims:

"... to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment."

The EIS indicates that the site is not contaminated and this aspect of the proposal is discussed later in this report.

Regional Environmental Plans

- **Sydney Regional Environmental Plan No.20 - Hawkesbury Nepean River (No.2 - 1997)** applies to the site and contains a number of provisions aimed at protecting the environment of the Hawkesbury River. Clauses 5 & 6 of SREP 20 contain general and specific planning policies which must be considered by the Council when determining a development application. Those clauses are discussed in a later section of this report.

Community consultation

Extensive community consultation was undertaken both as part of the concept development for the extension of the WMF and as part of the preparation of the EIS. Chapter 4 of the EIS contains a comprehensive description of the community consultation process undertaken, the objectives of which included:

- *Communicating with local residents about the project;*
- *Assisting the community in understanding the project and the environmental assessment work being undertaken;*
- *Involving the community in identifying mitigation measures to reduce local impacts;*
- *Building trust between the Proponent and local residents;*

and

- *Establishing means for relevant stakeholders to provide comments on the project."*

Chapter 4.6 of the EIS provides the overall outcomes of the consultation process as:

"Overall outcomes of the consultation process

A number of changes were made to the original proposal to address resident concerns, arising from feedback received from the community during the consultation process. Other actions have also been proposed to minimise impacts on residents.

4.6.1 Changes made to the Proposal

Reduction in size of landfill extension

In response to resident concerns, the footprint of the landfill extension (which originally occupied the entire quarry, plus a 30 metre wide firebreak around the outside of the quarry) [has] been reduced in size by about 0.7 hectares.

The modified footprint allows some of the existing vegetation near the top of the quarry to be preserved. It also allows vegetation to be reconstructed in the north east of the quarry, and this vegetation to be reconnected to the larger areas of bushland outside the quarry.

Reduction in landfill volume

Due to resident concerns about dust, noise and other impacts associated with preparation of the quarry for landfilling, the proposed excavation of rock in the base of the landfill has been reduced compared to the original design. This reduces the volume of rock to be excavated from the base and sides of the landfill to approximately 120,000 m³. It also reduces the overall capacity of the landfill by this amount, which addresses concerns from some residents that the landfill would be too large.

4.6.2 Other changes made as a result of the consultation process

Rezoning of land to the north

To address concerns expressed by the RATS [Residents Against the Supertip] local resident group about future expansion to the north of the Blaxland landfill, beyond the current site boundary,

Council passed a motion to rezone land to the north of the existing quarry form [sic] its existing zoning of Recreation – Garbage Disposal/Quarry to effectively prohibit future landfilling.

The Notice of Motion and minutes from the Council meeting held 18/05/04, where the motion was passed, are included in Appendix O [of the EIS].

Change to project scope

The initial project included a small vehicle drop-off facility located near the former incinerator on the western end of the site. Initial investigations showed that this would have required rezoning of a small area of land on Attunga Rd adjacent to the fire station from Light Industrial to Recreation – Garbage Disposal. It was decided that a separate approval would be sought for this facility if required.

Instead, a temporary small vehicle drop-off facility would be incorporated in the existing site, within the current operational area. The main purpose of this facility would be to avoid the need for small vehicles to drive onto the landfill extension area, thereby minimising dust emissions and potential OHS issues. More permanent drop-off facilities including improved recycling facilities would be sited at a later stage, with a separate approval process being undertaken if required.

4.6.3 Other changes under consideration, subject to EIS approval

Subject to EIS approval, Blue Mountains City Council is considering kerb and guttering the footpaths in Attunga Road, to reduce current noise and dust impacts from vehicles using this road to access the Blaxland WMF and the adjacent industrial area. This would be subject to EIS approval and would improve resident amenity in the medium to long term."

Notification

The application was advertised from 1 December, 2004 to 29 March, 2005.

Fourteen (14) submissions were received - One (1) in total support, five (5) in support with some concerns raised, and eight (8) objecting to the proposed development.

The development application was also referred to the following State government departments and statutory authorities for their comments:

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- Department of Infrastructure Planning and Natural Resources
 - Department of Environment and Conservation
 - NSW Fisheries (now Department of Primary Industries)
 - Roads and Traffic Authority
 - NSW Rural Fire Service
 - NSW Fire Brigade
 - NSW Heritage Office
 - NSW National Parks and Wildlife Service
 - Sydney Catchment Authority
 - Sydney Water Corporation
 - Integral Energy
 - WorkCover NSW
 - Wentworth Area Health Service
 - Telstra.

Residents Issues

The issues raised by residents and resident groups are summarised below with comment as appropriate.

Costing of the proposed development

Many of the submissions raised concern with the method by which the proposed development has been costed in the EIS. The Council, when deciding that the extension of the Blaxland WMF was to form part of its Waste Management Strategy, undertook a cost benefit analysis before resolving to extend the Blaxland WMF.

It is considered that the costing submissions raised during the notification process are of a strategic nature and, as such, are not a consideration pursuant to section 79C of the Environmental Planning and Assessment Act 1979.

The issue raised by objectors was, however, raised with the proponent who has provided a report titled "*Proposed Extension of the Blaxland WMF Supplementary Report*", dated May, 2005, prepared by GHD, the author of the EIS.

Nexus Environmental Planning Pty Ltd is not qualified to make comment on the strategic economic costings provided in either the EIS or the abovementioned supplementary report, however, it is considered that ample documentation is now available for the Council when it considers the submissions raised by objectors in this regard.

Traffic

Concern has been raised with regard to the impact additional traffic movements associated with the proposed development will have on both the residents in the environs of the site and on the wider road network. Many submissions raised concern that the traffic impact assessment contained in the EIS did not address the impact additional traffic movements would have should a decision be made by the Council to close the Katoomba WMF and transport waste currently disposed of at that facility to the proposed extension to the Blaxland WMF.

The Council's Development Engineer raised no objection to the proposed development from a traffic perspective, however, a review of the EIS has concluded that there is some merit in the concerns raised by the residents. In this regard, a request has been made to the proponent that additional information be provided which demonstrates:

- (i) the capacity of the intersection of Wilson Way with Railway Parade to accommodate trucks as proposed, and
- (ii) the impact of the additional traffic resulting from any closure of the Katoomba WMF on the road network in the environs of the Blaxland site.

With regard to point (i) above, the following request was made:

"I note that the EIS indicates that currently trucks make a 270 degree turn at the roundabout at the intersection of Wilson Way with Railway Parade. This raises two questions:

- (a) *Is a left turn movement from Wilson Way into Railway Parade a permitted manoeuvre?*
- (b) *If the answer to the above question is yes, is the geometry of the roundabout sufficient to allow for the safe undertaking of that 270 degree turning movement without compromising other traffic movements on the roundabout. This is particularly relevant in light of the statement in the EIS:*

"The existing traffic flows recorded on Wilson Way indicate that the road is heavily trafficked. Comparing the nominal traffic volumes for collector roads in Table 1 with the existing average daily traffic volumes in Table 2, it is evident that [Wilson Way] operates close to the design volume capacity of a collector road."

As with the additional information regarding the cost of the proposed development, the

supplementary report of GHD has addressed this impact. GHD states, among other things:

"Answer 1 (a)

A direct left turn from Wilson way into Railway Parade is not physically possible at the roundabout, due to the extreme angle of the intersection, and the traffic island which prevents vehicles from crossing the road centreline. However a 270 degree loop turn, which is a clockwise manoeuvre, is physically possible.

The crash history at the roundabout was assessed by GHD as part of the EIS. There is not a significant crash history at this location. Based on the acceptable operation of the existing roundabout, this loop turn manoeuvre is acceptable for (1) garbage collection vehicles, (2) trucks accessing the WMF during the construction period and during normal operations.

Answer 1 (b)

To answer this question, GHD staff analysed the turning movements on the roundabout using Austrack version 6, for three different types of heavy vehicles associated with the Blaxland landfill. These were as follows:

- *8.8 metre long non articulated vehicle (council garbage truck/concrete delivery truck during construction period);*
- *12.5 metre long non articulated vehicle (contractors truck delivering waste/typical construction truck delivering materials during the construction period); and*
- *19 metre long articulated vehicle/semi (possible waste transfer vehicle for Katoomba waste/semi delivering pipes during construction period).*

The results of this analysis are shown in Figures 100 to 102 in Appendix C. Figure 100 indicates that the existing road and roundabout geometry can accommodate 8.8 metre long vehicles.

More care needs to be taken by drivers of 12.5 metre long vehicles, but the movement is still possible, if the body of the vehicle slightly overhangs the centre of Railway Parade, as shown in Figure 101A. This overhang could be eliminated by modifying the southern kerb of the entrance to Railway Parade to widen the road in this location, as shown in Figure 101B.

For 19m long vehicles, there are some difficulties with the existing road and roundabout geometry, as shown in Figure 102. The arc swept by the vehicle is such that the vehicle's wheels would pass over the existing roundabout, and over the southern kerb of the entrance to Railway Parade (to a greater extent than the 12.5 metre long vehicle). Conversion of the roundabout and the kerb to drive over in this location would likely eliminate these problems."

In light of the above response from the proponent, it is recommended, if the Council is of a mind to approve the proposed development, that a suitably worded condition of development consent be attached to that consent to ensure that both the roundabout and other intersection works discussed above for the 8.8m and 12.5m trucks are implemented to ensure that the integrity of this intersection is maintained. Should the Council, at some later time, resolve to transfer waste currently disposed of at the Katoomba WMF to the Blaxland WMF, it should also include a condition of development consent to ensure that the intersection can safely accommodate 19m long articulated vehicles.

With regard to the impact of additional traffic should waste from the Katoomba WMF be transferred to the Blaxland site, the GHD supplementary report states:

"... GHD undertook additional analysis of the potential increase in heavy vehicle movements and total traffic movements along Attunga Parade and Railway Parade (south of Attunga Road) for the following two cases:

- *Transfer of waste from the Katoomba WMF to the Blaxland WMF (Option 1 in the EIS Chapter 9); and*
- *Exporting all waste from the Blue Mountains (Option 3 in the EIS Chapter 9).*

The traffic volumes reported in Chapter 16 of the EIS relate to potential increases in heavy vehicle movements associated with the construction period of the landfill extension (Option 2 in the EIS Chapter 9).

Option 1 Extension of Blaxland landfill/transfer of Katoomba waste

Construction impacts

As reported in Chapter 16 of the EIS, increases in heavy vehicle movements associated with extension of the Blaxland landfill itself would be of the order of 24 vehicle trips per day. These would be due to deliveries of construction materials, which would be limited to the initial construction period.

Since the Katoomba landfill would not close for 3-4 years, traffic levels would return to preconstruction levels for a period of 1-2 years.

Operational impacts

If a decision was then made by Council to send Katoomba waste to Blaxland landfill, only the material that would have been landfilled at Katoomba would be transferred – small vehicle traffic, garbage collection trucks and contractors that currently use the Katoomba landfill would instead dispose of material at the proposed Katoomba waste transfer station.

Efforts would be made at Katoomba to sort and segregate the materials and recover recyclables. Any nonrecyclable materials would be loaded into transfer

trailers and compacted ready for transfer to Blaxland landfill. The amount of material finally transferred to Blaxland landfill would depend upon the willingness of residents to sort their waste into recyclable and nonrecyclable components, for kerbside recycling collections and for material taken to the transfer station in trailers and small vehicles.

Therefore it is erroneous to assume that traffic levels at Blaxland will "at least double", if Katoomba waste is transferred to Blaxland for landfill disposal. Our analysis, which is outlined below, shows this not to be the case.

Council garbage trucks generally collect domestic waste from the lower mountains on Mondays, Tuesdays and Wednesday mornings, and deliver it to Blaxland landfill. On Wednesday afternoons, Thursdays and Fridays, the garbage collected from the upper mountains is delivered to Katoomba landfill.

Therefore once Katoomba landfill closes, and if a decision is made to transfer upper mountains waste to Blaxland landfill, this would mean additional traffic on Wednesday, Thursday and Friday in the vicinity of the Blaxland landfill. The current pattern of traffic around in the early part of the week should not be affected by domestic waste, but heavy vehicle traffic would increase slightly due to transfers of nondomestic waste from Katoomba at this time.

Based on figures from the EIS, approximately 27,000 tonnes of waste would need to be transferred from Katoomba waste transfer station to Blaxland landfill each year.

Information supplied by the Blue Mountains City Council that indicates waste disposal trends on weekdays and weekends was used by GHD to estimate the number of transfer vehicles movements would be required from the Katoomba WMF to Blaxland WMF. These are summarised in Table 1 [of the supplementary GHD report]."

"These estimates are based on the following conservative assumptions:

- *Capacity of transfer trailer = 67m³*
- *Average waste density in transfer trailer = 0.25 tonnes/m³*

They indicate that up to 9 daily deliveries (using semi trailers) would be required to transfer waste from Katoomba to Blaxland landfill over 3 busiest days of the week. Up to 4 deliveries would be needed for the 2 remaining weekdays, and 1 delivery on each of Saturday and Sunday. A total of 74 additional heavy vehicle movements (corresponding to 37 waste deliveries) would occur over a typical week. Estimated total and heavy vehicle movements for this option are shown in Figure 3.1 and Figure 3.2 [of the GHD supplementary report].

Percentage increases in heavy vehicle traffic and total vehicle traffic at the eastern end of Attunga Road near the Blaxland lWMF entrance are also shown

in Table 1 [of the GHD supplementary report]. They suggest that heavy vehicle traffic in this industrial area would increase by as much as 35% on Thursdays, but that other days would not be affected to the same extent. In terms of overall traffic, the maximum percentage increase of 12% also occurs on Thursdays.

Table A4, in Appendix A [of the GHD supplementary report] provides traffic statistics for this location and two other locations – the western end of Attunga Road and Railway Parade south of Attunga Road.

According to Table A4, there is only a 12% increase in heavy vehicle traffic at the western end of Attunga Road where most Attunga Road residents live. This is because the overall number of heavy vehicles is much higher than at the eastern end, due to trucks associated with activities in the industrial area. The percentage increases in heavy vehicle traffic are even lower on Railway Parade, and a maximum increase of 10% occurs on Fridays.

Option 3 Closure of Blaxland landfill and exporting of all waste

Construction impacts

If a decision were made not to extend Blaxland landfill, some of the capital works that are required as part of the Blaxland extension (ie diversion of Cripple Creek around the existing landfill mound) would still have to take place. Therefore the deliveries of construction materials such as pipes and concrete outlined needed for Option 1 would still occur for Option 3.

Rehabilitation of the existing landfill would also need to be undertaken very soon after closure. Additional capping material and topsoil for rehabilitation may need to be imported to the site. Therefore it is likely that the traffic impacts associated with the closure of Blaxland landfill would be very similar to those predicted in the EIS for extension of the Blaxland landfill.

It would be necessary to build a new waste transfer station at Blaxland WMF to enable waste to be bulked up and put into large transfer vehicles for transport to Sydney. In the EIS Chapter 9, the Alternative Waste Technology facility at Eastern Creek, and the new Collex waste transfer station at Clyde were identified as the most feasible locations for disposing of putrescible waste, with non putrescible waste being transferred to licenced landfills in Western Sydney, most likely in the Penrith area.

Therefore some additional heavy vehicle movements would also be associated with the construction of this new facility. These have not been quantified, but could likely be over and above the predicted construction traffic impacts outlined in the EIS for extension of the Blaxland landfill.

Operational impacts

There would be some increases in heavy vehicle movements along the Great

Western highway, through lower mountains townships, as transfer vehicles from Blaxland make their daily deliveries.

However the traffic impact on upper mountains townships would be no different to Option 1, since transfer vehicles would travel along the Great Western Highway from Katoomba transfer station to Western Sydney and Eastern Creek/Clyde (instead of disposing of the material at Blaxland landfill).

The estimated number of waste transfer loads from Blaxland transfer station has been estimated, based upon current tonnages. They are shown in Table 2 [of the GHD supplementary report].

These estimates are based on the same conservative assumptions used for analysing the impact of Katoomba waste being received at Blaxland landfill:

- *Capacity of transfer trailer = 67m³*
- *Average waste density in transfer trailer = 0.25 tonnes/m³*

GHD's analysis indicates that that [sic] up to 8 daily deliveries (using semi trailers) would be required to transfer waste from Blaxland transfer station to Sydney over 3 busiest days of the week. Up to 4 deliveries would be needed for the 2 remaining weekdays, and 1 delivery on each of Saturday and Sunday. A total of 68 additional heavy vehicle movements (corresponding to 34 collections of bulked up waste from the transfer station) would occur over a typical week.

Estimated total and heavy vehicle movements for this option are shown in Figure 3.3 and Figure 3.4 [of the GHD supplementary report].

These predicted volumes are very similar to those predicted for Option 1 – extension of Blaxland landfill and transfer of waste from Katoomba WMF, and shown in Table 1 [of the GHD supplementary report].

Percentage increases in heavy vehicle traffic and total vehicle traffic at the eastern end of Attunga Road near the Blaxland WMF entrance are also shown in Table 2 [of the GHD supplementary report]. They suggest that heavy vehicle traffic in this industrial area would increase by as much as 22% on Wednesdays, but that other days would not be affected to the same extent. In terms of overall traffic, a maximum percentage increase of 6% also occurs in the early part of the week.

Table A6, in Appendix A [of the GHD supplementary report] provides traffic statistics for this location and two other locations – the western end of Attunga Road and Railway Parade south of Attunga Road.

According to Table A6, there is a maximum 10% increase in heavy vehicle traffic at the western end of Attunga Road where most Attunga Road residents live. This occurs on Wednesdays. The percentage increases in heavy vehicle traffic are

lower on Railway Parade, and a maximum increase of 7% occurs on Mondays and Wednesdays.

Comparison of traffic impacts for Options 1 and 3

Construction impacts

The construction traffic impacts would be similar for Options 1 and 3, because even if the Blaxland landfill were not extended, the diversion of Cripple Creek around the existing landfill would still need to be undertaken. In addition, the existing landfill would need to be rehabilitated, and capping material and topsoil may need to be imported to enable this to occur.

Since a new waste transfer station would also be required at Blaxland, this would result in additional heavy vehicle movements during the construction period. This may could cause overall heavy vehicle traffic impacts to exceed those predicted for the Blaxland landfill extension.

Operational impacts

The overall increase in heavy vehicle movements associated with operation of an extended Blaxland landfill, and a new waste transfer station at Blaxland are very similar, with 74 additional heavy vehicle movements predicted for Option 1 (extension of Blaxland landfill) and 68 additional heavy vehicle movements predicted for Option 3 (closure of the Blaxland landfill and exporting all waste). This is a difference of only 6 heavy vehicle movements over a typical week, or less than 1 per day on average.

However the predicted heavy vehicle volumes associated with exporting of waste (Option 3) mean that heavy vehicle traffic impacts for local residents are more intense in the early part of the week, since waste transfers to Sydney would have to occur on the same days as current garbage truck deliveries to Blaxland WMF (Monday, Tuesday and Wednesday morning).

In contrast, the extension of Blaxland landfill coupled with waste being transferred from Katoomba WMF (Option 1) would spread the additional heavy vehicle movements more evenly throughout the week. This would likely have a lesser impact on residential amenity in Attunga Road. A comparison of the estimated heavy vehicle movements under each option is shown in Figure 3.5 [of the GHD supplementary report]."

The above extracts from the GHD supplementary report, and the graphics contained within that report, clearly demonstrate that the impact the transfer of waste currently disposed of at the Katoomba WMF to the Blaxland WMF would have on the road network is within the capacity of that road network, and that the traffic generation resulting from any decision to transfer all waste out of the City would be similar to that which will result from the proposed development.

Noise

Concern has been raised with regard to the increased noise associated with the proposed development and the impact any additional noise will have on the amenity of the residential areas in the environs of the site.

Chapter 17 of the EIS canvasses the impact noise from the proposed development will have on the environment. The EIS was submitted to the Department of Environment and Conservation ("**DEC**") which has absorbed the previous Environment Protection Authority ("**EPA**"). It was the EPA, and now the DEC, which had/has governance over the control of noise from noise generating activities such as that which is proposed.

Upon review of the EIS, the DEC requested additional information which was provided by the proponent through GHD. The DEC has reviewed that additional information and has concluded that it has no objection to the proposed development subject to a number of conditions, many of which relate to the mitigation of noise generated by the proposed development. The conditions provided by the DEC are incorporated in the recommended conditions of development consent as the General Terms of Approval of the Department of Environment and Conservation.

Odour

In a similar fashion to the above discussion of noise generated by the proposed development, submissions have raised the issue of potential increases in odour from the extension to the existing landfill.

The DEC is also the body controlling the emission of odour from development. As was the case with noise, the DEC requested additional information from the proponent which was provided by GHD.

The DEC has reviewed that additional information and raised no objection to the proposed development on grounds of odour impact subject to a number of conditions of development consent being applied. Those conditions are also contained in the General Terms of Approval of the Department of Environment and Conservation attached to the recommended conditions of development consent.

Effect of closure of Katoomba tip

The impact which the closure of the Katoomba tip will have on the operation of the Blaxland WMF was not addressed in a satisfactory manner in the EIS. The proponent has been asked to provide additional information with regard to the impact closure of the Katoomba facility will have. This issue has been canvassed in the above discussion of traffic impacts with the conclusion that, while some additional impacts will occur if the waste currently disposed of at the Katoomba tip is transferred to the Blaxland WMF:

- there is capacity in the road network to cater for the increased traffic,
- noise impacts will be within acceptable limits, and

- odour impacts will be limited and acceptable.

Impact to the health of children resulting from the increased landfill activity

No evidence has been presented which would lead to the conclusion that increasing the size of the existing Blaxland WMF will have any adverse impact on the health of children in the environs of the site.

Revegetation / rehabilitation

Concern has been raised that revegetation / rehabilitation of the site will not be undertaken in an effective and timely manner.

When dealing with rehabilitation of the site, the EIS states (at its Chapter 5.5) that the landfilling operation will be undertaken in five (5) discrete stages. Each stage of the landfill activity will involve the rehabilitation of that section of the site where landfilling has been completed. In essence, the rehabilitation of the site will occur as a dynamic process throughout the life of the landfill.

Chapter 8.8 of the EIS details the process of rehabilitation at the final stage of the landfill activity, i.e. during the closure of the landfill.

The details provided in the EIS clearly state that suitable, progressive and appropriate rehabilitation of the landfill will occur. If the Council is of a mind to approve the proposed development, the consent for that development will state that the development is to be undertaken in accordance with the EIS which has been submitted with the development application. It is envisaged that the existing Landfill Environmental Management Plan will be amended to reflect that condition of development consent.

As such, continuous rehabilitation / revegetation of the site will be undertaken over the life of the landfill activity.

Construction of a footpath in Attunga Road

Concern has been raised that the increased traffic associated with the proposed development will require the construction of a footpath in Attunga Road to ensure the safety of pedestrians.

The Council Staff have earmarked that kerb and gutter construction in Attunga Road could be possible if the proposed development is approved. It is considered that, if the Council is to approve this development, then such a measure is essential to ensure that the safety of residents and, in particular pedestrians.

It is recommended that a suitably worded condition of consent be attached to any consent for the proposed development to ensure that the construction of at least a footpath along Attunga Road is undertaken as part of the proposed development, with details to be forwarded with the Construction Certificate application.

Visual Impact

A number of submissions raised concern that the proposed extension to the existing landfill will have an unacceptable impact on the visual environment of adjoining landowners.

Chapter 19 of the EIS assesses the impact the proposed development will have on the visual character of the area. In this regard, the following analysis is made:

"Bushland surrounding the site is predominantly natural landscape interrupted only by overhead high voltage power lines which run east west across the area. Topography of the surrounding bushland is characterised by steep sandstone cliffs. A dense tree canopy covers the area.

The visual quality of the surrounding bushland is considered high due to the distinctive natural character, and complex and interesting topography."

"Urban development within the visual catchment of the site includes light industry areas, detached residential housing, and transport lines including road and rail. Extensive landscaping and remnant natural bushland generally fragment the urban areas. The scale of development is low such that it does not dominate the natural landscape. The roads and rail lines generally follow ridges and are thus in keeping with the natural topography.

The visual quality of surrounding urban development is considered moderate due to consistency and coherence with a mixed natural and built character, and the degree of interest and complexity associated with varying patterns of trees in terms of scale, form, and density."

A summary of the visual impact of the proposed development is provided in Chapter 19 and in the Executive Summary of the EIS. In this regard, the following summary is provided:

"The proposed development would have a low to moderate impact on the visual environment as a result of the low visibility of the site and limited number of visual receivers.

Operational activities may negatively impact on the surrounding landscape due to earthmoving works and clearing of vegetation. These activities would adversely impact the visual quality of residents, road users, and recreational users during the construction period.

Safeguard measures such as limiting the height of the landfill mound, tree planting around the western, southern, and eastern perimeter of the existing landfill mound to minimise the visibility of the site to sensitive receivers, and revegetation with native and endemic species that simulate the natural bushland character, have been proposed to manage these potential visual impacts."

There can be no doubt that some visual impact will result from the proposed development, however, with the proposed mitigation measures in place to limit that visual impact, it is

considered that the visual impact of the development will be reasonable and acceptable.

Ecologically Sustainable Development

One (1) submission has raised concern that the continued use of landfill as a major source of disposal of waste generated in the City of Blue Mountains is not within the recognised principles of Ecologically Sustainable Development.

As noted in the EIS, Schedule 2 of the Environmental Planning and Assessment Regulation 2000 lists four (4) principles of Ecologically Sustainable Development ("**ESD**") which must be considered when determining a development application for Designated Development.

Chapter 26 of the EIS deals with ESD principles, with the following summary provided in the EIS:

"The precautionary principle

None of the risks identified during the assessment of the proposal are considered to pose a threat of serious irreversible environmental damage. Where risks have been identified, mitigation measures have been proposed. The mitigation measures would substantially minimise the risks likely to occur.

Intragenerational equity

Local residents located close to the existing Blaxland landfill would be most impacted by the proposal. However the expected operational impacts of extended Blaxland landfill would not be significantly different from those of the current landfill.

To ensure that local residents do not bear the 'costs' of all potential impacts, the landfill would be managed in accordance with 'best practice' and mitigation measures that minimise such impacts.

The proposal could also be considered to facilitate intragenerational equity on a broader scale as it allows for waste, which is generated within the Blue Mountains, to be disposed of within the Blue Mountains. Disposing of waste locally avoids the need to transport to waste to another region and avoids imposing impacts on communities that have not generated the waste.

Intergenerational equity

The Blaxland landfill is located in an area that is geologically favourable to landfilling activities.

Careful management of the landfill, along with planned upgrading work, such as landfill gas extraction/flaring and improved leachate and stormwater management, would also reduce the future environmental impacts of the proposed landfilling operation. The planned improvement of recycling facilities

and implementation of alternative waste technology within the Blue Mountains would increase recycling and reuse of waste materials. This would also play a part in reducing the liability for future generations.

When compared to alternative options, the proposal also poses a lower financial burden on future generations than exporting all waste from the Blue Mountains.

Conservation of biological diversity and ecological integrity

The proposal would require some of the vegetation in the existing quarry to be removed. However the forest area is characterised as the Sydney Sandstone complex and is well represented elsewhere on site and in the region. The upper section of this vegetation would be retained, and areas that have currently been cleared would be revegetated, to reconnect this vegetation to the surrounding area of bushland.

No threatened or endangered species or ecological communities would be impacted by the proposal. Site areas containing vegetation classified as an 'environmentally sensitive vegetation unit', under Schedule 3 of the Blue Mountains LEP 1991 (Alluvium Bench Woodland and Paperbark Melaleuca linariifolia forest) would be protected and enhanced by the control of stormwater and progressive removal of weeds.

The proposal would enhance the water quality in Cripple Creek.

Improved valuation and pricing of resources

The proposal is consistent with the 'polluter pays' principle. All waste that is currently disposed of in the Blaxland landfill is generated within the Blue Mountains. The proposal would result in the local community, through increased rates paid to the Blue Mountains City Council, bearing the financial cost of managing its own waste.

Fees charged for waste management in the Mountains would be set at levels that would pay for the ongoing maintenance of the landfill throughout its lifecycle. This includes all post closure management, monitoring and rehabilitation of the landfill areas."

The continued use of landfill as the major or only source of disposal of waste is not considered to be acceptable in the long term. This approach has been recognised by Blue Mountains City Council which has adopted a Strategic Waste Action Plan to deal with the increasingly complex problem of waste management within the City.

It has been recognised by the Council that alternative waste management solutions need to be found and that the extension to the Blaxland WMF as proposed is a short to medium term solution which will be used in combination with alternative disposal methods.

In the context of the proposed development, however, it is considered that the Council has little

or no alternative but to rely, at least in part, on the continuation of landfilling as a means by which waste can be disposed of in the City in the short to medium term. With the combination of the strategy outlined in the Strategic Waste Action Plan and the expansion of the Blaxland WMF, it is considered that adequate regard has been had to the principles of Ecologically Sustainable Development.

Diversion of Cripple Creek

Concern has been raised that the existing leachate being leaked to the diversion of Cripple Creek may not be adequately dealt with by the proposed development.

Chapter 12 of the EIS deals with Hydrology and Surface Water Quality and, in particular, the existing leachate leakage into the diversion of Cripple Creek. In this regard, the following statements are made:

"The Blaxland WMF site is located at the base of a former valley through which Cripple Creek originally flowed. The creek was diverted into a 1800 mm internal diameter stormwater pipe passing beneath the landfill, when the landfill was extended a number of years ago. The exact installation date of this pipe is unknown, but it is understood that it was designed in 1986.

The pipe is made of reinforced concrete sections, and is approximately 380 m long. It is currently beneath more than 25 m of waste. Since it was originally designed to be beneath only 12 m of waste (under specified waste densities), there are some concerns about its long-term structural integrity.

Water quality monitoring in Cripple Creek suggests that leachate is entering the pipe through cracks in the joints. Part of the proposal to extend the landfill includes re-diverting Cripple Creek through a new pipe that is designed to withstand such loads.

The new diversion route runs along the northern side of the existing landfill. While it would be covered with waste, construction of this pipe would involve installing a double liner system above the pipe and a system for collecting and removing leachate generated by the landfill extension from the base of the landfill.

The risk of the new concrete diversion pipe being damaged by leachate (being acidic) is therefore extremely low, as it could not come into physical contact with the pipe."

The development application has been referred to the Council's Environmental Health and Building Specialist who raised no objection with regard to the proposed means of disposal of leachate from the extension of the landfill and/or the diversion of Cripple Creek.

The Council's Development Engineer has raised no objection to the proposed development.

The proposed diversion of Cripple Creek, combined with the upgraded leachate management

process proposed as part of the proposed development, are such that stormwater management on the site will be improved.

Should the Council choose not to approve the proposed development, it is recommended that the proposed diversion of Cripple Creek be undertaken to ensure that water quality in the downstream section of that creek is improved.

Flora and Fauna

Concern has been raised that insufficient investigation of the flora and fauna of the site and its surroundings has been undertaken.

The EIS was referred by the Council to Anderson Ecological Surveys Pty Ltd in order to have the flora and fauna aspects of the proposed development investigated by an independent expert. Anderson Ecological Surveys Pty Ltd has raised no concern with the content of the EIS with regard to impact the proposed development will have on the flora and fauna of the site or its environs.

Bushfire

Submissions have raised concern with regard to the impact fire trails will have on the flora and fauna of the site and to the practicability of the proposed Asset Protection Zone.

Concern was also raised by Nexus Environmental Planning Pty Ltd with regard to the proposed Asset Protection Zone. The following series of questions were put to the proponent.

"I note in the bushfire assessment that there will be a need for an Asset Protection Zone ("APZ") as part of the proposed extension to the WMF. In this regard, the following questions are raised:

- (a) How does the requirement for an APZ fit with the proposed revegetation of the land adjacent to the quarry?*
- (b) Can the mitigation measure provided for in 24.4.1 of the EIS be practically applied? How is it proposed to achieve these mitigation measures during "the high fire season" and during prolonged periods of "high risk days"? If activity is to cease during those periods, how will waste be disposed of? Is there a contingency plan in place to allow this to occur?*
- (c) Section 24.4.3 of the EIS provides for the concept design of a fire trail. Can such a fire trail be constructed without impacting on bushland which is proposed to be retained? Has the location of that fire trail be determined and if so has a plan been prepared. I am unable to find a plan in the bushfire assessment which shows the location of the fire trail. Is it possible to construct such a fire trail on the site with grades of less than 15 degrees? I feel more information is required in this regard so that the impact of such*

a fire trail can be assessed by the Flora and Fauna consultant."

GHD has, on behalf of the proponent, prepared a supplementary report which, when dealing with bushfire questions, states:

"Answer 1 (a)

The area to be rehabilitated corresponds to an area where it is proposed to provide a 15m wide Asset Protection Zone (APZ) and maintain it as an Inner Protection Area (IPA). The purpose of the IPA is to minimise the presence of fuels close to a development. This reduces the impact of direct flame contact and radiant heat on the development.

The Planning for Bushfire Protection guidelines state that

The performance of a IPA must be such that:

- *there is minimal fine fuel at ground level which could be set alight by a bushfire; and*
- *any vegetation in the IPA does not provide a path for the transfer of fire to the development that is, fuels are discontinuous.*

The presence of a few shrubs or trees in the IPA is acceptable provided that they:

- *do not touch or overhang the building;*
- *are well spread out and do not form a continuous canopy; are not species that retail [sic] dead material or deposit excessive quantities of ground fuel in a short period or in a danger period; and*
- *are far enough away so that they do not ignite the development by direct heat contact or radiant heat emission.*

As such, the area to be rehabilitated can be vegetated, provided that the revegetation complies with the requirements of the IPA. That is, the vegetation should not provide a continuous path for a bushfire to travel between the hazard and the development.

Answer 1 (b)

Discussion with operations staff from BMCC indicates that the mitigation measures provided in 24.4.1 can be practically applied, since incoming waste quantities are reasonably predictable. Landfilling of areas can therefore be scheduled well in advance to eliminate filling adjacent to bushland during the high fire season, and in particular during prolonged periods of high fire risk days. Activity will not cease during these period, but it will shift towards the existing landfill, which poses a very low fire risk. A contingency plan will be

developed as part of the new landfill operating contract, which is currently being drafted.

Answer 1 (c)

The landfill will be constructed in a number of discrete stages, which are illustrated in Figures 8.10 to 8.14 of the EIS, and in more detail in the Technical Report (Appendix F), Figures 7 to 11. When Stage 1 is constructed, the existing vegetation in the north of the quarry would be removed (refer Figure 8.10 and 7 respectively). This would remove a potential fire hazard from immediate proximity to the landfill operating areas.

All of the extremities of Stage 1 of the landfill will be able to be accessed via the proposed haul road for waste. This road (and the landfill face itself) would meet the width and turning area criteria for a Primary Fire Trail, according to the abovementioned guidelines, since it would be suitable for passage of a Category 1 fire tanker.

This road and the cleared area around the edges of the landfill face should provide the necessary bushfire access to protect the landfill from a bushfire, or visa versa. The haul road will be located on areas that have been cleared previously (therefore there should be no flora and fauna issues) and would be formed to comply with the requirements contained in Planning for Bushfire Protection.

As the landfill stages proceed from Stage 2 to 5, the location of the haul road will change (refer Figures 8 to 11), but a haul road will always be present and meet the criteria for bushfire fighting use.

4.3 Subsequent question/queries

In the meeting on 22 April 2005, Nexus queried whether a fire trail was to be constructed along the western end of the proposed landfill extension, and whether it would comply with the new Planning for Bushfire Protection guidelines. This trail was shown on some of the drawings provided in the Landfill Technical Report, which was prepared as part of the EIS.

4.4 GHD response to subsequent query

There appears to be no need to provide a fire access trail along the western edge of the proposed landfill extension. A stormwater diversion path is required in this area to prevent clean stormwater from entering the landfilling area.

Access to the landfill for fire vehicles would be via the road used for vehicles carrying waste up to the landfill. Since this road would be constructed to suit large semi trailers/waste transfer vehicles, it would meet the fire trail requirements outlined in the Planning for Bushfire Protection guidelines."

The above supplementary information clarifies the concerns raised by Nexus Environmental Planning Pty Ltd.

As noted elsewhere in this report, the Rural Fire Service raised no objection to the proposed development.

Anderson Ecological Surveys Pty Ltd raised no concern with regard to the proposed development and, in particular, to the impact bushfire mitigation measures will have on the flora and fauna of the site and its environs.

State Government Departments / Statutory Authority Issues

The following comments have been made by State government departments and/or Statutory Authorities in addition to those which are discussed in the following sections of this report.

Sydney Water

Sydney Water raised no objection to the proposed development and stated, among other things:

"The details of the proposal were clearly described in the EIS prepared by GHD, and specifically, comments relating to Sydney Waters assets are to be found in Chapters 7 & 8 under the headings Water Supply and Leachate. The following comments are provided to assist you in the above application.

Water Supply

The existing Waste Management Facility is currently served by two 100mm water mains. Sydney Water requires that the two mains be consolidated into one service and one meter as part of the upgrade. Waste Management Facilities generally, are not large water users and therefore no capacity issues are apparent. If required, a full assessment (upon providing details of existing and future hydraulic requirements) can be provided through a Section 73 Application with Sydney Water Development Services Group.

Sewerage - Leachate

In the EIS, a leachate disposal system enabling it to be pumped to the top of the existing landfill mound and then sprayed over the landfill surface is the preferred leachate management solution. Pumping of leachate to a Sydney Water sewer main is not the preferred option but if requested will be assessed upon an application for a Section 73 Certificate."

A condition of consent has been recommended to ensure that consolidation of the existing two (2) 100mm water mains is undertaken as part of any development of the site as proposed.

Sydney Catchment Authority

The Sydney Catchment Authority raised no objection to the proposed development and states:

"The SCA has no comment as the relevant site is outside of the [sic] SCA's area of operation,"

New South Wales Fire Brigades

The New South Wales Fire Brigades raised no objection to the proposed development and stated:

"It is noted that the subject site is located within [sic] Rural Fire Service area and has also been forwarded to them for comment.

Further a bushfire hazard assessment has been prepared and an internal road system provided for the proposal.

Traffic management has also been identified as not causing undue problems for the community and therefore emergency services.

This proposal will have no undue effect on the operational needs of the NSW Fire Brigades in the Blaxland area.

The NSW Fire Brigades therefore have no objection to the above proposal."

NSW Rural Fire Service

The NSW Rural Fire Service raised no objection to the proposed development and stated:

"Based upon an assessment of the plans and documentation received for the proposal, the NSW Rural Fire Service raises no concerns or special consideration in relation to bushfire matters for the proposed development."

Roads and Traffic Authority

At time of writing this report, no correspondence had been received from the Roads and Traffic Authority. As discussed below with regard to State Environmental Planning Policy No.11 - Traffic Generating Developments, there is no impediment to the Council determining the application as the period for response by the Roads and Traffic Authority has expired.

Department of Infrastructure Planning and Natural Resources

As discussed elsewhere in this report, the Department has raised no objection to the proposed development.

NSW Heritage Office

The NSW Heritage Office raised no objection to the proposed development and stated:

"I note from the EIS report that no cultural heritage values are impacted by the proposal. I also note that in terms of natural heritage impacts, some vegetation on the site would need removal but that this is Sydney Sandstone Complex

vegetation, well represented elsewhere on site and in the region.

I also note that measures proposed for stormwater control and progressive weed removal would mitigate any possible impacts on Alluvium Bench Woodland and paperbark forest, which is identified as being an environmentally sensitive vegetation unit.

On this basis, no objection is raised to the proposal."

National Parks and Wildlife Service

The National Parks and Wildlife Service raised no objection to the proposed development and has indicated that it does not have any requirements should the Council resolve to approve the proposed development.

Integral Energy

At time of writing this report, no correspondence had been received from Integral Energy.

Department of Environment and Conservation

The DEC has responded by stating:

"The EPA has reviewed the information provided and has determined that it will be able to vary environment protection licence 10039 ("the licence") to allow the proposal subject to a number of conditions. The applicant will need to make a separate application to the EPA to vary the licence.

The general terms of approval for this proposal are provided at Attachment A. The terms of approval set out in Attachment A are in addition of the requirements on the licence currently and at the time of applying to vary the licence. Where a general term of approval set out in Attachment A contradicts a condition on the licence, the general term of approval is intended to alter the licence at the time the applicant applies to vary the licence. If Blue Mountains City Council grants development consent for this proposal the conditions in the licence at the time of granting consent, as amended by the conditions in Attachment A, should be incorporated into the consent.

These general terms relate to the development as proposed in the documents and information currently provided to the EPA. In the event that the development is modified either by the applicant prior to the granting of consent or as a result of the conditions proposed to be attached to the consent, it will be necessary to consult with the EPA about the changes before the consent is issued. This will enable the EPA to determine whether its general terms need to be modified in light of the changes."

Wentworth Area Health Service

At time of writing this report, no correspondence had been received from the Service.

Telstra

At time of writing this report, no correspondence had been received from Telstra.

WorkCover NSW

At time of writing this report, no correspondence had been received from WorkCover NSW.

Statutory Considerations

- Integrated Development within the meaning of Section 91 of the Environmental Planning and Assessment Act 1979.
- Blue Mountains Local Environmental Plan 1991.
- State Environmental Planning Policy No.11 - Traffic Generating Development.
- State Environmental Planning Policy No.33 - Hazardous and Offensive Development.
- State Environmental Planning Policy No.44 - Koala Habitat Protection.
- State Environmental Planning Policy No.55 - Remediation of Land.
- Sydney Regional Environmental Plan No.20 - Hawkesbury Nepean River (No.2 - 1997).
- Environment Protection and Biodiversity Act 1999.
- Protection of the Environment Operations Act 1997.
- Water Act 1912.
- Fisheries Management Act 1994.
- Threatened Species Conservation Act 1995.
- National Parks and Wildlife Act 1974.
- Native Vegetation Act 2003.
- Rivers and Foreshores Improvement Act 1948.

Environmental Assessment

The application has been assessed in accordance with the Environmental Planning and

Assessment Act 1979, in particular Section 79C, and the relevant provisions of State and local environmental planning instruments, codes and policies. This report provides a summary of the assessment issues.

Integrated Development

The proposed development is classified as "Integrated Development" for the purposes of the Environmental Planning and Assessment Act 1979 as it requires a licence to carry out scheduled activity pursuant to the "*Protection of the Environment Operations Act 1997*".

Pursuant to sub-section 91A (2) of the Environmental Planning and Assessment Act 1979:

"(2) Before granting development consent to an application for consent to carry out the [integrated] development, the consent authority must, in accordance with the regulations, obtain from each relevant approval body the general terms of any approval proposed to be granted by the approval body in relation to the development. Nothing in this section requires the consent authority to obtain the general terms of any such approval if the consent authority determines to refuse to grant development consent."

The Council has notified the Department of Environment and Conservation ("**DEC**") of the Integrated Development application. DEC has relied by stating:

"The EPA has reviewed the information provided and has determined that it will be able to vary environment protection licence 10039 ("the licence") to allow the proposal subject to a number of conditions. The applicant will need to make a separate application to the EPA to vary the licence."

General Terms of Approval from the DEC are contained in the recommended conditions of development consent.

Blue Mountains Local Environmental Plan 1991

Clause 33 of LEP 1991 states:

"SPECIFIC USES

Where a specific use is shown on the Map by overlaid lettering, that use is permissible with the consent of the Council."

As noted in a previous section of this report, the section of the site where the existing WMF is located and the proposed extension is to be located is contained within the "Recreation - Garbage and Quarry" zone pursuant to the Blue Mountains Local Environmental Plan 1991 ("**LEP 1991**"). As such, the proposed development is permissible with the consent of the Council.

Sub-clause 9.3 of LEP 1991 states:

"9.3 Except as otherwise provided by this plan, the Council shall not grant consent to the carrying out of development on land to which this plan applies unless the Council has considered the objectives of this plan and the objectives of the zone and of any protected area in which the land is situated, and is of the opinion that the carrying out of the development complies with the objectives that are relevant to that development."

There are no objectives to the Recreation - Garbage and Quarry Zone. As part of the assessment process which the Council has undertaken in resolving that the use of the site for a Waste Management Facility (Garbage) and a Quarry is a suitable use of the site, it has accounted for the Principal Objectives for the City as detailed in sub-clause 3.1 of LEP 1991 and has resolved that such a land use complies with those objectives.

There are no protected areas as defined in LEP 1991 located on the site.

Sub-clause 10.5 of LEP 1991 deals with Environmental Impact. The following assessment is made against the relevant sections of sub-clause 10.5.

1. Measures have been incorporated into the design of the proposed development to ensure that appropriate erosion and sediment control measures will be provided on the site.
2. The assessment of the proposed development by Anderson Ecological Surveys Pty Ltd has concluded that there will not be any unnecessary clearing of indigenous plants.
3. Soil disturbance will be required as part of the establishment of the extension to the landfill, however, as indicated above, appropriate measures will be in place to ensure that soil erosion is kept to a minimum.
4. The EIS has indicated that the existing diversion of Cripple Creek is contaminated by leachate from the existing landfill. It is proposed to provide a new diversion of Cripple Creek to enhance the surface water quality of both Cripple Creek and the downstream watercourses. It is also proposed to provide state of the art liners within the landfill extension to ensure that leachate does not enter the groundwater of the site.
5. Much of the site where the proposed landfill extension is to take place has been cleared and the extension to the landfill has been designed, as far as is practicable, to be located on that part of the site which has been cleared.
6. Appropriate measures have been proposed to ensure that the proposed development will be adequately protected from bushfire.

There are no other provisions of LEP 1991 which apply to the proposed development. It is considered that the proposed development is consistent with the requirements of LEP 1991.

State Environmental Planning Policy No.11 - Traffic Generating Development

Clause 2 of State Environmental Planning Policy No.11 - Traffic Generating Development ("SEPP 11") states:

"The aims, objectives, policies and strategies of this Policy are to ensure that the Traffic Authority:

- (a) is made aware of, and*
 - (b) is given an opportunity to make representations in respect of,*
- development referred to in Schedule 1 or 2."*

The proposed development falls within the following definition contained in Schedule 1 of the Policy:

"(k) junk yards or depots or regional depots, within the meaning of the Waste Disposal Act 1970."

Clause 7 of SEPP 11 states, among other things:

"Development applications to be referred to the Traffic Authority

- 7(1) Subject to subclause (2), this clause applies to applications for development consent to carry out development specified in Schedule 1 or 2.*
- (2) Where the Traffic Authority has notified a consent authority that this clause does not apply to a development application (whether by reference to the type, purpose or location of the development the subject of the application or otherwise) this clause shall not apply to that development application.*
- (3) Where a consent authority receives a development application to carry out development specified in Schedule 1, the consent authority shall, within 7 days of its receipt of the application, forward a copy of the application to the Traffic Authority.*
- (4) Where a consent authority receives a development application (other than a development application to which subclause (3) relates) to carry out development specified in Schedule 2, being development on or of land that has direct vehicular or pedestrian access to:

 - (a) an arterial road; or*
 - (b) a road connecting with an arterial road, if the access is within 90 metres (measured along the road alignment of the connecting road) of the alignment of the arterial road,**the consent authority shall, within 7 days of its receipt of the application, forward a copy of the application to the Traffic Authority.**

- (5) *Where a copy of a development application has been forwarded to the Traffic Authority pursuant to subclause (3) or (4), the consent authority shall not determine the application until:*
- (a) *it has received a representation with respect to the application from the Traffic Authority; or*
 - (b) *the Traffic Authority has informed the consent authority that it does not wish to make any representation with respect to the application; or*
 - (c) *21 days have elapsed after the date on which the copy of the application was forwarded to the Traffic Authority,*
- whichever first occurs."*

The development application has been forwarded to the Roads and Traffic Authority. At time of writing this report, no reply had been received from the Roads and Traffic Authority. The 21 days period which is stated in sub-clause 7(5)(c) of SEPP 11 has expired and, as such, there is no impediment to the Council determining the development application.

State Environmental Planning Policy No.33 - Hazardous and Offensive Development

State Environmental Planning Policy No.33 - Hazardous and Offensive Development ("SEPP 33") aims, among other things:

- "(d) to ensure that in determining whether a development is a hazardous or offensive industry, any measures proposed to be employed to reduce the impact of the development are taken into account; and*
- (e) to ensure that in considering any application to carry out potentially hazardous or offensive development, the consent authority has sufficient information to assess whether the development is hazardous or offensive and to impose conditions to reduce or minimise any adverse impact."*

The proposed development is not a "Hazardous Industry", "Potentially Hazardous Industry" or "Hazardous Storage Establishment" as defined in SEPP 33 as it will not pose a significant risk in relation to the locality to human health, life or property, or to the biophysical environment.

The proposed development is, however, "Potentially Offensive Industry" and, as such, SEPP 33 does apply.

When determining an application for "Potentially Offensive Industry", Council must, pursuant to clause 13 of SEPP 33, consider:

- "(a) current circulars or guidelines published by the Department of Planning relating to hazardous or offensive development; and*

-
- (b) *whether any public authority should be consulted concerning any environmental and land use safety requirements with which the development should comply; and*
 - (c) *....., and*
 - (d) *any feasible alternatives to the carrying out of the development, and the reasons for choosing the development the subject of the application (including any feasible alternatives for the location of the development and the reasons for choosing the location of the subject application); and*
 - (e) *any likely future use of the land surrounding the development."*

With regard to current circulars and guidelines, the then Department of Planning has prepared Circular B27 and the publication "*Applying SEPP 33 Hazardous and Offensive Development Application Guidelines*". It is the information contained within these Guidelines which has been used to determine that the subject development is not "Hazardous Industry", "Potentially Hazardous Industry" or a "Hazardous Storage Establishment", but is "Potentially Offensive Industry".

With regard to "Potentially Offensive Industry", the Guidelines, at pages 13 & 14, give guidance to Council with regard to the information which should be provided with a Development Application. This EIS provides sufficient detail in this regard.

As indicated in the guidelines, if a licence is required by the then EPA (now DEC), then it is safe to assume that the proposed development is "Potentially Offensive Industry". The DCE has indicated that a licence is required to operate the proposed WMF pursuant to the "*Protection of the Environment Operations Act 1997*", and, as such, it is concluded that the proposed development is "Potentially Offensive Industry".

With regard to assessing a "Potentially Offensive Industry", the guidelines state that:

"The key consideration in the assessment of a potentially offensive industry is that the consent authority is satisfied there are adequate safeguards to ensure emissions from a facility can be controlled to a level at which they are not significant. An important factor in making this judgement is the view of the EPA (for those proposals requiring a pollution control licence under EPA legislation). If the EPA considers that its licence requirements can be met, then the proposal is not likely to be "offensive industry"."

The technical studies which were undertaken as part of the EIS process, and concerned with, among other things, noise, air quality, traffic, bushfire, flora and fauna, archaeology, soil and water management, have clearly demonstrated that the impact of the proposed development will, generally, be manageable.

The EIS has demonstrated that the consent authority can be satisfied that:

"... there are adequate safeguards to ensure emissions from a facility can be

controlled to a level at which they are not significant."

and, as such, the proposed development, although always remaining "Potentially Offensive Industry" is not "Offensive Industry". In this regard, the DEC has provided the following comments:

"The EPA has reviewed the information provided and has determined that it will be able to vary environment protection licence 10039 ("the licence") to allow the proposal subject to a number of conditions. The applicant will need to make a separate application to the EPA to vary the licence."

With regard to any likely future use of the land surrounding the development, the environs of the site are zoned such that only a waste management facility or a quarry are permissible land uses. The proposed use is consistent with adjoining land uses and the proposed progressive rehabilitation of the site will ensure that its long term impacts are mitigated.

State Environmental Planning Policy No.44 - Koala Habitat Protection

State Environmental Planning Policy No.44 ("SEPP 44"):

"... aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and reverse the current trend of koala population decline:

- (a) by requiring the preparation of plans of management before development consent can be granted in relation to areas of core koala habitat, and*
- (b) by encouraging the identification of areas of core koala habitat, and*
- (c) by encouraging the inclusion of areas of core koala habitat in environment protection zones."*

Chapter 15 of the EIS deals with the ecology of the site and, when discussing SEPP 44, states:

"Due to the lack of total canopy and absence of feed trees, the quarry into which the landfill would be expanded is not regarded a Potential Koala Habitat in accordance with SEPP 44."

To assist in the assessment of the proposed development, the Council has commissioned Anderson Ecological Surveys Pty Ltd to assess the impact the proposed development might have on the flora and fauna of the area. Anderson Ecological Surveys Pty Ltd has indicated that the conclusions of the ecological section of the EIS are concurred with and, as such, the proposed development is consistent with the provisions of SEPP 44.

State Environmental Planning Policy No.55 - Remediation of Land

State Environmental Planning Policy 55 - Remediation of Land ("SEPP 55") applies to the

subject site. Clause 7 of SEPP 55 states:

- "7. (1) *A consent authority must not consent to the carrying out of any development on land unless:*
- (a) *it has considered whether the land is contaminated, and*
 - (b) *if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and*
 - (c) *if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.*
- (2) *Before determining an application for consent to carry out development that would involve a change of use on any of the land specified in subclause (4), the consent authority must consider a report specifying the findings of a preliminary investigation of the land concerned carried out in accordance with the contaminated land planning guidelines.*
- (3) *The applicant for development consent must carry out the investigation required by subclause (2) and must provide a report on it to the consent authority. The consent authority may require the applicant to carry out, and provide a report on, a detailed investigation (as referred to in the contaminated land planning guidelines) if it considers that the findings of the preliminary investigation warrant such an investigation.*
- (4) *The land concerned is:*
- (a) *land that is within an investigation area,*
 - (b) *land on which development for a purpose referred to in Table 1 to the contaminated land planning guidelines is being, or is known to have been, carried out,*
 - (c) *to the extent to which it is proposed to carry out development on it for residential, educational, recreational or child care purposes, or for the purposes of a hospital land:*
 - (i) *in relation to which there is no knowledge (or incomplete knowledge) as to whether development for a purpose referred to in Table 1 to the*

contaminated land planning guidelines has been carried out, and

- (ii) *on which it would have been lawful to carry out such development during any period in respect of which there is no knowledge (or incomplete knowledge)."*

The then Department of Urban Affairs and Planning publication "*Managing Land Contamination - Planning Guidelines SEPP 55 - Remediation of Land*" provides advice on the process of determination as to whether a site is contaminated. In this regard, section 2.2 of the Guidelines states:

"When carrying out planning functions under the EP & A Act, a planning authority must consider the possibility that a previous land use has caused contamination of the site as well as the potential risk to health or the environment from that contamination."

"When an authority carries out a planning function, the history of the land use needs to be considered as an indicator of potential contamination. Where there is no reason to suspect contamination after acting substantially in accordance with these Guidelines, the proposal may be processed in the usual way."

The Guidelines continue at section 3.2.1 by stating that:

"The potential for contamination is often linked to past uses of land and a good early indicator of possible uses is land zoning. Contamination is more likely to have occurred if the land is currently, or was previously, zoned for industrial, agricultural or defence purposes."

The EIS, when dealing with site contamination, states:

"Based on the available information, the proposal is not affected by land contamination."

Notwithstanding the above conclusion of the EIS, the available data indicate that there is contamination on the site resulting from the presently leaking pipes which act as a diversion of Cripple Creek. It is, however, noted that, as part of the proposed development, the existing diversion pipes will be sealed off and the diversion of Cripple Creek will be relocated to a position under the now proposed extended landfill. It is considered that this part of the proposed development will significantly increase water quality both on the site and in the downstream watercourses and thus mitigate the existing source of site contamination. The details of the proposed Cripple Creek diversion provided within the EIS serve as a Remediation Action Plan for the site.

It is considered that the provisions of SEPP 55 have been complied with and that both the proposed method of landfilling of the site, and the methods to be employed to divert Cripple Creek, will ensure that potential land contamination as a result of the proposed development is

mitigated.

Sydney Regional Environmental Plan No.20 - Hawkesbury Nepean River (No.2 - 1997)

The site is located within the catchment of the Hawkesbury River.

Clause 4 (1) (a) of Sydney Regional Environmental Plan No.20 - Hawkesbury Nepean River (No.2 - 1997) ("**SREP 20**") states:

"(1) The general planning considerations set out in clause 5, and the specific planning policies and related recommended strategies set out in clause 6 which are applicable to the proposed development, must be taken into consideration:

*(a) by a **consent authority** determining an application for consent to the carrying out of development on land to which this plan applies,"*

The "General planning considerations" detailed in clause 5 are:

- "(a) the aim of this plan, and*
- (b) the strategies listed in the Action Plan of the Hawkesbury-Nepean Environmental Planning Strategy, and*
- (c) whether there are any feasible alternatives to the development or other proposal concerned, and*
- (d) the relationship between the different impacts of the development or other proposal and the environment, and how those impacts will be addressed and monitored."*

The "Specific planning policies and recommended strategies" listed in clause 6 which are relevant to the proposed development are:

- Total catchment management
- Environmentally sensitive areas
- Water quality
- Water quantity
- Cultural heritage
- Flora and fauna
- Metropolitan Strategy.

The requirements of clauses 5 & 6 of SREP 20 have been canvassed in the EIS as detailed in Table 3-2 of the EIS. It is considered that the requirements of SREP 20 have been met by the proposed development. Reference to specific environmental issues which are raised in SREP 20 are canvassed in the remaining sections of this report.

Environment Protection and Biodiversity Act 1999

As stated in Section 3.2.1 of the EIS:

"The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), in force from 16 July 2000, is the most fundamental reform of Commonwealth environmental laws since the first environment statutes were enacted in the early 1970s. The Act enables the Commonwealth to join with the States and Territories to provide a national scheme of environmental protection and biodiversity conservation.

The EPBC Act replaces five Commonwealth statutes: Environment Protection (Impact of Proposals) Act 1974; Endangered Species Protection Act 1992; National Parks and Wildlife Conservation Act 1975; World Heritage Properties Conservation Act 1983; and Whale Protection Act 1980.

Under the EPBC Act, any actions which are likely to have a significant impact on matters of National Environmental Significance (NES matters) or has a significant impact on Commonwealth land requires referral to the Commonwealth Minister for the Environment for approval. NES matters include:

- *World Heritage Properties*
- *Listed Migratory Species*
- *Listed Threatened Species and Communities*
- *Nuclear Actions*
- *Wetlands of International Importance*
- *Commonwealth Marine Areas and*
- *National heritage places.*

As discussed in Chapter 15 [of the EIS], NES matters present in the vicinity of the proposal include the Greater Blue Mountains World Heritage Area, migratory species, and threatened species and communities. The site is not listed a national heritage place and the proposal would not impact on any national heritage places.

The potential impact of the proposed upgrade on threatened species and communities has been assessed and discussed in Chapter 15. This assessment concludes that the proposed upgrade is unlikely to have a significant impact on any species or communities listed under the Threatened Species Conservation Act 1995.

Therefore since no NES matters would be significantly impacted by the proposal, it has not been referred to the Commonwealth Minister for the Environment.

Approval is not required under the EPBC Act. The relevant assessment and approval process is therefore via the NSW EP&A Act.

There is no impact to Commonwealth land from the proposed development."

The proposed development has been assessed by Anderson Ecological Surveys Pty Ltd with regard to the impact the proposed extension to the existing landfill will have on the ecology of the area with the conclusion that the contents of the EIS (Chapter 15) are an accurate representation of those impacts. Anderson Ecological Surveys Pty Ltd raised no objection to the proposed development on grounds of ecological impact.

Protection of the Environment Operations Act 1997 (administered by the Department of Environment and Conservation)

The Objects of the Protection of the Environment Operations Act 1997 are:

- "(a) to protect, restore and enhance the quality of the environment in New South Wales, having regard to the need to maintain ecologically sustainable development,*
- (b) to provide increased opportunities for public involvement and participation in environment protection,*
- (c) to ensure that the community has access to relevant and meaningful information about pollution,*
- (d) to reduce risks to human health and prevent the degradation of the environment by the use of mechanisms that promote the following:*
 - (i) pollution prevention and cleaner production,*
 - (ii) the reduction to harmless levels of the discharge of substances likely to cause harm to the environment,*
 - (iia)[sic] the elimination of harmful wastes,*
 - (iii) the reduction in the use of materials and the re-use or recycling of materials,*
 - (iv) the making of progressive environmental improvements, including the reduction of pollution at source,*
 - (v) the monitoring and reporting of environmental quality on a regular basis,*
- (e) to rationalise, simplify and strengthen the regulatory framework for environment protection,*

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- (f) *to improve the efficiency of administration of the environment protection legislation,*
 - (g) *to assist in the achievement of the objectives of the Waste Avoidance and Resource Recovery Act 2001."*

The existing landfill on the site operates under licences Nos.10039 and 4525 of the Protection of the Environment Operations Act 1997. The conditions of those licences will need to be amended to reflect any approval of the proposed development.

Water Act 1912

Sub-section 10 (1) of the Water Act 1912 states:

"(1) Any occupier of land whereon any work to which this Part extends (not being a joint water supply scheme) is constructed or used, or is proposed to be constructed or used, for the purpose of:

- (a) water conservation, irrigation, water supply, or drainage, or*
- b) (Repealed)*
- (c) changing the course of a river,*

may apply to the Ministerial Corporation in the form prescribed for a licence to construct and use the said work, and to take and use for the purposes specified in the application the water, if any, conserved or obtained thereby, and to dispose of such water for the use of occupiers of land for any purpose."

The proposed development will involve the relocation of the existing pipeline diversion of Cripple Creek which is located under the existing landfill mound. In this regard, the EIS states:

"There are some concerns about the integrity of the existing stormwater pipe, due to the large height of waste placed over the pipe (approximately 25 m), the low strength of the pipe used (standard pipe), the potential for differential settlement of the alluvial deposits upon which the pipe was laid and the lack of any substantial measures to prevent landfill leachate from entering the stormwater pipe.

Surface water monitoring results indicate that leachate from the existing landfilled waste is leaking into the pipe and contaminating the water passing through it. It is likely that the pipe joints are leaking and collapse of the pipe is also a possibility in the medium to long term.

This is due to the strength of the pipe used (standard pipe), the potential for differential settlement of the alluvial deposits upon which the pipe was laid, and the lack of any substantial measures to prevent landfill leachate from entering the

stormwater pipe.

Prior to the development of the landfill extension area, Cripple Creek, which currently runs beneath the existing landfill mound in a large pipe, would be re-diverted through a new pipe passing between the existing landfill area and the proposed extension area. This would be a 1950 mm external diameter (1800 mm internal diameter) high strength, reinforced concrete pipe (class 10) that follows the route shown in Figure 8-2. The new pipe will be founded on rock and will be backfilled with concrete to ensure its long term strength and stability.

While the new diversion pipe would eventually be covered with waste (like the existing diversion pipe) it has been designed to withstand the loads imposed by the proposed landfill extension. A number of measures would be used to prevent leachate from the landfill extension entering the new diversion pipe. These would include:

- *A piped leachate collection system at the base of the landfill extension area, to collect leachate generated by the landfilled waste – see Section 8.3.6 [of the EIS] for more details;*
- *A leachate containment system incorporating two low permeability barrier layers (a polyethylene geo-membrane liner with a geo-synthetic clay liner placed over the geomembrane) installed at the base of the proposed landfill extension area; and*
- *A low permeability geomembrane installed over the pipe (in the excavated pipe trench) to provide further protection for the creek diversion pipe."*

The Department of Infrastructure Planning and Natural Resources has indicated:

"...the work as described, given its nature and that of the watercourse at this point, does not trigger the need for Water Act approval

.... the pipeline is to be replaced and extended, ultimately delivering no loss in stream flow, potentially improving water quality and minimal loss of riverine habitat. no water extraction for industrial use or irrigation is proposed."

Fisheries Management Act 1994

Section 3 of the Fisheries Management Act 1994 states:

- "(1) The objects of this Act are to conserve, develop and share the fishery resources of the State for the benefit of present and future generations.*
- (2) In particular, the objects of this Act include:*
- (a) to conserve fish stocks and key fish habitats, and*

(b) *to conserve threatened species, populations and ecological communities of fish and marine vegetation, and*

(c) *to promote ecologically sustainable development, including the conservation of biological diversity,*

and, consistently with those objects:

(d) *to promote viable commercial fishing and aquaculture industries, and*

(e) *to promote quality recreational fishing opportunities, and*

(f) *to appropriately share fisheries resources between the users of those resources, and*

(g) *to provide social and economic benefits for the wider community of New South Wales."*

The Department of Primary Industries, which administers the Fisheries Management Act 1994, has stated, among other things:

"As you may be aware the Department of Primary Industries (NSW Fisheries) is responsible for conserving fish stocks, fish habitat, marine vegetation, threatened fish species, aquatic biodiversity and for achieving sustainable recreational and commercial fisheries. As such the department is concerned about any potential impacts that the proposed works may have on aquatic species and habitats in the vicinity of the proposed works. The Department offers the following comments on the above proposal.

It is noted that the proposed works include the re-diversion of Cripple Creek due to the existing diversion pipe leaking and the potential collapse of the stormwater pipe from the height of waste placed over the pipes. It is further noted that the surface water monitoring results indicate that leachate from the existing land-filled waste is leaking into the existing diversion pipe and contaminating the water passing through it.

Given the location of the site within the catchment and the presence of an existing creek diversion pipe, the proposal is likely to have minimal impact on fish passage and will improve water quality, this leading to an improvement in aquatic habitat conditions.

Despite the unlikelihood of aquatic threatened species (listed under the Fisheries Management Act 1994) being present on site (ie due to the existing creek diversion pipe), more intact watercourses downstream are within known range of the Adams Emerald Dragonfly. As such it is important that works are designed and conducted in a manner that will improve and maintain water quality and improve aquatic habitats downstream.

Consequently, DPI (NSW Fisheries) has no objection to the proposal and, in the event that development consent is granted, requires the following general terms of approval be included:"

The General Terms of Approval provided by the Department of Primary Industries have been included in the recommended conditions of consent.

Threatened Species Conservation Act 1995

Anderson Ecological Surveys Pty Ltd has concluded that the impact of the proposed development will be acceptable in terms of the flora and fauna of both the site and the environs of the site.

National Parks and Wildlife Act 1974

As stated in Section 3.3.6 of the EIS:

"The National Parks and Wildlife Act 1974, among other things, provides the basis for legal protection and management of Aboriginal sites in NSW. Implementation of the Aboriginal heritage provisions in the Act is the responsibility of the NSW DEC.

This Act, together with the policies of the DEC provides the following constraints and requirements on land owners and managers:

- *It is an offence to knowingly disturb an Aboriginal artefact or site without an appropriate permit;*
- *Prior to instigating any action which may conceivably disturb a "relic", archaeological survey and assessment is required; and*
- *When the archaeological resource of an area is known or can be reliably predicted, appropriate land use practices should be adopted which will minimise the necessity for the destruction of sites/relics, and prevent the destruction of sites/relics which warrant conservation.*

Chapter 20 [of the EIS] discusses the potential for the proposed upgrade to impact on items of Aboriginal significance and concludes that the extension development area (ie quarry site) is considered to be of low Aboriginal heritage potential and low historic heritage potential."

The development application was forwarded to the National Parks and Wildlife Service and the Service raised no objection to the proposed development.

Rivers and Foreshores Improvement Act 1948

Part 3A of the Rivers and Foreshores Improvement Act 1948 states that:

"(1) A person must not:

- (a) *make an excavation on, in or under protected land, or*
- (b) *remove material from protected land, or*
- (c) *do anything which obstructs, or detrimentally affects, the flow of protected waters, or which is likely to do so,*

unless the person is either authorised to do so by a permit under this Part and does so in accordance with any conditions to which the permit is subject, or is authorised to do so by the regulations."

Sub-section 22H (1) (b) of the Act, however, states that Parts 3A does not apply to work carried out by a public or local authority and, as such, no permit is required for the proposed works adjacent to Cripple Creek.

Conclusion

The proposed development is for the extension of the Blaxland Waste Management Facility.

The Environmental Impact Statement submitted with the development application, together with additional information provided by the proponent upon request from various government departments, statutory authorities and Nexus Environmental Planning Pty Ltd, has culminated in a proposed development which:

- will assist the Council in the short to medium term to dispose of waste generated in the Blue Mountain City Council area,
- will provide mitigation measures to be incorporated as part of the development of the site which will ensure that environmental impacts are limited and acceptable, and
- will provide immediate certainty to the Council with regard to waste disposal while the Council investigates alternative disposal methods.

The extensive assessment of the proposed development has resulted in a number of conditions of development consent being recommended.

It is considered that the site is suitable for the proposed development, the proposal has planning merit and should be approved by the Council.



25 May, 2005