

- Comments provided by the public in response to the invitation to provide comment made pursuant to s74(3).

Evidence still remains substantially unchanged. Council has included a 'new' liner study.

Findings on material questions of fact

14. I found that the site is 1 km from the Gara River which flows 4 km southwards to the Oxley Wild Rivers National Park, which is a part of the Gondwana Rainforests of Australia World Heritage Area (GRAWHA) and is also listed on the National Heritage list.

Location unchanged from PEA

15. I found that the natural values of the GRAWHA comprise rainforest within 50 separate reserves located between Newcastle and Brisbane (managed by NSW and QLD Agencies). I found that the GRAWHA provides habitat for more than 200 rare or threatened plant species, which also constitutes part of the natural values of the GRAWHA.

No changes in EA from PEA

16. I found that the proposed landfill will be located high in the catchment near a drainage line on which a leachate pond will be constructed. I found that a geotechnical assessment provided with the referral indicates that the soils on the site are potentially dispersive with high erosion hazard and that this has potential implications for the proposed compacted clay capping and liner as well as for water storage embankments.

No changes in EA from PEA

17. I found that values in Oxley Wild Rivers National Park are highly dependent on groundwater and river water entering the park. I also found that, based on the information provided by the proponent, the design of the leachate pond appears to be inadequate to deal with heavy rain and, even in the absence of heavy rain, it appears likely that leachate will be able to enter the groundwater.

No changes in EA from PEA

18. I found that extensive research has been conducted into the failure of landfills to contain leachate. I found that landfills have the potential to fail because the clay liners, or clay-plastic composites liners, can be corroded by the mixture of chemicals that collect in any landfill. I found that both clays and plastics have been shown to react with these chemicals and eventually the liners can decay to the extent that leachate leaks into the groundwater system and ultimately may leak into streams and rivers.

Council have included a 'new' liner report. Proposal Unchanged.

19. I found that any leachate leaking from the proposed landfill is likely to adversely impact on the quality of water leaving the site and entering the Gara River.

Impacts unchanged

20. I found that weeds and rubbish were likely to escape from the landfill and enter the World Heritage and National Heritage area. I found that the World Heritage and National Heritage values of the GRAWHA include animals that are directly dependent on water quality, such as frogs and turtles, and these are the values most likely to be severely adversely affected

in the short term. However, in the longer term, diminished water quality and the input of weed propagules may have a significant adverse impact on the World Heritage and National Heritage values of dry rainforest and fauna.

Impacts unchanged

21. I found that a number of World Heritage and National Heritage values are likely to be significantly adversely affected by the proposal to establish a landfill adjacent to the Gara River. I found that the values cited as being most at risk are those related to rainforest and fauna (particularly frogs) which are directly dependent on water quality for their survival.

Impacts unchanged

22. I found that the proponent's contention that World Heritage and National Heritage values will not be affected by the proposal was not supported by the information provided in the referral.

23. I found that the proponent provided no undertakings regarding mitigation measures relating to World Heritage and National Heritage values in the referral. I found that details on the likely nature and extent of impacts on World Heritage and National Heritage values were not provided by the proponent.

Statement of Commitments included. No change to nature and extent of impacts.

Reasons for Decision

24. In making my decision I took account of the precautionary principle and public comments.

25. When considering the potential impacts of the proposed action I had regard to the direct and indirect impacts of the action.

26. In light of my findings, I was satisfied that the proposed action will, or is likely to, have a significant impact on the World Heritage values of World Heritage properties and the National Heritage values of National Heritage places. I therefore decided on 1 October 2007 that the proposed action is a controlled action and that the controlling provisions are sections 12 and 15A (World Heritage properties) and sections 15B and 15C (National Heritage places).

In Conclusion,

Council's current proposal is almost identical to the one ruled on above. Taking into account the Precautionary Principle, potential impacts remain unchanged.

I urge the NSW Department of Planning to reject the proposal on the same grounds as stated in the EPBC decision. The potential for damage to the Gondwana Rainforests of Australia is of major National and International concern. It is Australia's obligation to protect and conserve these values.

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Submission S016

Issue Number	Topic	Response
S016a_1	H1 W4	<p>Community concerns have been noted regarding the site location in the catchment of the Gara River upstream of the Oxley Wild Rivers National Park. Section 8.12 of the EA addresses National Environmental Heritage (Oxley Wild Rivers National Park) which supports the GRAWHA. The impact on the GRAWHA has been assessed under the EPBC Act and a referral lodged with DSEWPC (formerly DEWHA). DSEWPC determined that the proposal constitutes a controlled action under the EPBC Act. The nature of the assessment process under the EPBC Act is such that determinations are made without having regard to mitigation measures that would be implemented. However, stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage have been proposed by Council and would be implemented to reduce the likelihood of impacts to surface and groundwater.</p> <p>A Hydrogeological (leachate) Assessment (Appendix I of the EA) was undertaken and found that diluted concentrations reaching the downstream Gara River would not pollute the existing environment at the OWRNP or have a significant impact on the World Heritage Area.</p>
S016b_1	P4	<p>The existence of a geological fault at the site has been addressed and is summarised in Section 8.2.1 of the EA. Detailed field observations, structural measurements and examination of all available relevant data found there was no evidence to support the existence of any significant geological fault within the vicinity of the Project Site.</p> <p>In accordance with recommendations by DECCW and as agreed with DoP, observations would be made and recorded during and/or on completion of the excavation works in the vicinity of the potential geological fault. Although considered unlikely, should evidence of a fault be encountered during the earthworks, further geotechnical and hydrogeological investigation would be undertaken and the appropriate mitigation measures (including design modifications) would be implemented to reduce the risk of potential impacts on landfill stability.</p> <p>If required, the geotechnical stability of the landfill structure and the associated leachate liner (or barrier) would be modelled, assessed, and designed with an appropriate earthquake (seismic) loading predicted for the Armistead area in accordance with the relevant Australian Standard for Earthquake Loading. The stability modelling for this event would be required to achieve a minimum Factor of Safety (FOS) in accordance with the Australian Standard which will account for potential seismic events that are (within the order of magnitude) greater than the predicted event specified for the Armistead area for design purposes.</p> <p>The likelihood of the landfill liner tearing or rupturing as a result of seismic events in Armistead is considered very low.</p>

To

NSW Department of Planning

NSW Government

Re: PROPOSED ARMISTEAD DUMARESQUE REGIONAL LANDFILL. 06-0220

In modern Australia we must insist on an end to (a) poorly explained (b) inadequately researched and (c) incompetently administered council ventures.

It appears that these three issues concerning the landfill proposal, offer

1. no financial estimates offered for capital costs or ratepayer liability for the landfill project, S017_1
2. no evidence of intensive technology research into site selection and alternate technologies for waste reduction and toxic by product issue, S017_2
3. every indication that this project has been poorly managed to date. S017_3

The environmental impact of a landfill on such a sensitive site is monumental, both currently and over time

This proposed landfill will impact equally on both human and flora and fauna communities for countless generations with toxicity of water likely to adversely affect the natural environment and thus its inhabitants. S017_4
S017_5

Armidale, as a city of distinction, does not deserve the stigma of being responsible for the pollution and despoiling of Heritage listed Oxley Wild Rivers National Park.



Gara River at sunset March 2010.

This waste dump must not be sited next to the Gara River or near any river system.



Submission S017

Issue Number	Topic	Response
S017_1	SE4	<p>The estimated cost for the construction of the landfill is \$14 million for the first two cells (which includes water and leachate collection and management systems, access road, amenities) and \$10 million for the remaining three cells, a total of \$24 million over the life of the landfill. The annual operational cost is likely to be in the order of \$1 million per year.</p> <p>Council has the ability to raise funds by loans and any loan will be serviced by the waste management charge that is set by Council. Council has continually advised ratepayers that the proposed new landfill will be paid for by ratepayers by means of a landfill levy that was established in 2006 to fund the new landfill. This levy will be increased and decreased over the period of the staged loans that are required as landfill cells are developed and closed.</p>
S017_2	P2 P3	<p>Council has considered the implementation of various AWT technologies. AWT refers to technologies such as MBT, thermal treatment or a combination of both MBT and thermal treatment. Council has demonstrated its commitment via its active pursuit of AWT processes over a number of years. Council is currently trialling and evaluating AWT at the Long Swamp Road Waste Transfer Facility before full scale adoption and implementation. Further facilities and processes to recover materials for re-use will be added in future as markets and recovery costs dictate.</p> <p>A review of the costs of AWT technologies would be undertaken should the trial be successful and more accurate costing information is available based on its trial and adoption at the existing facility.</p> <p>As part of the site selection process, several alternative sites were considered for the proposed landfill facility including sites within several of the surrounding LGA's. The site selection process evaluated over 50 sites since the mid-1990s. The site selection process included consideration of environmental impacts and their likely magnitude at each site. The <i>Regional Landfill Siting Study Final Report</i> (Maunsell, 2004) was appended to the EA (refer Appendix C of the EA) and concluded that the current site was the most suitable of the sites considered with respect to the identified criteria.</p>
S017_3	FF1	<p>An assessment of biodiversity including potential impacts of the proposed landfill facility on flora, fauna and habitat was presented in Appendix E of the EA and summarised in Section 8.8 of the EA. Further, the Surface and Groundwater Monitoring Program and Management Plan (appended to the LEMP in Appendix B) is designed specifically to detect and manage the quality of surface water and groundwater.</p> <p>In the unexpected event that leachate enters the groundwater, diluted concentrations reaching the downstream Gara River would not pollute the existing environment or have a significant impact on flora and fauna downstream.</p> <p>Direct impacts to native species that occur in the study area and indirect impacts to species that occur offsite will also be managed through implementation of a suite of management plans. Further details of the contents of these plans are provided in Section 4 of the Flora and Fauna Assessment (Appendix E of the EA). These plans will be developed during detailed design of the landfill and prior to construction. The plans would be prepared in consultation with relevant government agencies (e.g. DECCW and DSEWPC) and in accordance with best practice guidelines.</p>
S017_4	W4	<p>Stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the</p>

		likelihood of impacts to surface and groundwater. In the unexpected event that leachate enters the groundwater, diluted concentrations reaching downstream would not pollute the existing environment at the OWRNP or have a significant impact on the World Heritage Area.
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RE: Armidale Landfill Project
Application Number 06_0220

I am writing this letter to show my concerns regarding Armidale Dumaresq Councils proposed Landfill site east of Armidale.

As a local resident of Armidale for most of my adult life, my family has enjoyed swimming in what is locally known as "the blue Hole", which is down stream from the proposed site. You would not be game to swim in that water ever again, let alone allow children to enjoy such a great swimming spot!!

In more recent years, we have been camping to "The Big Hill" which the Gara River flows into the Macleay River approximately 1 hours drive east of Armidale, all of these waterways would potentially be poisoned by rubbish and toxins coming from the proposed dumpsite.

I have no expertise in this area, but common sense says this can only have a negative and fatal affect on the fish and other wildlife that rely on this water for survival.

Another concern I have, the road from Armidale heading East towards Dorrigo and then onto the mid north coast, is the main link between the country and the coast, I believe this road is known as a "Tourist Drive", not so pleasant driving past a stinky landfill site!!

My working career as a truck driver has seen me drive on many roads all over Australia, from a safety issue, heavier traffic on this section of the road will deteriorate the road very quickly, attention must be paid to this matter for the local residents who use this road every day, tourists and workers like myself.

My last huge concern hits me directly in the hip pocket, this proposed landfill site could cost up to \$35 million, I am guessing that every single rate payer will be contributing to this cost, and will be paying for a long time to come!!!

I hop you find the time to consider these issues and understand the point of view from a local.....

Regards,

Submission S018

Issue Number	Topic	Response
S018_1	SE2	Stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the likelihood of downstream impacts to surface and groundwater. Impacts on the recreation values of the Blue Hole are not expected. Monitoring would be undertaken downstream of the site (upstream of the Blue Hole) to monitor water quality.
S018_2	HR2 W4 FF1	Stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the likelihood of impacts to surface and groundwater, and therefore aquatic ecology including fish and invertebrates, to negligible levels. In the unexpected event that leachate enters the groundwater, diluted concentrations reaching downstream would not pollute the existing water environment or aquatic ecology of the OWRNP or have a significant impact on the World Heritage Area.
S018_3	SE3	An analysis of the socio-economic impact, including tourism, of the proposed landfill facility was undertaken and described in Section 8.9 of the EA. The proposed landfill facility would utilise the Waterfall Way as an access route. It is noted that the Waterfall Way is a National tourist drive and this is acknowledged in the EA. The tourist value of the Waterfall Way is not expected to be impacted by the proposal.
S018_4	T3	The proposed landfill facility would utilise the Waterfall Way as an access route. It is noted that the Waterfall Way is an existing haulage route for several existing facilities in the region. The traffic modelling undertaken for the EA has considered a worst-case scenario where up to 6 traffic movements would occur per day (one way), of which only 4 would be heavy vehicles. Given that the volume of waste to be directed to landfill is expected to decrease over time due to increasing recycling rates (refer to Section 2.4 of the EA), traffic movements to the proposed landfill facility will remain stable or may decrease over time. Based on the RTA traffic count data, Waterfall Way has an estimated average annual peak hour flow (two way) of approximately 97 vehicles per hour which indicates that it is currently operating at a Level of Service A (based on the RTA's Guide to Traffic Generating Developments). Level of Service A indicates that the operation of the road is good, with minor vehicle delays and considerable spare capacity capable of accommodating future growth in traffic. The traffic modelling has determined that Waterfall Way would continue operating at Service Level A.
S018_5	SE4	The estimated cost for the construction of the landfill is \$14 million for the first two cells (which includes water and leachate collection and management systems, access road, amenities) and \$10 million for the remaining three cells, a total of \$24 million over the life of the landfill. The annual operational cost is likely to be in the order of \$1 million per year. Council has the ability to raise funds by loans and any loan will be serviced by the waste management charge that is set by Council. Council has continually advised ratepayers that the proposed new landfill will be paid for by ratepayers by means of a landfill levy that was established in 2006 to fund the new landfill. This levy will be increased and decreased over the period of the staged loans that are required as landfill cells are developed and closed.

2nd August 2010

Felicity.Greenway@planning.nsw.gov.au

Major Development Assessment
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Re : Proposed Armidale Dumaresq Regional Landfill, 06_0220

It is with great concern that I tender this submission to register my misgivings on the location of the proposed Landfill that Armidale Dumaresq Council with clear disregard to world evidence and incompetence to actually determine that it was a good idea to propose a landfill in this location above a World Heritage site. S019_1

As has been pointed out, most landfills leak no matter what technology is used to try and prevent this from happening. S019_2

To have this scenario at the headwaters of a World Heritage site I consider to be an act of idiocy bordering on criminal intent.

As there is no currently viable scientific / technological option to landfills, I am resigned to there being a need for one as proposed for the use of the surrounding Councils to use.

I would strongly urge that a more suitable site be investigated using a competent and neutral party to carry out this investigation and research regardless of the costs involved. S019_3

As has been demonstrated on many occasions, the Armidale Dumaresq Council has neither the management nor the engineering skills required to ascertain the viability or the ramifications of anything this technical and involved.

The costs involved to the residents, governments and future generations to clean up the damage caused to any World Heritage areas from contamination by this proposed landfill would be insignificant compared to the costs incurred to find and develop a more suitable location for this facility. S019_4

I hope that a more considered approval process by competent and informed people will see the potential folly of this proposal as it now stands and decide against it in this location.

Sincerely

Submission S019

Issue Number	Topic	Response
S019_1	P2 H1	As part of the site selection process, several alternative sites were considered for the proposed landfill facility including sites within several of the surrounding LGA's. The site selection process evaluated over 50 sites. The site selection process included consideration of environmental impacts and their likely magnitude at each site. The <i>Regional Landfill Siting Study Final Report</i> (Maunsell, 2004) was appended to the EA (refer Appendix C of the EA) and concluded that the current site was the most suitable of the sites considered with respect to the identified criteria.
S019_2	H1 P4	<p>Community concerns have been noted regarding the site location in the catchment of the Gara River upstream of the Oxley Wild Rivers National Park. Section 8.12 of the EA addresses National Environmental Heritage (OWRNP) which supports the GRAWHA. The impact on the GRAWHA has been assessed under the EPBC Act 1999 and a referral lodged with DSEWPC (formerly DEWHA). DSEWPC determined that the proposal constitutes a controlled action under the EPBC Act. The nature of the assessment process under the EPBC Act is such that determinations are made without having regard to mitigation measures that would be implemented. However, the measures proposed in the EA will reduce the likelihood of significant impacts on the environment including the World Heritage Area.</p> <p>The landfill and pond design, including the landfill liner, have been designed in accordance with the recommended DECCW Landfill Guidelines Benchmark Techniques. The combination of composite landfill liner with a leachate collection system ensures maximum prevention of leachate leakage from the landfill into the surrounding environment. A review of available literature on the efficiency of different landfill linings was undertaken (refer Appendix I). Although the Leachate Collection and Conveyance Systems have a finite life ranging from under 70 years to over 200 years, the system will have a higher operational life provided that it is installed in accordance with the construction specifications including the CQA/CQC programmes and protection of the liners during and after construction. The LEMP will dictate efficient operation and management of the landfill to ensure landfill structures are used appropriately and the risk of leachate leakage from the landfill site is minimised.</p> <p>Stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the likelihood of impacts to surface and groundwater. In the unexpected event that leachate enters the groundwater, diluted concentrations reaching downstream would not pollute the existing environment at the OWRNP or have a significant impact on the World Heritage Area.</p>
S019_3	E3 P2	Council has engaged the services of an independent Professional Services Consultant (AECOM) to provide technical and management services including detailed design, environmental approvals and land acquisition for the proposed landfill. As required, other specialist consultants have been engaged to provide Council technical advice and assessment. Over 50 sites were evaluated as part of the site selection process and the <i>Regional Landfill Siting Study Final Report</i> (Maunsell, 2004) concluded that the proposed site was the most suitable of the sites considered with respect to the identified criteria.
S019_4	SE4	<p>Stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the likelihood of downstream impacts to surface and groundwater.</p> <p>With the implementation of control and mitigation measures and adherence to the suite of management plans presented in the EA, contamination of the World</p>

		Heritage Area is not anticipated and high cost remediation measures are not likely to be required.
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[REDACTED]
[REDACTED]
[REDACTED]

To whom it may concern,

Re: Proposed Armidale Dumaresq Regional Landfill, 06_0220

I write in support of the Gara Valley Environment Preservation Association, Inc. in working to halt what presents as a most unbelievably enigmatic string of questionable events that, if allowed to continue to fulfil the egoistic drive of a few, will undoubtedly result in the partial destruction of some of Australia's premier National Park land, the World Heritage listed Gondwana Rainforests of Australia – New England Group.

The initial selection and purchase of the proposed site is well known to have been conducted in an entirely subversive manner and given the 2007 ruling of the Federal Government's EPBC that the site for the proposed landfill "will, or is likely to, have a significant impact upon World Heritage values" in the Oxley Wild Rivers National Park it would be the suggestion only of those with a reprobate mind to seek success in such a venture. As stated on NSW state government's department for Environment, Climate change and Water website the Oxley Wild Rivers national park is "...widely accepted as a valuable asset for the region, making a major contribution to nature conservation, cultural heritage and tourism on the Northern Tablelands."

Surely it is illogical for a regional council to propose the development of a waste landfill adjacent to a major scenic route. One of the reasons this route is both major and scenic is because it traverses the Oxley Wild River National Park which comprises 145,000 ha of dry rainforest, richness in biodiversity infrequently paralleled globally including many rare or threatened species of flora and fauna, and remnants of European exploration history. Perhaps the aim of the Armidale Dumaresq Council (ADC) is actually to facilitate a significant reduction in tourism dollars for the region. ADC is on track.

S020_1

It was a recently as May 25th this year, as reported in the Bellingen Shire Courier Sun, that the Minister for Climate Change and the Environment, Mr. Frank Sartor, was present in the New England to launch celebrations for the 75th anniversary of the New England National Park, stating "Today we celebrate their achievements in protecting this special place not only for public enjoyment but to protect the special ecosystems and habitats within."

On this auspicious occasion Mr. Sartor was joined in spirited song by Northern Tablelands MP, Mr. Richard Torbay, who, with unequivocal clarity, expressed his countenance of the national park and the history and heritage of the area, exclaiming "There are a range of opportunities for the community to celebrate this conservation milestone throughout 2010. "We welcome your involvement in a number of Discovery ranger-guided walks, a picnic day in October and a public photographic competition that opens this week. "I wish to acknowledge the thousands of years of conservation custodianship by the Aboriginal people of the region. "Point Lookout has always been a sacred and important place to the Anaiwan, Gumbaynggirr and Dunghutti Aboriginal Peoples."

Does My Torbay now intend to lull, prostrate, whilst the destruction of the magnificent result of over 40 millennia of the aforementioned 'conservation custodianship' is actualized on his watch?

On June 16th, 2009 the NSW state budget was announced. The Northern Tablelands electorate was described as having "...fared reasonably well..." by MP, Mr. Richard Torbay, with \$999,520 from the Environmental Trust to go to Armidale Dumaresq Council to protect bio-diversity and \$30,000 to establish a walk in the Oxley Wild Rivers National Park, as reported on the website for the MP. This same website spruiks the mantra "Achieving for Northern Tablelands". Clearly, financial gains such as these are an achievement. To claim such funding and then consider allowing a landfill waste dump to be constructed in close proximity to the very area money was distributed for the protection of could not, in all reality, be considered an achievement.

Having said that, achieving is obviously rather a subjective notion. It would indeed be interesting to learn exactly how many individuals outside of the yoke of deal-makers involved in this polemical and chronically irresponsible suggestion would consider the violation of this resplendent example of natural order to be an achievement.

Whichever way the Armidale Dumaresq Council intend to glamorise the waste dump proposal and decry the potential, and in some instances unavoidable, ramifications of this action on the surrounding wilderness to the local community, one point must never be allowed to drift far from the minds that collude to realise this disaster and that is that it will not be just the local community watching.

[REDACTED]
August 2010



Submission S020

Issue Number	Topic	Response
S020_1	SE3	<p>It is noted that the Waterfall Way is a National tourist drive and this is acknowledged in the EA. It is envisaged that views of the proposed landfill facility from Waterfall Way would be partially masked by existing vegetation and further obscured by vegetation once the offset area has matured.</p> <p>The proposed landfill facility would not significantly affect or impede tourism in the area. Armidale Dumaresq Council supports the promotion of tourism in the region through the Tourism Information Centre, provision of funding for local community infrastructure including public facilities for tourists and sponsorship of events to promote tourism in the region.</p>

To Whom it may concern

I am writing to reject Council's plan to built new landfill off the Waterfall Way next to the Gara River.

I believe it will damage and contaminate the Gara River which in turn flows into the Gondwana Rainforest of Australia World Heritage Area. The river has a lot of water going down it when receiving heavy rain and how can this be contained if toxic's leech into the river system. There will be no containment.

S021_1

I believe the proposed dump jeopardizes several major Department of Environmental & Climate Change NSW recovery plans for key populations of threatened species such as the Brush-tailed Rock Wallaby, Spooter Qual & Hastings River mouse. Other examples include koalas, rare birds such as the Diamond Firetail and Speckled Warbler.

S021_2

Dumps produce odour, litter ,dust, insects and vermin which will be coupled with a modified and scarred lanadscape. 3km downstream from the site is the "Blue Hole", swimming and recreation area. Only a short distance along the Waterfall Way lie the Bakers Creek, Wollomombi and Ebor Waterfalls plus the National parks which make up the World Heritage listed "Gondwana Rainforest of Australia".

S021_3

S021_4

Our family runs a grazing enterprise in the Gara river. The quality of the water is essential for the well being of the cattle. Without this we are unable to use this land.

S021_5

[REDACTED]

Submission S021

Issue Number	Topic	Response
S021_1	W4	<p>Stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the likelihood of impacts to surface and groundwater.</p> <p>The water management system has been designed to accommodate the 1:100 ARI (flood event). The Guidelines recommend a 1:25 ARI thus the modelling carried out for the proposed landfill facility is considered to provide adequate protection against heavy rainfall and ensure containment of onsite dirty water and leachate.</p> <p>In the unexpected event that leachate enters the groundwater, diluted concentrations reaching the downstream Gara River would not pollute the existing environment or have a significant impact downstream on the GRAWHA.</p>
S021_2	FF2	<p>Potential impacts to threatened species in the area were addressed in the Flora and Fauna Assessment (Appendix E of the EA). Known habitat is present within the study area for the Koala, Diamond Firetail and Speckled Warbler, which are all listed threatened species. Assessments of Significance were undertaken for these species and are provided in Appendix A of the Flora and Fauna Assessment (Appendix E of the EA).</p> <p>The Flora and Fauna Assessment found that the study area does not contain core or potential Koala habitat, as defined by SEPP 44. However, a Yellow Box within the Stringybark Woodland appears to be used significantly by Koalas and as such, the tree will be retained.</p> <p>The Flora and Fauna Assessment concluded that the proposed works would have a significant impact on local populations of the Diamond Firetail Finch and Speckled Warbler. This will be offset by setting aside adjacent areas of similar vegetation type that are likely to respond to conservation measures which will permanently improve biodiversity values of the offset area. The impact to the Diamond Firetail Finch and Speckled Warbler will be greatly reduced by provision of these offset areas.</p> <p>The impacts of the project will be further minimised through implementation of the mitigation measures outlined in Section 4 of the Flora and Fauna Assessment (Appendix E of the EA) and the management plans set out in the Statement of Commitments (Section 9.3 of the EA).</p>
S021_3	AQ1 V3 AQ2 Q2	<p>Odour emissions from the site are predicted to be within acceptable levels at the nearest receiver. Standard management strategies for landfill sites would be employed including sub surface and surface gas monitoring and the daily covering of waste. A complaints hotline would be set up in accordance with EPL requirements.</p> <p>Litter management was considered in Section 5.5.6 of the EA. The LEMP (Appendix B of the EA) sets out the control measures to prevent impacts from litter. A Pollution and Litter Management Plan for the operation of the landfill would be prepared and implemented for the site to ensure litter is contained.</p> <p>Total dust emissions from operations at the proposed landfill facility have been estimated by analysing the excavation and landfilling operations for three stages of the proposed landfill. Predictions of dust generation were very low and it was concluded that the proposed activities would be unlikely to give rise to exceedances of the DECCW air quality criteria. Overall, dust concentrations and deposition levels at all residential receivers were very low and it was concluded that air quality impacts arising from dust emissions from the proposed landfill</p>

		<p>facility would be negligible.</p> <p>Pest and vermin monitoring would be undertaken on a regular basis at the Project Site. Daily cover of the landfill would also discourage vermin and reduce odour emissions. Should the proposed techniques be unsuccessful in deterring pests and vermin, further investigations of additional measures would be undertaken such as engaging professional exterminators if required.</p>
S021_4	SE2	<p>Stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the likelihood of downstream impacts to surface and groundwater.</p> <p>Impacts on the recreation values of the Blue Hole are not expected. Water quality monitoring would be undertaken downstream of the site (upstream of the Blue Hole).</p>
S021_5	LU1	<p>Specialist studies indicate that the risk of contamination of the Gara River resulting from the proposal is very low. Any toxicity of leachate would be detected in monitoring wells and appropriately remediated in order to prevent impacts to the Gara River. Monitoring bores would ensure water quality is regularly recorded and mitigation action taken if required. It is therefore unlikely there would be impacts on the quality of water used for grazing.</p> <p>The Water and Leachate Management Plan details all aspects of the design and operation of the Leachate Pond, Sedimentation Basin and Dry Basin. The Surface and Groundwater Monitoring Program and Management Plan (appended to the LEMP) details the monitoring that will be undertaken and procedural responses to be implemented in the event that impacts to water quality are detected.</p>

Dear Felicity,

I have just picked up my local paper to read that the Armidale Council proposes to place a landfill dump in the catchment area of Oxley Wild Rivers National Park - this is absolutely appalling!

S022_1

I truly hope this crazy proposal is never approved.

Yours sincerely,

[Redacted Signature]

Submission S022

Issue Number	Topic	Response
S022_1	H1	Management and mitigation measures proposed in the EA will ensure that the proposal will have no significant impacts on the environment, including the World Heritage Area. Stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the likelihood of impacts to surface and groundwater.

3 August 2010

Felicity Greenway
Major Development Assessment
Department of Planning
GPO Box 39 Sydney NSW 2001

Dear Felicity,

RE: PROPOSED ARMIDALE DUMARESQ LANDFILL 06_0220

I am a farmer, recreational user of waterways and a pragmatic environmentalist residing in the locality of the proposed site and wish to register my objection to the proposed Armidale Dumaresq Landfill on the following grounds.

Governance and Lack of Transparency

1. I am concerned with a number of very basic governance issues.
2. There are two vendors of the property that will be acquired for the project. One is the real estate agent who was engaged by Council to find a suitable site (Derry Crisp), and the other is a former Councillor who was sitting at the time the site was selected (Ken Waters). I have not been able to find this information disclosed in the EA. As there is an obvious conflict of interest and the transaction is not at arm's length this information should be disclosed in the EA. S023_1
3. The Council will obviously have to pay the vendors for the site. Because the transaction will involve public monies and is not at arm's length the public are entitled to know the outline of any arrangement, in order that they might form a view on whether dealings have been proper and whether the public money is being spent wisely. This is a fundamental governance principle. I have not been able to find this information disclosed in the EA. S023_1
4. I understand GVEPA has previously requested disclosure of the above relationships under Freedom of Information (FOI) legislation, but Council has not divulged the information. So far as I am aware only Council and the vendors know the commercial arrangements. It does not engender confidence when a democratically elected body will not willingly disclose information that is clearly in the public interest. It is a democratic threat when it actively fights to suppress information by denying an FOI request. There is a strong implication of something unpalatable that Council wants hidden. S023_2
5. As the Council have not been transparent on this matter (indeed they have actively suppressed it) it is reasonable to ask whether they have not disclosed other information prejudicial to the project - it is likely that they have.
6. The EA report has been prepared by AECOM. This firm has also been engaged by Council to project manage the proposed landfill site until commissioning. This is another conflict of interest that is not disclosed in the EA. S023_3

7. I do not submit that conflicts of interest should not occur. In an ideal world they wouldn't but in a rural city it is always a possibility. The issue is that when conflicts do occur they should be dealt with in a transparent manner so that the public and interested parties can make informed judgements. The proposals of a Council that actively suppress relevant information cannot be trusted. S023_3

Threat to World Heritage Area

8. Council have sought a licence for a Class 1 tip which will allow all manner of materials to be disposed in the site. I understand this will lead to the creation of methane gas and leachate. Leachate is a liquid mix of all the chemicals, toxins, acids etc that find their way into the waste stream of any community. Because it is toxic, leachate is a serious pollutant which will destroy life. Methane is well known as an undesirable greenhouse gas.
9. Because Council have a poor record of management I have no doubt that that all manner of toxins, heavy metals, putrescibles and other pollutants will be dumped no matter what restrictions are placed on any operating licence. These will make leachate even more deadly. S023_4
10. I understand that that clay and plastic liners breakdown relatively quickly (within a few decades) in the presence of leachate. The leachate then leaks into the surrounding groundwater and thence into the drainage of the catchment. Leachate can also be spilt in flooding events. My understanding is that the technology (clay and plastic liners) proposed in the EA to contain the leachate is old and has been discontinued in Europe and the US because it does not prevent leakage. The leachate will likely be leaking for centuries post closure. S023_5
11. The proposed landfill is about 3.5 kms upstream from the Oxley Wild Rivers National Park a World Heritage Listed Area (WHA). I understand that countries fortunate enough to host WHA's are obliged to maintain and protect those heritage areas in order to conserve the unique features that gave rise to the World Heritage listing in the first instance. S023_6
12. Placing a leachate producing facility just upstream of a World Heritage Area would appear to be in direct contravention of Australia's obligation to protect and conserve the Oxley Wild Rivers WHA. The proposal should be rejected in order to maintain Australia's international reputation. S023_6
13. Following the Kibble report Council will likely amalgamate with surrounding Councils (Uralla and Guyra). I understand the Council will be placed in administration until elections for an amalgamated Council can be held. The legacy of a dying Council should not be a leachate factory on the roof of a unique forest ecosystem.

Threat to Stygofauna

14. Stygofauna are any fauna that live within groundwater systems. I understand that in Australia, scientists have found 850 species living in subterranean water, caves and micro-caverns. These insects, crustaceans, spiders and worms are likely only about one-fifth of the number of undiscovered species the researchers think exist underground in Australia. Two species of blind fish and two of blind eels are also known to exist in Australian groundwater systems.

15. Generically, the animals found in underground water are known as "stygo fauna" and those from caves and micro-caverns are known as "troglodytes."

16. I have not been able to find any reference to a baseline stygo fauna survey in the EA. As these animals would be the first to be killed by leachate escaping into the groundwater it is surprising that this risk has not been quantified. S023_7

17. The facility should not be permitted unless a baseline stygo fauna survey is conducted and the risk has been properly assessed and managed.

Threat to the Blue Hole

18. Just downstream of the facility and before the WHA is the Blue Hole swimming and recreation area, a very popular recreation area for New England citizens and visitors. Any environmental spills will go straight into the pool, posing a direct health threat to anyone using the area. S023_8

19. I have been unable to locate any emergency response plan for spills affecting the Blue Hole. S023_9

I would like to thank you for the opportunity to comment on this unsatisfactory proposal.

In conclusion I believe the proposal should be rejected because:

- Council has deliberately withheld and suppressed relevant information.
- The landfill threatens ecology in a World Heritage Area that Australia is obliged to protect.
- The landfill threatens the purity of popular public recreational areas.
- Baseline environmental surveys have not been completed.
- The site selection process is flawed.

Yours sincerely,



Uncosted proposal

20. The EA provides no information on costs. There are no capital, operating, closure and post closure costs. Nor does it appear that any detailed engineering, site operating or closure plans have been costed. There is no indication of site acquisition or potential compensation costs - the proposal is totally uncosted. S023_10

21. Any organisation that implements uncosted proposals will inevitably run into financial difficulties and the Kibble report confirms exactly that - Council is in financial difficulties.

22. The EA notes at page 226: "there are potential environmental impacts should the landfill operator not have the financial means within which to carry out...adequate environmental safeguards." Yet nowhere does the EA state what the Council's financial position is. According to the Kibble report it is effectively broke.

23. The EA contains numerous references to management plans, policies and practices which will be implemented at "best practice standard" to ensure certain things are done. Yet when you get into it there is little detail in these plans and there is certainly no costing. There are lots of well worded assurances that various "best practices" will be employed but they are deliberately not costed because the Council know that the cost is unaffordable. If the facility is approved Council will not implement the precautions in the EA because it does not have the money to do so. S023_10

24. The financial situation will be exacerbated when the Council has to construct, operate, close and monitor the two extra cells that will be required.

25. So we have a financially troubled council proposing to site a landfill in an environmentally unsuitable location in direct contravention of Australia's World Heritage obligations and the proposal does not say how much it will cost or how it will be paid for.

26. The EA says the environmental outcome is dependent on the money yet there is no analysis of money in the EA.

27. I contend that is an unacceptable risk and the proposal should be rejected so any landfill can be sited in a less risky position.

Lack of Alternative Waste Technology (AWT) Evaluation

28. The EA gives a very cursory evaluation of AWT options and it appears this work was done in 2002 so is outdated for a 2010 proposal. Only four alternatives were identified and there are now many more options available. S023_11

29. Given there is no financial information on the proposed landfill it's weird that one of the few Alternative Waste Technology (AWT) options noted in the EA is dismissed because of its allegedly high capital cost. High compared to what? S023_11

30. Most likely not all AWT options would be applicable. However the separation and processing of the organic fraction is relatively simple and devoid of risk. This can be via an in-vessel, tunnel (as operated at Port Macquarie/Hastings) or bay system (at Coffs Harbour) or the

SITA facility at Kemps Creek (SAWT). The EA makes no reference to these systems successfully operating in nearby Councils. There is no rigorous analysis of current AWT options in the EA.

S023_12

31. Given the EPBC concerns and the proponent's acknowledgement that the proposed site is fundamentally unsuitable environmentally, it seems very remiss that there is no such analysis. Thorough evaluation and comparison of AWT options would seem to be highly desirable.

32. Analysis and comparison of alternatives should be completed by a consultant with no financial interest in the outcome.

S023_13

33. As best as I understand landfill levies are currently \$70 per tonne in Sydney and \$20/tonne in local government areas in Eastern NSW. It is planned that the Eastern NSW levies will be increased by \$10/tonne pa until they are at parity with Sydney levies in 2015. It is not clear to me whether Sydney levies will increase in that period.

34. The levies are part of a commendable NSW government initiative to reduce waste going into landfills because landfills are environmentally unsound.

35. As I understand it there are currently no waste levies applicable to Western NSW councils including Armidale. It is inevitable that this situation will change and that Council will be required to pay a landfill levy. A pro-active Council would anticipate this change, plan for the future and opt for a minimum landfill solution in conjunction with an AWT solution, so as to minimise future costs.

S023_14

Site Selection

36. The logical way to choose a landfill site would be to develop a list of desirable criteria and then examine the whole of the Council area to find a site that fits the criteria. That land could then be compulsorily acquired if there was no willing vendor.

37. Despite the impressive amount of site selection data in the EA it is my belief that this logical approach was not followed. It is my understanding that the process commenced at least as early as 1994 two years before the timeline mentioned in the EA, and that the Mackney report was commissioned after a local real estate agent had been identifying sites.

38. The subject property was offered to Council as a landfill site in 1994 and rejected as being unsuitable.

S023_15

39. A site "Ballantrae" was recommended to Council as being ideal. It was only when GVEPA pointed out that it was just upstream of the Gara Dam (backup water supply for Armidale) that Council belatedly realised it was totally unsuitable.

40. It would be a huge co-incidence if the optimum landfill site in the Council area just happened to be one of the sites for sale during the early to mid 1990's.

41. The ranking process is subjective and I understand weightings changed so that environmental outcomes were given less priority.

S023_15

Submission S023

Issue Number	Topic	Response
S023_1	E3	<p>The Project Site is proposed to incorporate portions of the Sherraloy and Edington properties (refer to Figure 4 of the EA), which would be subdivided. Appropriate portions, totalling 86 hectares, would be formally acquired by Council to facilitate the proposed landfill facility.</p> <p>The Edington property is currently owned by a former Councillor. The Sherraloy property is currently owned by one of the real estate agents engaged by Council to identify suitable land for sale.</p> <p>Price negotiations for the purchase of the land for the proposed landfill have not yet commenced. Land acquisition will be undertaken only once Major Project approval has been granted by the Minister for Planning.</p>
S023_2	E2 E3	<p>Where FOI requests were submitted to Council, information was made freely available in accordance with FOI processes. Information relating to "commercial in confidence" detailed discussions with private persons and companies was withheld.</p>
S023_3	E2 E3	<p>In 2004, Council sought tenders from suitably qualified consultants to provide project management and consultancy services to manage the design, planning, environmental assessment, land acquisition and construction project management for the new regional landfill. AECOM was engaged by Council through this competitive tender process. Therefore the appointment of AECOM as a consultant on the project does not represent a conflict of interest.</p>
S023_4	P6	<p>The proposed landfill facility will accept General solid waste (putrescible) in accordance with the EPL which includes household waste, manure, disposable nappies, food waste and litter bin waste collected by local councils. No toxic or chemical wastes would be disposed of at the proposed landfill facility. Waste would be screened and sorted at the existing Waste Management Centre prior to transportation to the proposed landfill. The generator, transporter or Armidale Waste Management Centre staff would be requested to assess and classify the material prior to its arrival at the proposed new landfill. Loads arriving at the proposed landfill would be checked for non-conformance.</p>
S023_5	P6	<p>Council would be required to monitor the site until leachate generation ceases and comply with other post-closure conditions as specified by the EPL and/or approval conditions. Council is committed to monitoring and rehabilitating the site and the proposed offset area post-closure for a time yet to be specified in any approvals.</p>
S023_6	H1	<p>The heritage values of the GRAWHA have been considered in Section 8.12 of the EA. The impact on the GRAWHA was assessed and a referral lodged with DSEWPC (formerly DEWHA). It was determined that the proposal constitutes a controlled action under the EPBC Act. Mitigation measures proposed, including stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage, would be implemented and would reduce the likelihood of impacts to surface and groundwater. In the unexpected event that leachate enters the groundwater, diluted concentrations reaching downstream would not pollute the existing environment at the OWRNP or have a significant impact on the World Heritage Area.</p>
S023_7	FF1	<p>An assessment of biodiversity including potential impacts of the proposed landfill facility on flora, fauna and habitat was presented in Appendix E of the EA and summarised in Section 8.8 of the EA. Further, the Surface and Groundwater Monitoring Program and Management Plan (appended to the LEMP in Appendix B) is designed specifically to detect and manage the quality of surface water and groundwater and thus, the quality of stygofauna habitat.</p>

		<p>No groundwater dependent ecosystems have been identified in the study area or in the OWRNP. Furthermore, the proposed works are not likely to significantly impact on groundwater dependent ecosystems in the study area or further downstream in the OWRNP.</p> <p>In the unexpected event that leachate enters the groundwater, impacts would be localised and diluted concentrations reaching the downstream Gara River would not pollute the existing environment or have a significant impact on flora and fauna downstream.</p>
S023_8	O1	<p>The potential for the leaking of leachate from the landfill has been assessed in Section 8.3 and 8.4 of the EA. Stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the likelihood of downstream impacts to surface and groundwater.</p> <p>Impacts on the recreation values of the Blue Hole are not expected. Monitoring would be undertaken downstream of the site (upstream of the Blue Hole) to monitor water quality.</p> <p>It is considered that the proposed development would not pose a significant risk to human health or the biophysical environment, either during construction or operation. This is due to the implementation of comprehensive measures that will ensure that neither hazardous nor offensive discharges from the development site would occur.</p> <p>Council is committed to ensuring the proposed landfill facility is operated so that any emissions are in accordance with environmental health regulations and guidelines stipulated within relevant local, State and Federal Government policies and legislation.</p>
S023_9	W5	<p>As part of the approvals process, the relevant agencies will prescribe approval conditions for which the proposed landfill facility will be required to meet. These conditions are incorporated into the detailed design plans and are presented to the relevant agencies such as DECCW prior to construction. It is expected that an emergency spill response plan would be contained within the final LEMP.</p>
S023_10	SE4	<p>Environmental management plans and proposed mitigation and management measures to be prepared and implemented for the proposed landfill form part of the overall cost of the project. The Statement of Commitments will also form part of the approval conditions for the project and therefore the preparation and implementation of these plans will be a condition of approval of the project.</p>
S023_11	P3 SE4	<p>Council has considered the implementation of various AWT technologies. AWT refers to technologies such as MBT, thermal treatment or a combination of both MBT and thermal treatment. Council has demonstrated its commitment via its active pursuit of AWT processes over a number of years. Council is currently trialling and evaluating AWT at the Long Swamp Road Waste Transfer Facility before full scale adoption and implementation. Further facilities and processes to recover materials for re-use will be added in future as markets and recovery costs dictate.</p> <p>A review of the costs of AWT technologies would be undertaken should the trial be successful and more accurate costing information is available based on its trial and adoption at the existing facility.</p>
S023_12	P3	<p>Comment noted. Other existing AWT facilities have been implemented within the region; the closest AWT facility is the Bedminster facility at SITA in Raymond Terrace, NSW and the REMONDIS fully enclosed bio-waste composting and residential waste pre-treatment facility in Port Macquarie, NSW. The environmental assessment</p> <p>A detailed analysis of AWT options was outside the scope of the environmental</p>

		assessment, however Council is committed to finding, assessing and installing new waste disposal technologies which would, over time, significantly increase waste recovery and reduce the amount of waste being directed to landfill for disposal.
S023_13	E3	Detailed evaluation of AWT options was not within AECOM's scope of works for the project. Council is undertaking separate investigations into the use of AWT as demonstrated with the current trial of AWT at the existing facility.
S023_14	SE4	<p>The Waste and Environment Levy is currently applied to Sydney Metropolitan Area (SMA), Extended Regulated Area (ERA) and Regional Regulated Area (RRA). The RRA is adjacent to the Armidale-Dumaresq LGA and Councils that are within the RRA and border Armidale-Dumaresq include Kempsey, Nambucca, Hastings and Bellingen. The RRA was included into the Regulated Area on 1 July 2009.</p> <p>Current levies for the respective areas are:</p> <ul style="list-style-type: none"> • SMA - \$70.30/tonne • ERA - \$65.30/tonne • RRA - \$20.40/tonne <p>As announced by NSW Government in mini budget of 11 November 2008, levies in all regulated areas will increase by \$10/tonne plus CPI every year from 1 July 2009 with the last planned increase to be on 1 July 2015. The starting levy in RRA was \$10/tonne on 1 July 2009. Therefore levy in the RRA expected to become \$70/tonne plus CPI on 1 July 2015.</p> <p>Historically, the trend has been for levies to increase and for the size of regulated areas to increase. It would therefore be a reasonable assumption that the regulated area will extend to include the Armidale-Dumaresq LGA (and LGAs within the wider region) at some unknown point in the future, however there are no confirmed plans to include Armidale Dumaresq in the RRA at present, nor what the levy cost would be.</p> <p>Council has been investigating AWT to stabilise putrescibles waste. When implemented, AWT will supplement already high waste recovery rates. Implementation of the AWT will further contribute to the already impressive rates of waste diversion from landfill and therefore minimise any future waste levy charges.</p>
S023_15	P2	<p>As part of the site selection process, over 50 alternative sites were considered for the proposed landfill facility. Criteria analysed during the site selection process included:</p> <ul style="list-style-type: none"> • Strategic planning guidelines; • Statutory planning issues; • Ground and surface water environment; • Local amenity and environmental considerations; • Level of Service; • Adequacy of existing services; • Set-up costs; • Operational costs; • Site features required; and • Social issues. <p>The relative importance of each primary criteria was weighted using a scale ranging from 'relevant' to 'essential'. The ranking process was determined to account for potential environmental issues and constraints as well as giving weightings to those criteria considered to be of greater significance for design</p>

		<p>purposes. Groundwater and surface water environment was assigned a weighting of 10 (essential) as was level of service of the site. Local amenity and environmental considerations were weighted 6. Design-related criteria including cost, site features and adequacy of service were weighted between 4 and 6.</p> <p>A full description of the rankings and weightings have been included in the <i>Regional Landfill Siting Study Final Report</i> (Maunsell, 2004) which was appended to the EA (refer Appendix C of the EA).</p>
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I wish to submit to Planning New South Wales that this project Not be approved, for the following reasons:

1. Under EPBC Act Part 3, Division 1, being determined as a "Controlled Action", that the proposal does not meet the guidelines set down for protection of World Heritage areas. S024_1
2. That the proposed development presents unacceptable risks for environmental degradation in future, with particular detrimental effects to World Heritage Areas. S024_2
3. That the proposed development, presents unacceptable risks as outlined in various reports, and that the waters of the Gara river are at potential risk. S024_3
4. As important public swimming and recreation areas exist in close proximity (Blue Hole, Gara Gorge, Oxley Wild Rivers National Park), to the proposed site, and any contaminants leaking from the waste site, will have a detrimental effect on public health and safety. This is an unacceptable risk for future generations. S024_4
5. The potential development also is adjacent to a nationally recognised tourist route known as Waterfall Way, and The Armidale Dumaresq Council can not give a assurance that unacceptable smells, smoke, and negative visual impact will not affect tourism traffic on the road. S024_5
6. Waterfall Way presents a major tourism and traffic linkage for Armidale, the region and the Pacific Coast, and any development such as proposed presents an unacceptable risk to the region's economy.

Name: [REDACTED]

Address:
[REDACTED]
[REDACTED]

IP Address: [REDACTED]

Submission for Job: #81 Armidale Landfill Project
https://majorprojects.onhive.com/index.pl?action=view_job&id=81

Site: #74 Armidale-Dumaresq Waste Facility
https://majorprojects.onhive.com/index.pl?action=view_site&id=74

Felicity Greenway

E: Felicity.Greenway@planning.nsw.gov.au

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Submission S024

Issue Number	Topic	Response
S024_1	H1	The heritage values of the GRAWHA have been considered in Section 8.12 of the EA. The impact on the GRAWHA was assessed and a referral lodged with DSEWPC (formerly DEWHA). It was determined that the proposal constitutes a controlled action under the EPBC Act. The nature of the assessment process is such that proposals are assessed assuming no mitigation is in place. However, mitigation measures proposed in the EA, including stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage, would be implemented and would reduce the likelihood of impacts to surface and groundwater. In the unexpected event that leachate enters the groundwater, diluted concentrations reaching downstream would not pollute the existing environment at the OWRNP or have a significant impact on the World Heritage Area.
S024_2	W1	Specialist studies indicate that the risk of contamination of the Gara River is very low. Stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the likelihood of impacts to surface and groundwater. Leachate would be detected in monitoring wells (refer Surface and Groundwater Monitoring Program and Management Plan appended to the LEMP, Appendix B of the EA) and appropriately remediated in order to prevent impacts to the Gara River. The Water and Leachate Management Plan details all aspects of the design and operation of the Leachate Pond, Sedimentation Basin and Dry Basin.
S024_3	O1	The potential for the leaking of leachate from the landfill has been assessed in Section 8.3 and 8.4 of the EA. Considering a worst-case scenario in the event leachate escaped the landfill, concentrations into the downstream water environment would be diluted to negligible levels. Impacts on the recreation values of the Blue Hole are not expected. Water quality monitoring would be undertaken downstream of the site (upstream of the Blue Hole). It is considered that the proposed development would not pose a significant risk to human health or the biophysical environment, either during construction or operation. This is due to the implementation of comprehensive measures that will ensure that neither hazardous nor offensive discharges from the development site would occur. Council is committed to ensuring the proposed landfill facility is operated so that any emissions are in accordance with environmental health regulations and guidelines stipulated within relevant local, State and Federal Government policies and legislation and the EPL for the site.
S024_4	SE3	The existing landfill on Long Swamp Road has been in operation since the 1960s and has not impeded development or tourism in the surrounding area. It is envisaged that views of the proposed landfill facility from Waterfall Way would be partially obscured by existing vegetation and further masked once the vegetation of the offset area has matured. The tourist value of the Waterfall Way is not expected to be impacted by the proposal. Assessments of air quality and odour have been undertaken as part of the EA and have concluded that potential emissions on the surrounding environment would comply with DECCW criteria.
S024_5	SE1	An analysis of the socio-economic impact, including tourism, of the proposed landfill facility was undertaken and described in Section 8.9 of the EA. The

		<p>proposed landfill facility would have a positive economic impact on the Armidaale Dumaresq LGA through the employment of local contractors and through the increase in efficiencies associated with waste transport.</p> <p>The proposed landfill facility would utilise the Waterfall Way as an access route. It is noted that the Waterfall Way is a National tourist drive and this is acknowledged in the EA. Armidaale Dumaresq Council supports the promotion of tourism in the region through the Tourism Information Centre, provision of funding for local community infrastructure including public facilities for tourists and sponsorship of events to promote tourism in the region.</p> <p>With the implementation of management measures such as a vegetation buffer and upgraded intersection, and considering the low level of traffic generation, the proposed landfill project does not present an unacceptable risk to the region's economy.</p>
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4 August 2010

Felicity Greenway
Major Development Assessment
Department of Planning
GPO Box 39 Sydney NSW 2001

Dear Felicity,

RE: PROPOSED ARMIDALE DUMARESQ LANDFILL_06_0220

I am farmer and miner residing approximately 5 kms upstream of the proposed site and wish to register my objection to the proposed Armidaale Dumaresq Landfill on the following grounds.

Landfill Capacity

1. Based on information in the EA, it is my conclusion that the EA is for a rubbish tip that is at least 40% smaller than it needs to be. The EA is not representative of the actual project, it is for a smaller project, and should be rejected.
2. According to the EA the Council has designed a landfill with a capacity of 1,056,000 m³. As far as I can determine there are no calculations in the EA to show how this figure was derived.
3. Using the volume data from Table 5 section 2.4.1 of the report the average annual volume requirement is 28,700 m³ meaning that a 50 year facility would require a volume of 1,435,000 m³ which is 36% more volume than designed. The facility is currently designed using five cells. This extra volume adds another two cells. Alternatively the facility only has a life of 37 years.

Volume Calculations

Data from section 1.3.2 of EA report.		Volume
Period	m ³	
5 November 1998	m ³	22,600
25 November 1999	m ³	29,600
30 November 2000	m ³	25,904
29 November 2001	m ³	24,715
29 November 2002	m ³	23,730
30 November 2003	m ³	25,588
30 November 2004	m ³	28,978
21 August 2005	m ³	12,548
August 05 to August 08	m ³	124,225
Total	m ³	317,888
Years		11.08
Average pa	m ³	28,699

As best as I can tell Council appears to infer that data from three recent construction events should be ignored, but does not quantify the volumetric contribution from those events and does not explain why such one off events will not occur again over the course of the next fifty years. A prudent Council would plan for some unexpected events and would incorporate that in the design capacity.

4. Council has assumed zero growth in the region and does not appear to allow for deposition from Guyra and Uralla when their current landfills are full (anticipated within the next 10 years). Conservatively it would seem prudent to allow for growth of 5% pa to allow for these factors and a higher figure may be appropriate. Therefore it can be seen that the landfill appears to be at least 40% undersize.
5. This means that the EA is not addressing the actual project; it is addressing a much smaller project. For this reason the proposal should be rejected.
6. It is not clear to me whether this is a deliberate attempt to make the project smaller and thus understate any potential adverse consequences (particularly with respect to the World Heritage Area just downstream) or simply a design error.
7. Other consequences of this error are:
 - a. All calculations in the EA are questionable - if such a large error can be made on such a fundamental issue and remain undetected through the peer review process then it is reasonable to infer that other more complex engineering elements are flawed.
 - b. It goes to the heart of competence - if this basic parameter is flawed then does Council have the capacity to implement and manage the myriad "best practice management plans" it contends are necessary to manage the facility?
 - c. All remediation measures are under engineered by 40%
 - d. Traffic volumes will be 40% higher.
 - e. Leachate volume will be 40% higher.
 - f. Gas generation will be 40% higher
 - g. Total costs will be higher but not by 40% due to scale economies.
 - h. Extra cells will be required and these are not included in any proposed plan.
 - i. Presumably more real estate will be required (or otherwise presumably buffer zones must be reduced)
 - j. Post closure costs and monitoring requirements will be higher.
 - k. Management plans will require revision to adjust for higher volumes
 - l. Any environmental spills will be commensurately larger with the potential for a much greater environmental impact.
 - m. Any environmental spills will require commensurately more response resources.

S025_1

Governance and Lack of Transparency

8. I am concerned with a number of very basic governance issues.
9. There are two vendors of the property that will be acquired for the project. One is the real estate agent who was engaged by Council to find a suitable site (Derry Crisp), and the other is a former Councillor who was sitting at the time the site was selected (Ken Waters). I have not been able to find this information disclosed in the EA. As there is an obvious conflict of interest and the transaction is not at arm's length this information should be disclosed in the EA.
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S025_2

S025_2

S025_3

S025_4

S025_5

Lack of Consultation

15. We (my wife and youngest child) live approximately 5 kms upstream from the proposed site so it would be reasonable to assume we would receive regular updates on the proposal. Unless we have made a query we have never received any correspondence on this matter whatsoever from Council. We always receive our rate notice so Council have our address. Council claim to have published a number of newsletters on this matter; we have never received one.
16. The first we knew of a proposal for a new rubbish tip was when Council proposed to locate it at the property "Ballantrae". We were totally ambushed, we had absolutely no idea that

Council were considering such a proposal despite previously having submitted a development application for a dwelling construction nearby.

17. I understand that Council have held some community meetings but none that I have been able to attend (my work frequently requires that I am away from home). In any case I would imagine that a proactive Council would forward the results of any community meeting to residents of surrounding properties.

S025_5

18. I briefly served on the site selection committee for a few months in 2003 but my employment changed and I was obliged to move to WA until 2008. During my brief tenure it was apparent that Council were intent on ensuring debate was suppressed. By this I mean that any attempt to draw up a set of criteria and then search for a site that met the criteria (as opposed to selecting a site from the list of properties that were for sale) was considered too idealistic and not practical. The concept could not be got on the agenda, and discussion was restricted to the relative merits of what were clearly sub standard sites, as most of them drained into the World Heritage Area.

S025_6

19. I contacted Council for cost information in 2008 and was courteously received, but it was clear that my interest was unwelcome.

20. We continued to own our Armidale property during our years away and as mentioned there was no unsolicited communication whatsoever from Council on the landfill proposal during that period.

S025_5

21. We have relied on the Gara Valley Environmental Protection Association (GVEPA) to keep us informed. We know that Council will not provide accurate and unbiased advice so rely on other sources. If it had not been for GVEPA we would not know that we could make a submission. I would be willing to bet that not even 1 in 10 people would know they have an opportunity to make comment. Council have not published the fact that the EPBC is concerned that the proposal "will or is likely to have significant impact on the World Heritage Area".

S025_7

22. For example if Council were genuine in consulting why couldn't they put up a large notice at the existing rubbish tip explaining the plan and inviting comment? Why not send something out with rate notices? Why not ensure the newsletters are distributed? (at the very least to residents of nearby properties)

S025_5

Threat to World Heritage Area

23. Council have sought a licence for a Class 1 tip (despite assuring the public they would only apply for a Class 2 tip) which will allow all manner of materials to be disposed in the site. I understand this will lead to the creation of methane gas and leachate. Leachate is a liquid mix of all the chemicals, toxins, acids etc that find their way into the waste stream of any community. Because it is toxic, leachate is a serious pollutant which will destroy life. Methane is well known as an undesirable greenhouse gas.

24. Because Council have a poor record of management I have no doubt that that all manner of toxins, heavy metals, putrescibles and other pollutants will be dumped no matter what restrictions are placed on any operating licence. These will make leachate even more deadly.

S025_8

25. I understand that that clay and plastic liners breakdown relatively quickly (within a few decades) in the presence of leachate. The leachate then leaks into the surrounding groundwater and thence into the drainage of the catchment. Leachate can also be spilt in flooding events. My understanding is that the technology (clay and plastic liners) proposed in the EA to contain the leachate is old and has been discontinued in Europe and the US because it does not prevent leakage. The leachate will likely be leaking for centuries post closure.

S025_9

26. The proposed landfill is about 3.5 kms upstream from the Oxley Wild Rivers National Park a World Heritage Listed Area (WHA). I understand that countries fortunate enough to host WHA's are obliged to maintain and protect those heritage areas in order to conserve the unique features that gave rise to the World Heritage listing in the first instance.

S025_10

27. Placing a leachate producing facility just upstream of a World Heritage Area would appear to be in direct contravention of Australia's obligation to protect and conserve the Oxley Wild Rivers WHA. The proposal should be rejected in order to maintain Australia's international reputation.

28. Following the Kibble report Council will likely amalgamate with surrounding Councils (Uralla and Guyra). I understand the Council will be placed in administration until elections for an amalgamated Council can be held. The legacy of a dying Council should not be a leachate factory on the roof of a unique forest ecosystem.

Threat to Stygofauna

29. Stygofauna are any fauna that live within groundwater systems. I understand that in Australia, scientists have found 850 species living in subterranean water, caves and micro-caverns. These insects, crustaceans, spiders and worms are likely only about one-fifth of the number of undiscovered species the researchers think exist underground in Australia. Two species of blind fish and two of blind eels are also known to exist in Australian groundwater systems.

30. Generically, the animals found in underground water are known as "stygofauna" and those from caves and micro-caverns are known as "troglofauna."

31. I have not been able to find any reference to a baseline stygofauna survey in the EA. As these animals would be the first to be killed by leachate escaping into the groundwater it is surprising that this risk has not been quantified.

S025_11

32. The facility should not be permitted unless a baseline stygofauna survey is conducted and the risk has been properly assessed and managed.

Threat to the Blue Hole

33. Just downstream of the facility and before the WHA is the Blue Hole swimming and recreation area, a very popular recreation area for New England citizens and visitors. Any environmental spills will go straight into the pool, posing a direct health threat to anyone using the area.

S025_12

34. I have been unable to locate any emergency response plan for spills affecting the Blue Hole.

S025_13

Uncosted proposal

35. The EA provides no information on costs. There are no capital, operating, closure and post closure costs. Nor does it appear that any detailed engineering, site operating or closure plans have been costed. There is no indication of site acquisition or potential compensation costs - the proposal is totally uncosted. S025_14
36. Any organisation that implements uncosted proposals will inevitably run into financial difficulties and the Kibble report confirms exactly that - Council is in financial difficulties.
37. The EA notes at page 226: "there are potential environmental impacts should the landfill operator not have the financial means within which to carry out...adequate environmental safeguards." Yet nowhere does the EA state what the Council's financial position is. According to the Kibble report it is effectively broke.
38. The EA contains numerous references to management plans, policies and practices which will be implemented at "best practice standard" to ensure certain things are done. Yet when you get into it there is little detail in these plans and there is certainly no costing. There are lots of well worded assurances that various "best practices" will be employed but they are deliberately not costed because the Council know that the cost is unaffordable. If the facility is approved Council will not implement the precautions in the EA because it does not have the money to do so. S025_14
39. The financial situation will be exacerbated when the Council has to construct, operate, close and monitor the two extra cells that will be required.
40. So we have a financially troubled council proposing to site a landfill in an environmentally unsuitable location in direct contravention of Australia's World Heritage obligations and the proposal does not say how much it will cost or how it will be paid for.
41. The EA says the environmental outcome is dependent on money yet there is no analysis of money in the EA.
42. I contend that is an unacceptable risk and the proposal should be rejected so any landfill can be sited in a less risky position.

Lack of Alternative Waste Technology (AWT) Evaluation

43. The EA gives a very cursory evaluation of AWT options and it appears this work was done in 2002 so is outdated for a 2010 proposal. Only four alternatives were identified and there are now many more options available. S025_15
44. Given there is no financial information on the proposed landfill it's weird that one of the few Alternative Waste Technology (AWT) options noted in the EA is dismissed because of its allegedly high capital cost. High compared to what? S025_15
45. Most likely not all AWT options would be applicable. However the separation and processing of the organic fraction is relatively simple and devoid of risk. This can be via an in-vessel, tunnel (as operated at Port Macquarie/Hastings) or bay system (at Coffs Harbour) or the SITA facility at Kemps Creek (SAWT). The EA makes no reference to these systems S025_16

successfully operating in nearby Councils. There is no rigorous analysis of current AWT options in the EA. S025_16

46. Given the EPBC concerns and the proponent's acknowledgement that the proposed site is fundamentally unsuitable environmentally, it seems very remiss that there is no such analysis. Thorough evaluation and comparison of AWT options would seem to be highly desirable.
47. Analysis and comparison of alternatives should be completed by a consultant with no financial interest in the outcome. S025_17
48. As best as I understand, landfill levies are currently \$70 per tonne in Sydney and \$20/tonne in local government areas in Eastern NSW. It is planned that the Eastern NSW levies will be increased by \$10/tonne pa until they are at parity with Sydney levies in 2015. It is not clear to me whether Sydney levies will increase in that period.
49. The levies are part of a commendable NSW government initiative to encourage AWT and recycling thereby reducing the waste going into environmentally landfills.
50. As I understand it there are currently no waste levies applicable to Western NSW councils including Armidale. It is inevitable that this situation will change and that Council will be required to pay a landfill levy. A pro-active Council would anticipate this change, plan for the future and opt for a minimum landfill solution in conjunction with an AWT solution, so as to minimise future costs. S025_18

Site Selection

51. The logical way to choose a landfill site would be to develop a list of desirable criteria and then examine the whole of the Council area to find a site that fits the criteria. That land could then be compulsorily acquired if there is no willing vendor.
52. Despite the voluminous amount of site selection data in the EA it is my belief that this logical approach was not followed. It is my understanding that the process commenced at least as early as 1994 two years before the timeline mentioned in the EA, and that the Mackney report was commissioned after a local real estate agent had been identifying sites.
53. My understanding is that a local real estate agent was identifying sites as early as 1994 and that the list of 11 shortlisted sites has remained essentially unchanged since that time. The issue with this is that the process is back to front. It is trying to pick the "most suitable site", from a very restricted list of sites that may or may not meet desirable criteria, rather than consider what the desirable criteria are then find a site that fits. S025_19
54. The subject property was offered to Council as a landfill site in 1994 and rejected as being unsuitable. S025_19
55. A site "Ballantrae" was recommended to Council as being ideal. It was only when GVEPA pointed out that it was just upstream of the Gara Dam (backup water supply for Armidale) that Council belatedly conceded it was totally unsuitable.
56. It would be a huge co-incidence if the optimum landfill site in the Council area just happened to be one of the sites for sale during the early to mid 1990's.

57. The ranking process is very subjective and I understand weightings changed so that environmental outcomes were given less priority. In the weightings "Site Amenity and Environmental Consideration" was only given a weighting of 6. In this more enlightened age there is a clear case for Environmental Consideration to be a standalone consideration with a weighting of 10.

S025_19

58. In addition Set Up Cost weightings and Operating Cost weightings are obviously meaningless when the EA does not include any cost information.

S025_19

59. My conclusion is that Council are looking for the easy option - a site that is for sale and near a main road - and have engineered the process to "choose" a pre-ordained site. It is amazing that after all these years, committees and site ranking process's the site originally proposed and belonging to two conflicted parties ends up being the most suitable site. A seemingly amazing co-incidence.

S025_20

Conclusion

I would like to take this opportunity to thank you for the opportunity to comment on this unsatisfactory proposal. In conclusion I believe the proposal should be rejected because:

- The landfill will need to be much bigger than the plan submitted.
- Council has deliberately withheld and suppressed relevant information.
- Council has not consulted.
- The landfill threatens ecology in a World Heritage Area that Australia is obliged to protect.
- Baseline environmental surveys have not been completed.
- The proposal is not costed.
- Council does not have the financial resources to ensure safeguards are implemented.
- There is no rigorous analysis of alternative options by an unbiased party.
- The site selection process is flawed.

ARMIDALE NSW

12 August 2010

Felicity Greenway
Major Development Assessment
Department of Planning
GPO Box 39 Sydney NSW 2001

Dear Felicity,

RE: PROPOSED ARMIDALE DUMARESQ LANDFILL 06_0220
ADDENDUM TO SUBMISSION of 4 AUGUST 2010

I have taken it for granted that someone reading my submission would understand that the Council have options for siting a landfill in an area that does not drain into a World Heritage Area. However as non residents are not familiar with the Council's location a map of the current council boundaries might be useful.



The top of the map is north. Broadly areas west of the New England Highway between Guyra and Uralla drain to the West away from World Heritage Areas and areas east of the highway drain towards the various National Parks. It can be seen that there is a considerable westerly draining area

within the current Council boundary and if amalgamation with Uralla and Guyra proceeds there will be even more options.

S025b_1

I trust that this information is useful in putting my submission in context

ARMIDALE NSW

Submission S025

Issue Number	Topic	Response
S025_1	P4	<p>The waste data presented in the EA is based on waste information between 1998 and 2009.</p> <p>Prior to the installation of a weighbridge in 2006, data from 1998 to 2005 (Table 5 of the EA) was obtained from annual topographic survey which calculated annual volume change within the landfill mass. The volumes include waste as well as daily waste cover, bunds, decomposition, etc which are not actually part of the waste stream. Therefore the figures in Table 5 are not representative of actual waste volumes but were provided for information and context. With the installation of a weighbridge at the Waste Management Centre, the data captured was more representative of actual waste volumes to landfill (Table 6) and was used to guide the conceptual landfill design.</p> <p>As stated in Section 2.4.3, the average tonnage of waste to landfill was 15,500 tpa (July 2007 to June 2009). Adjusted to account for pronounced reductions in waste tonnage over 5 years, an assumed estimate of 15,000tpa was used as a basis for the proposed landfill tonnage for the concept design of the landfill. Furthermore, the estimate conservatively assumed existing recycling rates will continue, however it is possible that there will be future improvements in recycling rates over time.</p> <p>Each cell has been designed to contain 211,000m³. This includes 10 years of waste (15,000 tpa at current waste generation rates, i.e., assuming no improvements to waste reduction / recycling rates) and also accounts for the required volume of cover material (approximately 20% of the total void volume) and assumes a compaction rate of 0.85 t/m³. There will be 5 cells of similar size and volume, with the total final volume of the landfill being 1,056,000m³.</p> <p>The future waste profile presented in Section 2.4.3 of the EA incorporated consideration of the population in the region. Population data for member LGAs (Armidale-Dumaresq, Uralla, Guyra) shows a trend of a relatively stable population (Table 8). Analysis of further ABS data shows that the population for the member LGAs has seen an overall increase of only 0.38% between June 2001 and June 2009. The trend in waste volumes has also been relatively stable but with a pronounced downward trend since 2007, even with the minor increase in population.</p>
S025_2	E3	<p>The Project Site is proposed to incorporate portions of the Sherraloy and Edington properties (refer to Figure 4 of the EA), which would be subdivided. Appropriate portions, totalling 86 hectares, would be formally acquired by Council to facilitate the proposed landfill facility.</p> <p>The Edington property is currently owned by a former Councillor. The Sherraloy property is currently owned by one of the real estate agents engaged by Council to identify suitable land for sale.</p> <p>The Local Government Act outlines the legal requirements for the conduct of Councillors with respect to pecuniary interest and Councillor Waters scrupulously observed his obligations in this regard, keeping himself at arms length from all discussions and Council decisions, declaring his interest and vacating Council chambers when necessary. Mr Crisp represented both landowners in all other dealings. Mr Crisp was involved in his capacity as a real estate agent in assisting Council with identification of suitable land along with a number of other real estate agents in Armidale.</p> <p>Price negotiations for the purchase of the land for the proposed landfill have not yet commenced. Land acquisition will be undertaken only once Major Project</p>

		approval has been granted by the Minister for Planning.
S025_3	E2 E3	Council has made information freely available in accordance with FOI processes. However, information relating to "commercial in confidence" detailed discussions with private persons and companies has been withheld.
S025_4	E2 E3	In 2004, Council sought tenders from suitably qualified consultants to provide project management and consultancy services to manage the design, planning, environmental assessment, land acquisition and construction project management for the new regional landfill. AECOM was engaged by Council through this competitive tender process. As required, AECOM has engaged other specialist sub-consultants to provide technical advice and assessment. Therefore the appointment of AECOM as a consultant on the project does not represent a conflict of interest.
S025_5	C1	Section 7 of the EA describes the consultation that has been undertaken during the environmental assessment process to date. Consultation with the community was strategically planned and targeted to include landowners nearest the proposal, as well as residents along the transport route, specialist interest groups and the wider community. A range of media have been used during community consultation, including newsletters, website updates, media releases, public displays and direct contact with neighbouring landowners. Key issues raised by the public have been considered during the preparation of the EA and specialist studies to support the EA.
S025_6	P2	<p>As part of the site selection process, over 50 alternative sites were considered for the proposed landfill facility. Criteria analysed during the site selection process included:</p> <ul style="list-style-type: none"> • Strategic planning guidelines; • Statutory planning issues; • Ground and surface water environment; • Local amenity and environmental considerations; • Level of Service; • Adequacy of existing services; • Set-up costs; • Operational costs; • Site features required; and • Social issues. <p>The relative importance of each primary criteria was weighted using a scale ranging from 'relevant' to 'essential'. The ranking process was determined to account for potential environmental issues and constraints as well as giving weightings to those criteria considered to be of greater significance for design purposes.</p>
S025_7	E1	<p>Newsletter 7 (March 2010) set out the public exhibition details for the EA, including the process by which the public could make submissions to the DoP. The newsletter was mailed to members of the public on the mailing list as well as posted on the Council website. Notices regarding the dates of public exhibition of the EA were placed in the Amidale Express and Amidale Independent prior to the EA being placed on exhibition. A notice was also placed in a National newspaper, the Sydney Morning Herald, to meet the requirements of the EPBC Act 1999.</p> <p>The EA was prepared in accordance with the DGR's and placed on public exhibition for comment. Under Section 75H (3) of the <i>Environmental Planning and Assessment Act 1979</i>, the Director General of the Department of Planning is required to exhibit the EA for a period of 'at least 30 days'. Given the size of the EA and previous comments from the public suggesting the exhibition period be</p>

		<p>extended to allow sufficient time for the public to comprehend the information contained within it, the EA was on exhibition for a period of 60 days. During this exhibition period, the DoP website experienced technical difficulties with the electronic collection of submissions. In light of this issue, DoP accepted submissions for a further 30 days. During the exhibition period the public was able to submit written comments on the proposal. The comments raised during the exhibition period have been considered by the Proponent and its Consultant and responses were prepared and compiled in this Submissions Report.</p> <p>The impact on the GRAWHA has been assessed under the EPBC Act 1999 and a referral lodged with DSEWPC (formerly DEWHA). Council noted the EPBC Act determination as a controlled action in the EA. The determination was taken into account during the preparation of the environmental assessment and suitable mitigation measures will be implemented to minimise the impacts on the GRAWHA (refer Section 8.8 and 8.12). Stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the likelihood of impacts to surface and groundwater.</p>
S025_8	P6	The proposed landfill facility will accept General solid waste (putrescible) in accordance with the EPL which includes household waste, manure, disposable nappies, food waste and litter bin waste collected by local councils. No toxic or chemical wastes would be disposed of at the proposed landfill facility. Waste would be sorted at the existing Waste Management Centre prior to transportation to the proposed landfill.
S025_9	P4	<p>The landfill and pond design have been designed in accordance with the recommended DECCW Landfill Guidelines Benchmark Techniques. The combination of composite landfill liner with a leachate collection system ensures maximum prevention of leachate leakage from the landfill into the surrounding environment. A review of available literature on the efficiency of different landfill linings was undertaken (refer Appendix I) Although the Leachate Collection and Conveyance Systems have a finite life ranging from under 70 years to over 200 years, the system will have a higher operational life provided that it is installed in accordance with the construction specifications including the CQA/CQC programmes and protection of the liners during and after construction. The LEMP will dictate efficient operation and management of the landfill to ensure landfill structures are used appropriately and the risk of leachate leakage from the landfill site is minimised.</p> <p>Any toxicity of leachate would be detected in monitoring wells (refer Surface and Groundwater Monitoring Program and Management Plan appended to the LEMP, Appendix B of the EA) and appropriately remediated in order to prevent impacts to the Gara River.</p> <p>Council would be required to monitor the site until leachate generation ceases and comply with other post-closure conditions as specified by the EPL and/or approval conditions. Council is committed to monitoring and rehabilitating the site and the proposed offset area post-closure for a time yet to be specified in any approvals.</p>
S025_10	H1	<p>The heritage values of the GRAWHA have been considered in Section 8.12 of the EA. The impact on the GRAWHA has been assessed under the EPBC Act and a referral lodged with DSEWPC (formerly DEWHA). DSEWPC determined that the proposal constitutes a controlled action under the EPBC Act. The nature of the assessment process under the EPBC Act is such that determinations are made without having regard to mitigation measures that would be implemented. However, the measures proposed in the EA will reduce the likelihood of significant impacts on the environment including the World Heritage Area.</p> <p>Stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the</p>

		likelihood of impacts to surface and groundwater. In the unexpected event that leachate enters the groundwater, diluted concentrations reaching downstream would not pollute the existing environment at the OWRNP or have a significant impact on the World Heritage Area.
S025_11	FF1	<p>An assessment of biodiversity including potential impacts of the proposed landfill facility on flora, fauna and habitat was presented in Appendix E of the EA and summarised in Section 8.8 of the EA. Further, the Surface and Groundwater Monitoring Program and Management Plan (appended to the LEMP in Appendix B) is designed specifically to detect and manage the quality of surface water and groundwater and thus, the quality of stygofauna habitat.</p> <p>No groundwater dependent ecosystems have been identified in the study area or in the OWRNP. Furthermore, the proposed works are not likely to significantly impact on groundwater dependent ecosystems in the study area or further downstream in the OWRNP.</p> <p>In the unexpected event that leachate enters the groundwater, impacts would be localised and diluted concentrations reaching the downstream Gara River would not pollute the existing environment or have a significant impact on flora and fauna downstream.</p>
S025_12	O1	<p>The potential for the leaking of leachate from the landfill has been assessed in Section 8.3 and 8.4 of the EA. Considering a worst-case scenario in the event leachate escaped the landfill, concentrations into the downstream water environment would be diluted to negligible levels.</p> <p>Impacts on the recreation values of the Blue Hole are not expected. Water quality monitoring would be undertaken downstream of the site (upstream of the Blue Hole).</p> <p>It is considered that the proposed development would not pose a significant risk to human health or the biophysical environment, either during construction or operation. This is due to the implementation of comprehensive measures that will ensure that neither hazardous nor offensive discharges from the development site would occur.</p> <p>Council is committed to ensuring the proposed landfill facility is operated so that any emissions are in accordance with environmental health regulations and guidelines stipulated within relevant local, State and Federal Government policies and legislation and the EPL for the site.</p>
S025_13	W5	As part of the approvals process, the relevant agencies will prescribe approval conditions for which the proposed landfill facility will be required to meet. These conditions would be incorporated into the detailed design plans and are presented to the relevant agencies such as DECCW prior to construction. It is expected that an emergency spill response plan would be contained within the final LEMP.
S025_14	SE4	<p>The estimated cost for the construction of the landfill is \$14 million for the first two cells (which includes water and leachate collection and management systems, access road, amenities) and \$10 million for the remaining three cells, a total of \$24 million over the life of the landfill. The annual operational cost is likely to be in the order of \$1 million per year.</p> <p>Council has the ability to raise funds by loans and any loan will be serviced by the waste management charge that is set by Council. Council has continually advised ratepayers that the proposed new landfill will be paid for by ratepayers by means of a landfill levy that was established in 2006 to fund the new landfill. This levy will be increased and decreased over the period of the staged loans that are required as landfill cells are developed and closed.</p>
S025_15	P3	Council has considered the implementation of various AWT technologies. AWT refers to technologies such as MBT, thermal treatment or a combination of both

	SE4	<p>MBT and thermal treatment. Council has demonstrated its commitment via its active pursuit of AWT processes over a number of years. Council is currently trialling and evaluating AWT at the Long Swamp Road Waste Transfer Facility before full scale adoption and implementation. Further facilities and processes to recover materials for re-use will be added in future as markets and recovery costs dictate.</p> <p>A review of the costs of AWT technologies would be undertaken should the trial be successful and more accurate costing information is available based on its trial and adoption at the existing facility.</p>
S025_16	P3	<p>Comment noted. Other existing AWT facilities have been implemented within the region; the closest AWT facility is the Bedminster facility at SITA in Raymond Terrace, NSW and the REMONDIS fully enclosed bio-waste composting and residential waste pre-treatment facility in Port Macquarie, NSW. The environmental assessment</p> <p>A detailed analysis of AWT options was outside the scope of the environmental assessment, however Council is committed to finding, assessing and installing new waste disposal technologies which would, over time, significantly increase waste recovery and reduce the amount of waste being directed to landfill for disposal.</p>
S025_17	E3	<p>Council is undertaking investigations into the use of AWT as demonstrated with the current trial of AWT at the existing facility.</p> <p>Council has engaged the services of AECOM, an independent Professional Services Consultant, to provide technical and management services including detailed design, environmental approvals and land acquisition for the proposed landfill. AECOM has no vested interest in the outcome of AWT investigations being undertaken by Council and the specific AWT option that is progressed by Council is of no commercial concern to AECOM.</p>
S025_18	SE4	<p>The Waste and Environment Levy is currently applied to Sydney Metropolitan Area (SMA), Extended Regulated Area (ERA) and Regional Regulated Area (RRA). The RRA is adjacent to the Armidale-Dumaresq LGA and Councils that are within the RRA and border Armidale-Dumaresq include Kempsey, Nambucca, Hastings and Bellingen. The RRA was included into the Regulated Area on 1 July 2009.</p> <p>Current levies for the respective areas are:</p> <ul style="list-style-type: none"> ▪ SMA - \$70.30/tonne ▪ ERA - \$65.30/tonne ▪ RRA - \$20.40/tonne <p>As announced by NSW Government in mini budget of 11 November 2008, levies in all regulated areas will increase by \$10/tonne plus CPI every year from 1 July 2009 with the last planned increase to be on 1 July 2015. The starting levy in RRA was \$10/tonne on 1 July 2009. Therefore levy in the RRA expected to become \$70/tonne plus CPI on 1 July 2015.</p> <p>Historically, the trend has been for levies to increase and for the size of regulated areas to increase. It would therefore be a reasonable assumption that the regulated area will extend to include the Armidale-Dumaresq LGA (and LGAs within the wider region) at some unknown point in the future, however there are no confirmed plans to include Armidale Dumaresq in the RRA at present, nor what the levy cost would be.</p> <p>Council has been investigating AWT to stabilise putrescibles waste. When implemented, AWT will supplement already high waste recovery rates. Implementation of the AWT will further contribute to the already impressive rates</p>

		of waste diversion from landfill and therefore minimise any future waste levy charges.
S025_19	P2	<p>As part of the site selection process, over 50 alternative sites were considered for the proposed landfill facility. Comparative set-up and operating costs were considered as part of the <i>Regional Landfill Siting Study Final Report</i> (Maurssell, 2004) which was appended to the EA (refer Appendix C of the EA).</p> <p>The relative importance of each site selection criteria used in the site selection process was weighted using a scale ranging from 'relevant' to 'essential'. The ranking process was determined to account for potential environmental issues and constraints as well as giving weightings to those criteria considered to be of greater significance for design or economic purposes. Groundwater and surface water environment was assigned a weighting of 10 (essential) as was level of service of the site. Local amenity and environmental considerations were weighted 8. Design-related criteria including set up and operating cost, site features and adequacy of service were weighted between 4 and 6.</p> <p>A full description of the rankings and weightings has been included in the Maurssell (2004) study.</p>
S025_20	P2 E3	<p>The site selection process was rigorous and involved consideration by multiple consultants, state government departments, Council's advisory committees and by the elected Councillors. Site selection work undertaken by Brian Mackney and Associates and by the Department of Commerce was "peer reviewed" by the Department of Public Works. The first preferred site, Site 9, was replaced by Site 7 as the preferred site following the review of the process to date, review of the selection criteria and the application of criteria weightings undertaken by AECOM in 2004.</p>
S025b_1	P2	<p>Addendum noted. As noted previously, over 50 sites have been evaluated in the Armidale region for the proposed landfill. The potential sites considered include land within and outside the catchment of the GRAWHIA. The implementation of the proposed management and mitigation measures will reduce the likelihood of impacts on the environment of the GRAWHIA.</p>

Felicity

I wish to record my objection to the above proposal.

It seems inevitable that at some time there will a failure of system or management and the world heritage park will be compromised, and also the popular Blue Hole recreational area.

S025b_1

Numerous problems have been highlighted which suggest the site for this facility is inappropriate

[REDACTED]

Major Development Assessment
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Email: Felicity.Greenway@planning.nsw.gov.au

Submission S026

Issue Number	Topic	Response
S026_1	H1	<p>Community concerns have been noted regarding potential for pollution of the Gara River through leachate migration from the landfill and these issues are addressed in Sections 8.3 and 8.4 of the EA. Section 8.12 of the EA addresses National Environmental Heritage (OWRNP) which supports the GRAWHA. The impact on the GRAWHA has been assessed in the EA. Stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the likelihood of impacts to surface and groundwater. In the unexpected event that leachate enters the groundwater, diluted concentrations reaching downstream would not pollute the existing environment at the OWRNP or have a significant impact on the World Heritage Area.</p> <p>Impacts on the recreation values of the Blue Hole are not expected. Water quality monitoring would be undertaken upstream of the Blue Hole (downstream of the proposed landfill).</p>

Proposed Armidale Dumaresq Regional Landfill, 06 0220

Dear Felicity,

I wish to register my **OBJECTIONS** to the Proposed Armidale Dumaresq Regional Landfill, of which the location is proposed to be ten kilometres east of Armidale off the Waterfall Way, a main tourist route from the North Coast to the New England region.

As a regular visitor to the region, my main reasons for objection is that the Armidale Council is seriously undermining its credibility because they promote the town and the region, yet fail to be concerned about the impacts of a Class 1 Dump on our front door step, clearly visible from Water Fall Way, and clearly an environmental disaster waiting to happen.

S027_1

S027_2

Not only is the proposed location situated in full view of a main road, it is upstream of the Gondwana Rainforests of Australia World Heritage Area. Any leachate that may leak from the proposed landfill site would find its way into the Gara River, which is one kilometre from the proposed site, and with the Gara River flowing into the Gondwana Rainforests of Australia World Heritage Area, we would have pollution of the water ways which would impact greatly on the natural environment.

S027_3

In 2007, the Australian Government's Environmental Protection and Biodiversity Committee (EPBC) ruled that the council's proposed landfill "will, or is likely to, have a significant impact upon World Heritage values" in the Oxley Wild Rivers National Park due to the likelihood of their leachate catchment pond failing and entering the groundwater. In the case of new landfills, the Environmental Protection Authority (EPA) must issue a license if the landfill is proposed to be in an "environmentally sensitive and inappropriate area for landfilling", which includes World Heritage Areas and National Parks (EPA, (1996) *Environmental Guidelines: Solid Waste Landfills*, p.8). The adverse consequences of the council's proposal will directly impact upon a World Heritage Area and National Park, thus they ought to be assessed on this basis and stop trying to pull the wool over our eyes. In 2008, former Chair of the Council's Waste Committee, Cr Beyersdorf learned of the EPBC ruling and said the council should immediately halt any further expenditure on the project. Why then is it still in motion? What fool would hear this truth and not listen?

S027_3

S027_4

Furthermore, it has come to my attention that the "council has already spent years trying to find a suitable site for a new regional landfill", (*The Armidale Express*, 4 Aug 2010, p.2) however this is completely inaccurate. The council proposed the new site when I was only fourteen years old. Now I am twenty-two and they have not looked at any other sites within this eight year period. How can we as citizens be confident in the council's propositions and decision making process when they have spent almost a decade sitting around trying to convince us that a landfill perched high in the catchment near a drainage line where soil has a high erosion hazard is the best site, when even they haven't looked at any other places?

S027_5

The Council's proposed landfill site must not go ahead. The decisions it makes today will impact on generations to come and not just generations of people, generations of flora and fauna.

S027_5

Yours sincerely,

[Redacted Signature]

4 August 2010

Submission S027

Issue Number	Topic	Response
S027_1	SE3	<p>It is not expected the proposed landfill facility would significantly affect or impede tourism in the area. It is noted that the Waterfall Way is a National tourist drive and this is acknowledged in the EA. It is envisaged that views of the proposed landfill facility from Waterfall Way would be partially masked by existing vegetation and further obscured by vegetation of the offset area once matured.</p> <p>Armidale Dumaresq Council supports the promotion of tourism in the region through the Tourism Information Centre, provision of funding for local community infrastructure including public facilities for tourists and sponsorship of events to promote tourism in the region.</p>
S027_2	V1	<p>The site would be screened by the biodiversity offset area proposed in the EA. Visual montages of the various viewpoints were considered as part of the EA. All existing trees and known tree heights were included in the visual montages in addition to the final profile of the proposed landfill mass (refer Figures 30 to 35 of the EA). It should be noted that these visualisations did not take into account future screening from the proposed biodiversity offset area.</p> <p>It is noted that views towards the Project Site from Receivers 4 and 5 (and indicatively Waterfall Way) are considered to be reasonably significant, however these views would be partially masked by existing vegetation and further obscured by vegetation of the offset area once matured.</p>
S027_3	W4	<p>The mitigation measures provided in the EA are considered sufficient to contain all dirty water runoff and leachate within the on site storage dams.</p> <p>Specialist studies indicate that the travel distance of approximately one (1) km from the site to the Gara River would be substantially longer once the actual flow paths through the fractured rock is taken into account. Considering the low permeability (4.8×10^{-9} m/s) of the rock observed in bore hole No. BH4 and the expected capacity of the clays and silts to naturally attenuate any fugitive contaminants, any significant impacts to potential receptors would be extremely unlikely. In addition, any toxicity of leachate would be detected in monitoring wells and appropriately remediated in order to prevent impacts to the Gara River and downstream GRAWHA.</p> <p>The findings of specialist studies identified that if in the unlikely event leachate escaped the liner, concentrations of pollutants would be diluted and unlikely to cause a notable impact on the GRAWHA downstream environment.</p>
S027_4	H1	<p>The impact on the GRAWHA has been assessed under the EPBC Act and a referral lodged with DSEWPC (formerly DEWHA). DSEWPC determined that the proposal constitutes a controlled action under the EPBC Act. The nature of the assessment process under the EPBC Act is such that determinations are made without regard to mitigation measures that would be implemented. However, the measures proposed in the EA will ensure that there will be no significant impacts on the environment including the World Heritage Area.</p> <p>Stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the likelihood of impacts to surface and groundwater. In the unexpected event that leachate enters the groundwater, diluted concentrations reaching downstream would not pollute the existing environment at the OWRNP or have a significant impact on the World Heritage Area.</p>
S027_5	P3	<p>As part of the site selection process, several alternative sites were considered for the proposed landfill facility including sites within several of the surrounding LGA's. Through the site selection process, underway since the mid-1990s, over</p>

		<p>50 potential sites were evaluated in detail. A summary of the site identification and selection process is presented in Section 4.2 of the EA.</p> <p>The <i>Regional Landfill Siting Study Final Report</i> (Maunsell, 2004) was appended to the EA (refer Appendix C of the EA). This concluded that the current site was the most suitable of the sites considered with respect to the assessment criteria determined as part of the site selection process.</p>
S027_6	FF1	<p>An assessment of biodiversity including potential impacts of the proposed landfill facility on flora, fauna and habitat was presented in Appendix E of the EA and summarised in Section 8.8 of the EA.</p> <p>Direct and indirect impacts to flora and fauna will be managed through implementation of the mitigation measures proposed in the EA, which will be documented in a suite of management plans to be prepared for the site. Further details of the contents of these plans are provided in Section 4 of the Flora and Fauna Assessment (Appendix E of the EA). These plans will be developed during detailed design of the landfill and prior to construction. The plans would be prepared in consultation with relevant government agencies (e.g. DECCW and DSEWPC) and in accordance with best practice guidelines.</p> <p>Consideration of the principles of Ecologically Sustainable Development (ESD), including Intergenerational Equity and the Precautionary Principle is outlined in Section 11.1 and 11.2 of the EA.</p> <p>The proposed landfill facility is part of Council's long term waste management strategy and has been planned to provide a service for the disposal of community waste for a period of 50 years or more. The landfill has been designed in accordance with the NSW EPAs Environmental Guidelines: Solid Waste</p> <p>Landfills and the detailed design will be aimed at achieving the most environmentally beneficial outcome for the effective treatment and disposal of waste so that the landfill operates effectively into the future and does not give rise to any long term environmental effects.</p> <p>Throughout the development of the proposed landfill facility, Council has aimed to balance the need for this development with the need to reduce potential environmental impacts which may result as a consequence of the development. The precautionary principle has been incorporated into the proposal through the commitment to mitigation measures to reduce the likelihood or consequence of the identified environmental impacts, hence minimising potential impacts from the proposed landfill facility.</p>

Major Development Assessment
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Email: Felicity.Greenway@planning.nsw.gov.au

Proposed Armidale Dumaresq Regional Landfill, 06 0220

Dear Felicity,

I wish to register my **OBJECTIONS** to the Proposed Armidale Dumaresq Regional Landfill.

As a regular visitor to the region it is gravely disappointing that the council appears to promote sustainable, green values in their pursuit of income for the region yet fail to be concerned about the impacts of a Class 1 Dump on their front door step.

One of my major objections to this proposal is the fact that it is upstream of the Gondwana Rainforests of Australia World Heritage Area. Any leachate that may leak from the proposed landfill site would find its way into the Gara River and with the Gara River flowing into the Gondwana Rainforests of Australia World Heritage Area, we would have pollution of the waterways impacting on the natural environment.

S028_1

To say that protocols are in place to prevent this are redundant. In 2007 the Australian Government's Environmental Protection and Biodiversity Committee (EPBC) ruled that the council's proposed landfill "will, or is likely to, have a significant impact upon World Heritage values" in the Oxley Wild Rivers National Park due to the likelihood of their leachate catchment pond failing and entering the groundwater. This major flaw seems to have been glossed over and no real effort put into addressing the main issue here, which is not the effectiveness of the catchment pond, but rather the incompetency in selecting an appropriate location in the first place.

S028_1

S028_2

The Council's proposed landfill site must not go ahead, the decisions it makes today will impact on generations to come and not just generations of people, generations of flora and fauna.

S028_3

Yours sincerely,

[Redacted Signature]

4 August 2010

Submission S028

Issue Number	Topic	Response
S028_1	W4	<p>The mitigation measures provided in the EA are considered sufficient to contain all dirty water runoff and leachate on site appropriate storage dam.</p> <p>Specialist studies indicate that the travel distance of approximately one (1) km from the site to the Gara River would be substantially longer once the actual flow paths through the fractured rock is taken into account. Considering the low permeability (4.8×10^{-9} m/s) of the rock observed in bore hole No. BH4 and the expected capacity of the clays and silts to naturally attenuate any fugitive contaminants, any significant impacts to potential receptors would be extremely unlikely. In addition, any toxicity of leachate would be detected in monitoring wells and appropriately remediated in order to prevent impacts to the Gara River and downstream GRAWHA.</p> <p>The findings of specialist studies identified that if in the unlikely event, leachate escaped the liner, concentrations of pollutants would be diluted and unlikely to cause a notable impact on the GRAWHA downstream environment.</p>
S028_2	P3	<p>As part of the site selection process, several alternative sites were considered for the proposed landfill facility including sites within several of the surrounding LGA's. The site selection process evaluated over 50 sites since the mid-1990s, and included consideration of environmental impacts and their likely magnitude at each site. The <i>Regional Landfill Siting Study Final Report</i> (Maunsell, 2004) was appended to the EA (refer Appendix C of the EA) and concluded that the current site was the most suitable of the sites considered with respect to the identified criteria.</p>
S028_3	FF1	<p>An assessment of biodiversity including potential impacts of the proposed landfill facility on flora, fauna and habitat was presented in Appendix E of the EA and summarised in Section 8.8 of the EA.</p> <p>Direct and indirect impacts to flora and fauna will be managed through implementation of the mitigation measures proposed in the EA, which will be documented in a suite of management plans to be prepared for the site. Further details of the contents of these plans are provided in Section 4 of the Flora and Fauna Assessment (Appendix E of the EA). These plans will be developed during detailed design of the landfill and prior to construction. The plans would be prepared in consultation with relevant government agencies (e.g. DECCW and DSEWPC) and in accordance with best practice guidelines.</p>



Phone: [REDACTED]

4th August 2010

Felicity Greenway
Major Development Assessment
Department of Planning
GPO Box 39
Sydney NSW 2001

Dear Felicity,

RE: PROPOSED ARMIDALE DUMARESQ LANDFILL 06_0220

I am opposed to the above landfill on the following grounds:

1. Lack of Transparency

I requested information from Council under the Freedom of Information (FOI) legislation but Council has not divulged the information, stating that information regarding the proposed amalgamation of Uralla and Guyra Council with Armidale Dumaresq Council was not grounds for the information to be released. So far as I am aware only Council and the vendors know the commercial arrangements. It is not a good look when Council withholds information that is clearly in the public interest.

S029_1

2. Aboriginal Sites and Places of Significance

As a consulting archaeologist, I am greatly concerned that Aboriginal sites may be affected by the proposed landfill and its associated ground works, leachates, and traffic to and from the site. I have read the archaeological report commissioned by the Council and although only two (2) artifacts were found in the development area does not mean that there are not others – these just haven't been located. The area was extensively used by Aboriginal people in the past (evidence of scarred trees, artefact scatters and use of the riverine environment) and as such extreme care should be exercised in areas of high Aboriginal use. Attached is a photo showing a tree used by Aboriginal people for making a boat adjacent the landfill site.

S029_2



PLATE 3. CANOE SCAR IN STRINGY BARK TREE

3. Threat to World Heritage Area

Despite assuring the public that they were going to apply for a Class 2 landfill Council have applied for a Class 1 landfill which allows all manner of rubbish to be disposed and this in turn leads to the creation of leachate.

I understand that that clay and plastic liners breakdown relatively quickly (within a few decades) in the presence of leachate (Rehabilitation of Kentucky Landfill site Hudson 2010). The leachate then leaks into the surrounding groundwater and thence into the drainage of the catchment. Leachate can also be spilt in flooding events. My understanding is that the technology (clay and plastic liners) proposed in the EA to contain the leachate is old and has been discontinued in Europe and the US because it does not prevent leakage. The leachate will likely be leaking for a long time after the landfill has closed.

S029_3

Placing a leachate producing facility just upstream of a World Heritage Area is in direct contravention of Australia's obligation to protect and conserve the Oxley Wild Rivers WHA. The proposal should be rejected in order to maintain Australia's international reputation.

S029_4

I would like to thank you for the opportunity to comment on this unsatisfactory proposal. I believe the proposal should be rejected because:

- Council has deliberately withheld relevant information.
- Council has not consulted with interested people/groups
- The landfill threatens ecology in a World Heritage Area that Australia is obliged to protect.

Yours sincerely

[REDACTED]
[REDACTED]

Submission S029

Issue Number	Topic	Response
S029_1	E2	<p>Council has made information freely available in accordance with FOI processes. However, information relating to "commercial in confidence" detailed discussions with private persons and companies has been withheld.</p> <p>Price negotiations for the purchase of the land for the proposed landfill have not yet commenced. Land acquisition will be undertaken only once Major Project approval has been granted by the Minister for Planning.</p>
S029_2	H2	<p>Aboriginal and European heritage assessments have been undertaken as part of the EA and the results are summarised in Section 8.10 and Section 8.11 of the EA.</p> <p>Of the five AHIMS registered sites within 10km of the Project Site, none are within the immediate vicinity. Two sites were discovered in the immediate vicinity of the Project Site, GL ISO1 and GL ISO2 (located within the Project Site), during the 2006 survey. These two sites are not located within the landfill footprint and are unlikely to be impacted by construction or operation works. However, mitigation measures would be implemented to ensure the preservation of these items, including fencing of those sites.</p> <p>An Indigenous Heritage Management Plan (IHMP) would be prepared to set out appropriate mitigation measures to protect the known sites and management actions that would be implemented during construction and operation in the unlikely event that further artefacts are encountered.</p> <p>Leachate would be managed according to the Water and Leachate Management Plan which details all aspects of the design and operation of the Leachate Pond, Sedimentation Basin and Dry Basin. The two heritage items, GL ISO 1 and GL ISO2, are located to the north and east of the landfill footprint at distances such that, during a worst-case scenario, potential surface contamination is unlikely to reach these sites.</p>
S029_3	P4	<p>The landfill and pond design have been designed in accordance with the recommended DECCW Landfill Guidelines Benchmark Techniques. The combination of composite landfill liner with a leachate collection system ensures maximum prevention of leachate leakage from the landfill into the surrounding environment. A review of available literature on the efficiency of different landfill linings was undertaken (refer Appendix I) and though the Leachate Collection and Conveyance Systems have a finite life ranging from under 70 years to over 200 years, the system will have a higher operational life provided that it is installed in accordance with the construction specifications including the Construction Quality Assurance/Construction Quality Control programmes. The LEMP will dictate efficient operation and management of the landfill to ensure landfill structures are used appropriately and the risk of leachate leakage from the landfill site is minimised.</p> <p>Any toxicity of leachate would be detected in monitoring wells (refer Surface and Groundwater Monitoring Program and Management Plan appended to the LEMP, Appendix B of the EA) and appropriately remediated in order to prevent impacts to the Gara River.</p> <p>Council would be required to monitor the site until leachate generation ceases and to comply with other post-closure conditions as specified by the EPL and/or approval conditions. Council is committed to monitoring and rehabilitating the site and the proposed offset area post-closure for a time yet to be specified in any approvals.</p>

S029_4	H1	<p>The heritage values of the GRAWHA have been considered in Section 8.12 of the EA. The impact on the GRAWHA has been assessed under the EPBC Act. Stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the likelihood of impacts to surface and groundwater. In the unexpected event that leachate enters the groundwater, diluted concentrations reaching the downstream environment would not pollute the OWRNP or have a significant impact on the World Heritage Area. Australia's reputation with regard to conservation and environmental protection is unlikely to be impacted by the proposal.</p>
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My name is [REDACTED] and I reside at [REDACTED]
 I am contactable at this email address or on [REDACTED]

I am writing regarding the Proposed Armidale Dumaresq Regional Landfill, 06_0220

I wish it be known that I strongly object to the above proposal on the grounds that this will have monumental **environmental impact on the rainforest and National Park in the proposed area**. Armidale, with the backing of the Armidale Dumaresq Council, is promoting itself as a sustainable city yet they want to possibly poison pristine water ways with rubbish.

S030_1

Armidale Regional Landfill
 Environmental Assessment - Submissions Report

AECOM

Submission S030

Issue Number	Topic	Response
S030_1	FF3	<p>Potential impacts to the OWRNP and GRAWHA were considered in Section 8.8 and 8.12 of the EA and in the Flora and Fauna Assessment (Appendix E of the EA). Potential impacts on water quality in the OWRNP were assessed Section 8.3 and 8.4 of the EA and in the Hydrogeological (Leachate) Assessment (Appendix I of the EA).</p> <p>Direct and indirect impacts to flora and fauna will be managed through implementation of the mitigation measures proposed in the EA, which will be documented in a suite of management plans to be prepared for the site. Further details of the contents of these plans are provided in Section 4 of the Flora and Fauna Assessment (Appendix E of the EA). These plans will be developed during detailed design of the landfill and prior to construction. The plans would be prepared in consultation with relevant government agencies (e.g. DECCW and DSEWPC) and in accordance with best practice guidelines.</p>

I am writing to inform you of my objection to the project 'Proposed Armidale Dumaresq Regional Landfill, 06_0220'.

I do not believe that the proposed site is acceptable for a land fill. The proposed site is too close to an important waterway, inhabited by threatened species of bird and utilised by humans. The damage caused by clearing and then further by the toxins produced by land fill would devastate this area. I feel that the site is in too close a proximity to Oxley Wild Rivers, which is a protected area and it is imperative that it not be used for land fill. Doing this may attract not only major protest, but also negative international publicity, as Oxley Wild Rivers is a World Heritage Site. As an Armidale resident, I feel most strongly against the proposed plan and would not have second thoughts about joining in protest against the proposed plan.

I sincerely hope that those with the power reconsider this project.

Regards [REDACTED]

Name [REDACTED]

Address:
[REDACTED]
[REDACTED]

IP Address [REDACTED]

Submission for Job: #81 Armidale Landfill Project
https://majorprojects.onhiive.com/index.pl?action=view_job&id=81

Site: #74 Armidale-Dumaresq Waste Facility
https://majorprojects.onhiive.com/index.pl?action=view_site&id=74

Felicity Greenway

E: Felicity.Greenway@planning.nsw.gov.au

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Submission S031

Issue Number	Topic	Response
S031_1	W1	Management measures are designed to prevent dirty and contaminated water runoff during construction and operation of the proposed landfill facility. Mitigation measures include a geosynthetic liner system, water management system and leachate barrier and collection system. An assessment of potential construction and operational impacts on the surface water environment is provided in Section 8.3 of the EA. With the implementation of environmental controls and mitigation measures to manage dirty stormwater runoff, leachate containment and emergency storage, the magnitude of impacts to surface water would be negligible.
S031_2	H1	Potential impacts to the Oxley Wild Rivers National Park were considered in Section 8.8 and 8.12 of the EA and in the Flora and Fauna Assessment (Appendix E of the EA). Potential impacts on water quality in the OWRNP were assessed in the Hydrogeological (Leachate) Assessment (Appendix I of the EA). The landfill facility will be constructed and operated in a manner that avoids offsite water quality impacts. The proposed landfill facility would not result in pollution of the existing environment at the OWRNP or have a significant impact on the World Heritage Area given the implementation of the identified mitigation measures.

Dear Madam,

This submission is to inform your office of my objection to the site of the proposed landfill near Armidale.

The grounds for objection are that the site is upstream of the Oxley Wilds Rivers National Park and that

S032_1

the proposal and/or any future landfill operation is or will be likely to have a significant impact on this

National Park which is a World Heritage area.

Public opinion these days is clearly in favour of erring on the side of caution when it comes to protecting

the natural environment particularly in relation to protecting those assets for tourism.

S032_2

There are other options that would better suite the land fill requirements of Armidale without the need for

taking unacceptable environmental risks. These alternative options need to be properly considered and

evaluated before launching into this major project which may have undesirable future environmental effects.

Thank you for your considerations

Submission S032

Issue Number	Topic	Response
S032_1	FF3 H1	<p>Potential impacts to the OWRNP and GRAWHA were considered in Section 8.8 and 8.12 of the EA and in the Flora and Fauna Assessment (Appendix E of the EA). Potential impacts on water quality were assessed in the Hydrogeological (Leachate) Assessment (Appendix I of the EA).</p> <p>Mitigation measures proposed in the EA, including stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage, would be implemented and would reduce the likelihood of impacts to surface and groundwater. In the unexpected event that leachate enters the groundwater, diluted concentrations reaching downstream would not pollute the existing environment at the OWRNP or have a significant impact on the World Heritage Area.</p>
S032_2	SE3	<p>It is not expected the proposed landfill facility would significantly affect or impede tourism in the area. It is noted that the Waterfall Way is a National tourist drive and this is acknowledged in the EA. It is envisaged that views of the proposed landfill facility from Waterfall Way would be partially masked by existing vegetation and further obscured once vegetation of the offset area has matured.</p> <p>Armidale Dumaresq Council supports the promotion of tourism in the region through the Tourism Information Centre, provision of funding for local community infrastructure including public facilities for tourists and sponsorship of events to promote tourism in the region.</p>

I should think that it would be possible, and advisable, to pick a location further from the Oxley Wild Rivers national park which is an important landmark to the area.

S033_1

Name [REDACTED]

Address:
[REDACTED]

IP Address: [REDACTED]

Submission for Job: #81 Armidale Landfill Project
https://majorprojects.onhive.com/index.pl?action=view_job&id=81

Site: #74 Armidale-Dumaresq Waste Facility
https://majorprojects.onhive.com/index.pl?action=view_site&id=74

Felicity GreenwayE: Felicity.Greenway@planning.nsw.gov.au

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Submission S033

Issue Number	Topic	Response
S033_1	P3	As part of the site selection process, several alternative sites were considered for the proposed landfill facility including sites within several of the surrounding LGA's and several sites outside the catchment of the GRAWHA. The site selection process evaluated over 50 sites and included consideration of environmental impacts and their likely magnitude at each site. The <i>Regional Landfill Siting Study Final Report</i> (Maunsell, 2004) was appended to the EA (refer Appendix C of the EA) and concluded that the current site was the most suitable of the sites considered with respect to the identified site selection criteria. Further, the EA investigated potential impacts on the GRAWHA and identified mitigation measures to ensure that impacts to the GRAWHA are negligible.

My name is [REDACTED] and I am the owner of [REDACTED] which is a property situated on Waterfall Way, and some of the property is approximately a kilometre away from Armidale-Dumaresq Council's proposed new landfill site (Proposed Armidale Dumaresq Regional Landfill, 06_0220).

I consider that the proposed site is a dreadful place to put a landfill, and should not proceed for the following reasons:-

1. The selection process was flawed from the beginning, as only sites that happened to be up for sale at the time of selection were considered in Armidale Council's original deliberations. S034_1

2. The site finally decided upon was owned jointly by a real estate agent and a councillor of Armidale Dumaresq Council. The councillor was defeated at the last Local Government elections. S034_2

3. The site is now proposed to be a Regional landfill. If this is the case, especially with the prospect of amalgamation of councils on the State Government's agenda, further heavy vehicle traffic from Uralla and Guyra will be travelling to the site. S034_3

4. The proposed access route is on a road which is considered a tourist attraction, as it goes through land which is a designated National Park, and some of New South Wales greatest waterfalls are on that road, hence the name, Waterfall Way. The amount of heavy traffic so close to Armidale would be a deterrent to visitors form throughout Australia, as well as overseas. S034_4

5. The proposed site is just upstream from the Bluehole, a noted Armidale picnic and swimming area, and which is also the beginning of Oxley Wild Rivers National Park. The risk of pollution of these areas is great. I remember a heavy thunderstorm in the area a few years ago when 90 mm of rain fell in 20 minutes, and one property owner's chooks were swimming in the backyard, and I do not believe that the technology envisaged for the landfill site could possibly cope with such a deluge of that magnitude. Any leachate would be greatly detrimental to the Oxley Wild Rivers National Park. The proximity of the site to the Gara River, which is a tributary of the Macleay River, is a matter of great concern to me as well as many others. S034_5

6. The effect on wildlife is also a matter of great concern. There are platypus in the Gara River, and koalas are making a reappearance in the area. There are also species of birds in the area which would be affected by any clearing in the area, as well as an influx of predatory types of birds, such as crows and hawks, which would be attracted to the area by the landfill. S034_6

7. This is a world heritage area. Are the powers that be, both State and Federal governments, going to allow this area to be destroyed by a council which is looking for a quick-fix solution, as well as costing ratepayers a fortune for something which is going to be inadequate anyway? This whole process needs to be rethought. S034_7

I trust that these points will be considered thoughtfully. Thank you for the opportunity to comment on the proposal.

Submission S034

Issue Number	Topic	Response
S034_1	P2	<p>As part of the site selection process, several alternative sites were considered for the proposed landfill facility.</p> <p>Sites were identified through several preliminary investigations involving consultation with Real Estate agents regarding availability for sale of appropriate sites, consultation with the Department of Mineral Resources regarding the availability of current and former extractive industry sites and consideration of sites within appropriate geological areas. The principles outlined in the document <i>Landfilling – EIS Guidelines</i> (DUAP, September 1996) were then used to develop appropriate criteria and weightings for the assessment of the potential landfill sites identified from the preliminary investigations.</p> <p>The <i>Regional Landfill Siting Study Final Report</i> (Maunsell, 2004) appended to the EA (refer Appendix C of the EA) provides further detail of the site selection process.</p>
S034_2	E3	<p>The Project Site is proposed to incorporate portions of the Sherraloy and Edington properties (refer to Figure 4 of the EA), which would be subdivided. Appropriate portions, totalling 86 hectares, would be formally acquired by Council to facilitate the proposed landfill facility.</p> <p>The Edington property is currently owned by a former Councillor. The Sherraloy property is currently owned by one of the real estate agents engaged by Council to identify suitable land for sale.</p>
S034_3	T2	<p>Traffic modelling has been undertaken as part of the EA and has determined that assuming an increase in traffic movements (6 movements per day (one way) of which only 4 would be heavy vehicles), traffic impacts would be acceptable. Given that the volume of waste to be directed to landfill is expected to decrease over time due to increasing recycling rates (refer to Section 2.4), traffic movements to the proposed landfill facility may in fact decrease over time.</p>
S034_4	SE3	<p>The proposed landfill facility would utilise the Waterfall Way as an access route. It is noted that the Waterfall Way is a National tourist drive and this is acknowledged in the EA. It is also noted that the Waterfall Way is an existing haulage route for several existing facilities in the region.</p> <p>Based on the RTA traffic count data, Waterfall Way is currently operating at a Level of Service A (based on the RTA's <i>Guide to Traffic Generating Developments</i>). Level of Service A indicates that the operation of the road is good, with minor vehicle delays and considerable spare capacity, capable of accommodating future growth in traffic. Traffic modelling has been undertaken as part of the EA and has determined that Waterfall Way would continue operating at Level of Service A.</p> <p>The traffic modelling in the EA has considered a worst-case scenario where up to 6 traffic movements would occur per day (one way). It is expected traffic movements would remain stable or would decline over time as recycling rates increase. Impacts to the tourist value of the Waterfall Way are not expected to be significant.</p>
S034_5	SE2	<p>Community concerns have been noted regarding potential for pollution of the Gara River through leachate migration from the landfill and these issues are addressed in Sections 8.3 and 8.4 of the EA. Section 8.12 of the EA addresses National Environmental Heritage (OWRNP) which supports the GRAWHA. The impact on the GRAWHA has been assessed in the EA. Stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the likelihood of impacts to surface and</p>

		<p>groundwater. In the unexpected event that leachate enters the groundwater, diluted concentrations reaching downstream would not pollute the existing environment at the OXWRN or have a significant impact on the World Heritage Area.</p> <p>Impacts on the recreation values of the Blue Hole are not expected. Water quality monitoring would be undertaken downstream of the proposed landfill (upstream of the Blue Hole).</p>
S034_6	W4	<p>Stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the likelihood of impacts to surface and groundwater.</p> <p>The water management system has been designed to accommodate the 1:100 ARI (flood event). The Guidelines recommend a 1:25 ARI thus the modelling carried out for the proposed landfill facility is considered to provide adequate protection against heavy rainfall and ensure containment of onsite dirty water and leachate.</p> <p>In the unexpected event that leachate enters the groundwater, diluted concentrations reaching the downstream Gara River would not pollute the existing environment or have a significant impact downstream on the GRAWHA.</p>
	FF1	<p>Potential impacts to threatened species on site and in the surrounding area were addressed in the Flora and Fauna Assessment (Appendix E of the EA). Known habitat is present within the study area for a number of threatened species. Assessments of Significance were undertaken for these species and are provided in Appendix A of the Flora and Fauna Assessment (Appendix E of the EA).</p> <p>The Flora and Fauna Assessment concluded that the study area does not contain core or potential Koala habitat, as defined by SEPP 44. However, a Yellow Box within the Stringybark Woodland appears to be used significantly by Koalas and as such, the tree will be retained. The impacts of the project on wildlife will be minimised through implementation of the mitigation measures outlined in Section 4 of the Flora and Fauna Assessment (Appendix E of the EA). This includes progressive clearing and rehabilitation and provision of compensatory habitat.</p> <p>Direct and indirect impacts to flora and fauna will be managed through implementation of the mitigation measures proposed in the EA, which will be documented in a suite of management plans to be prepared for the site. Further details of the contents of these plans are provided in Section 4 of the Flora and Fauna Assessment (Appendix E of the EA). These plans will be developed during detailed design of the landfill and prior to construction. The plans would be prepared in consultation with relevant government agencies (e.g. DECCW and DSEWPC) and in accordance with best practice guidelines.</p>

Major Development Assessment
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Email: Felicity.Greenway@planning.nsw.gov.au

Proposed Armidale Dumaresq Regional Landfill. 06_0220

Dear Felicity,

I wish to register my **OBJECTIONS** to the Proposed Armidale Dumaresq Regional Landfill, of which the location is proposed to be 10 kms east of Armidale off the Waterfall Way, a main route from the North Coast to the New England region.

As a former resident in the region, I am quite concerned about the impact of a landfill rubbish dump in the proposed location. The proposed site is within a kilometre of the Gara River, which lies on a level below the dump site. Any leaking leachate would most likely end up in the river, which flows into the Gondwana Rainforests of Australia, a listed World Heritage area. This would lead to contamination of the waterways in an ecosystem that supports diverse fauna and flora, a long term issue with severe consequences.

S035_1

I am also concerned with the proposed site location with regard to it's location along the Waterfall Way. The site will be visible from a road that, when I was living in the region, was the focus of a major tourism push from the local government and as such, I believe the location of the proposed site is a step backwards from a tourism point of view.

S035_2

The Council's proposed landfill site must not go ahead, the decision to build on the current proposed site will impact on generations of flora and fauna to come and erode tourism for decades.

Yours sincerely,

[Redacted Signature]

4 August 2010

Submission S035

Issue Number	Topic	Response
S035_1	W4 H1 FF3	<p>Community concerns have been noted regarding potential for pollution of the Gara River through leachate migration from the landfill and these issues are addressed in Sections 8.3 and 8.4 of the EA. Section 8.12 of the EA addresses National Environmental Heritage (OWRNP) which supports the GRAWHA. The impact on the GRAWHA has been assessed in the EA. Stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the likelihood of impacts to surface and groundwater. In the unexpected event that leachate enters the groundwater, diluted concentrations reaching downstream would not pollute the existing environment at the OWRNP or have a significant impact on the World Heritage Area.</p> <p>The Hydrogeological (Leachate) Assessment (Appendix I of the EA) demonstrated that in the event that leachate enters the groundwater, diluted concentrations reaching the downstream Gara River would not pollute the existing environment or have a significant impact downstream on the GRAWHA.</p> <p>The landfill facility will be constructed and operated in a manner that avoids offsite water quality impacts. The proposed landfill facility would not result in pollution of the existing environment at the OWRNP or have a significant impact on the World Heritage Area given the implementation of the identified mitigation measures.</p>
S035_2	V1 SE3	<p>It is not expected the proposed landfill facility would significantly affect or impede tourism in the area. It is noted that the Waterfall Way is a National tourist drive and this is acknowledged in the EA. It is envisaged that views of the proposed landfill facility from Waterfall Way would be partially masked by existing vegetation and further obscured once vegetation of the offset area has matured.</p> <p>Armidale Dumaresq Council supports the promotion of tourism in the region through the Tourism Information Centre, provision of funding for local community infrastructure including public facilities for tourists and sponsorship of events to promote tourism in the region.</p>

Dear Ms Greenway,

I herewith wish to voice my absolute opposition to the proposed landfill near the Waterfall Way, Armidale.

Besides objecting to the environmental consequences of such a landfill, I have other objections. They are as follows:

The owner of the land is Mr Ken Waters. He was, until recently, an Armidale Dumaresq Councillor. In about 2003 the local newspaper announced the proposed sale of this land to the Council by Councillor Ken Waters, which is an imprisonable offence.

My information on this matter (from another Councillor) is that the sale price is far, far above its true value and that everyone knew that the land was never suitable (has 2,000 trees, aboriginal sacred sites and adjacent to the Gara River).

The reason for the Council's persistence in this matter is that it is highly likely that certain Councillors, including the General Manager, have been promised pecuniary rewards by the landholder, Councillor Ken Waters.

In the event, though unexpectedly, the Gara River Landholders have mounted spirited opposition to the proposal, on environmental grounds, and managed to delay the permission.

I do not know if the sale by Ken Waters to the Armidale Dumaresq Council has been effected. He was not re-elected to the Council in 2008. If the situation is what I think it is, he may have received some legal advice on the illegality of his sale to the ADC, is no longer a Councillor, and thus able to sell the land without fear of imprisonment. He had, in any case, become a liability to the Council for other reasons.

It is extraordinary that the Armidale Dumaresq Council still persists with this proposal which leads me to suspect their motives in relation to the proceeds of a sale by Ken Waters, purchased from him by them.

This Council has been investigated by Gabrielle Kibble, resulting in the Kibble Report, which has been accepted by the Minister. Mrs Kibble identified many financial problems and, overall, a 'failure of governance.' It has been recommended that an Administrator be appointed and a 'new' General Manager employed.

Even if the Council has gone, if the landfill proposal were to be accepted, this means that those members, who have been so dishonest in much of the Council's management over the last ten years, even though they are no longer on the scene, will yet benefit by its purchase of the site.

This is unconscionable and I hope the State will not allow this landfill proposal to eventuate.

You may refer to Leigh Plater, Senior Solicitor, at the Crown Solicitor/Attorney-General's Department. She will vouch for my integrity and correct factual analysis in connection with Armidale Dumaresq Council matters. I have been particularly involved with substantiated criticism of its management of the Hinton Trust, successful hearings in the Supreme Court against it and resulting investigation by the Attorney-General into the ADC's financial exploitation of Hinton Trust Funds.

Yours sincerely,

Submission S036

Issue Number	Topic	Response
S036_1	E3	Price negotiations for the purchase of the land for the proposed landfill have not yet commenced. Land acquisition will be undertaken only once Major Project approval has been granted by the Minister for Planning.

Re: Armidale Dumaresq Landfill Project (06_0220) – Exhibition of Environmental Assessment

Concern about Preserving World Heritage Properties

Email submission to:

Major Development Assessment
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Email: plan_comment@planning.nsw.gov.au

From:

[REDACTED]

Phones:

[REDACTED]

Date and Time emailed: Thursday, 5 August, 2010 at 11.55 am

Please confirm receipt

Re: Armidale Dumaresq Landfill Project (06_0220) – Exhibition of Environmental Assessment

We are nearby residents of the currently proposed landfill site and have been actively involved in opposing the Council's proposal since late-2002 when the community first learnt about its plan for a new landfill. While that proposal was for a different site, it nonetheless galvanized the immediate Gara Valley community into action and the Gara Valley Preservation Association (GVEPA) was formed. What began as something of a 'not in my backyard' (NIMBY) response has been transformed, over the intervening years of research, learning and lobbying activities, into something of a crusade in defense of what we have come to understand as a very special natural environment. As a former President of GVEPA, David is closely associated with the writing of its submission in response to the EA, so it is likely that some phrases and main ideas will be recognizable also in those documents.

In this personal submission we want to make some broadly focused observations about the impact that the current proposal would have on 'matters of national environmental significance'. One strong motivation for making this submission is the impact of our recent overseas travels which have exposed us to a variety of World Heritage properties in other countries, emphasized for us the international status and significance of such sites and heightened our sense of obligation to the international community for the safeguard and conservation of these special places.

Overview

*In essence, we oppose, most strongly, the building of any landfill anywhere in the catchment of the Gondwana Rainforests of Australia World Heritage Area, simply and plainly because of the high probability that, sooner or later, it will inevitably discharge environmentally toxic leachate into that very special environment for the life of the landfill (projected to be 50 years) and well beyond.*¹

We are convinced that it is NOT POSSIBLE to prevent contamination of the World Heritage Oxley Wild Rivers National Park (which is one of the many properties comprising this extraordinary World Heritage property) if this landfill proceeds. It follows then that it must NOT BE ALLOWED to proceed anywhere within the catchment area.

It should be recognized that the existing Armidale Landfill is known to leak and so we must assume that already the Gara River system will be carrying some measure of pollution into the Oxley Wild Rivers National Park, and that effect will almost certainly continue, most likely even increase, a long time after the closure of that landfill. That is another problem to be addressed, but the immediate task is to do all that we can to prevent the building of a new landfill that will exacerbate the threat to the World Heritage properties downstream.

A Rare Opportunity

Preventing the commissioning of a new landfill in the Gara River drainage system is a once-in-a-lifetime opportunity to begin to reduce its pollution burden, by ensuring that the source

¹ The logic underpinning this assertion is the subject of a separate submission that we will make, as well as being a major theme in the formal GVEPA submission. The essence of that logic is also present, in a less-developed form in GVEPA's 2007 Submission to the EPBC – see <http://www.worldheritagedump.com.au/Briefing/GVEPA%20Submission%202008%20proofed.pdf>.

of leachate is not further increased. We must hope that levels will not reach disastrous levels before beginning to decline.

Failure to do so is tantamount to willfully condemning this World Heritage property to on-going, and almost certainly increasing, environmental degradation, a decision that runs absolutely counter to Australia's international obligations as its custodian.

All Landfills Leak²

The 2002 proposal, announced without any consultation with the public or affected ratepayers, was for a new landfill just 2 km up a feeder gully to the Gara Dam, Armidale's official back-up water supply. That idea immediately seemed to us to be ill-informed, even bewildering, given that a drinking water supply would be put at risk, hence the spontaneous decision to form a community organisation for the purpose of scrutinising and where thought appropriate, challenging the Council's unilateral, and seemingly poorly researched, decisions³.

That meant that we had to begin to educate ourselves about landfills, their design and their performance. The outcome of that learning, which was essentially web-based and involved accessing information from Europe and the American EPA, surprised us all, to say the least.

The literature that we accessed is replete with reports and research papers that persistently attest to landfill failures because the liners, both clay and clay-plastic composites, ultimately succumb to the cocktail of chemicals that collect in any landfill. Both clays and plastics have been shown to react with these chemicals and finally they decay to the point where leachate is lost into the groundwater system. It seems that nobody has yet devised a landfill design that will withstand the ravages of time and guarantee to retain all its nasties!

There was no discussion of this problem anywhere in the proponent's Referral to the EPBC in 2007. It appears as though this reality is one that the proponents were hoping to be able to ignore: we cannot believe that they, as specialist professionals in the waste industry, were not aware of it! Indeed, during the process of site selection that led to the original site being declared by Council's consultants to be less suitable, the issue that clinched that decision was their ruling that since a water supply was immediately down-gradient the site should be rated more lowly. *This implies their recognition that leachate just might escape the proposed landfill!* This in turn raises the question: is a human water supply more worthy of protection than is the wider environment? And what if that environment just happens to contain a World Heritage inscribed⁴ aquatic ecology declared to contain significant species reflective of Gondwanan times?

The overseas articles that we accessed also made the point **that liner breakdown and subsequent leachate loss is commonly beneath the landfill, not visible and only detected once leachate shows up in the groundwater. By then it is too late** – the damage has already been done and fixing it is extremely difficult, if not impossible, not to mention costly.

² See the formal submissions by GVEPA for details on this issue.

³ As we see it, elected Councillors are little more than by-standers and 'rubber stamp' endorsers of these proposals – it is Council officers and their consultants who drive proposals. One Councillor whom we approached did not even know that the Referral to DEWR in 2007 had gone forward from Council, and had never seen it. Similarly, The Chair of the Waste Committee resigned in 2008 once he became aware of the 2007 EPBC decision, claiming that he had been 'kept in the dark'. – see <http://www.worldheritagedump.com.au/pdf/ADCcouncillorcalls001.pdf>

⁴ See <http://www.worldheritagedump.com.au/Briefing/World%20Heritage%20Values%20080625.pdf> for our understanding of Australia's obligations under system.

The EA of 2010 does recognise that landfill liners do indeed have a limited effective life and that leachate security is a major challenge. While it includes the assertion that management measures will be put in place to ensure that leachate is contained, those measures relate only to situations where extreme weather events might cause containment pondages to be flooded: **nowhere is the issue of leachate loss through the bottom of the landfill addressed. We infer that this is because it is recognised that there is no management measure that can be put in place to control this highly probable eventuality.**

S037_3

Coupled with this, Appendix I to the EA concludes with a caution about the fractured nature of the bedrock that lies beneath the proposed landfill site⁵. It shows clear evidence of groundwater movement through it, and despite the Proponent's optimism to the contrary, it seems reasonable to assume that any escaped leachate would soon find its way into the Gara River, and hence the World Heritage Oxley Wild Rivers National Park.

We argue that where EPBC values are concerned, policies should be pre-emptive in general, and especially so where a World Heritage property is involved. A new landfill on this site is a risk too great to take given the values and obligations to the internationally endorsed World heritage Convention that are at stake.

The call for caution is further amplified by the fact that the EA fails completely to address the nature of the aquatic environment within the Gondwana Rainforests of Australia World Heritage Area that will be affected by leachate pollution. It seems that there is little documentation available from validated scientific studies, so to do so means undertaking an expensive, painstaking ecological study. *But without those definitive data, the consequences of leachate pollution simply cannot be anticipated.*

S037_2

We argue that this is precisely why the Precautionary Principle exists, and is the archetypal case in which it should be applied. The Proponent does not have sufficient information about the likely impact of its proposal to be allowed to proceed. The fact that the receiving waters are World Heritage inscribed, simply adds further compulsion to the case for withholding approval.

An International Obligation⁶

In recent years, we have been privileged to travel to several countries and visit a range of World Heritage properties. As 'outsiders', these have always impressed us enormously and we applaud the World Heritage concept. We fear that since we live in close proximity to properties like the Oxley Wild Rivers National Park then, as 'insiders' (i.e. Australians in general and locals in particular), the risk is real and probably high, that we do not appreciate fully their uniqueness.

Australia has an international obligation, through the listing of this property on the World Heritage register, to do everything possible to preserve its integrity. We agree wholeheartedly with the observation by the then Assistant Minister, DEWR, when announcing the renaming of the property that:

"Few places on earth contain so many plants and animals whose ancestors can be traced through the fossil record and today remain relatively unchanged"

It is our collective obligation to the international community, as Australians, to not permit any development that will prejudice and accelerate change to this priceless environment.

⁵ See the main GVEPA submissions for details.

⁶ See <http://www.worldheritagedump.com.au/Briefing/World%20Heritage%20Values%20080625.pdf>, pp 3-5

We believe that it is unconscionable to even contemplate the commissioning of a facility that will almost certainly cause pollution of such an environment as the World Heritage Oxley Wild Rivers National Park.

And it is 'super-unconscionable' to permit a development that is so mundane, in the long-term scheme of things, as a putrescible waste facility, especially when alternative sites undoubtedly exist!

S037_5

The desires of a local Council to have a conveniently located dump, serviced by a good quality main road that it doesn't have to fund the maintenance of, that it sees as a business venture first and foremost, must not be allowed to override the National and International values and obligations that the World Heritage Oxley Wild Rivers National Park represents. **There are other sites available: the issue is Council's unwillingness to change its focus.**

S037_5

Alternative Sites

Council's *Regional Landfill Siting Study* (2004, p. 17) includes the following statement in relation to the proposed site:

This does not necessarily mean that it is the best available site in the region, nor does it mean that it is an ideal site (our emphasis).

Unless a site is specifically excluded by way of legislation/planning, it could always be development into a landfill, dependent upon what mitigation measures are required to make it comply with both DUAP and EPA Guidelines. In these instances however, cost considerations then become increasingly important.

When coupled with the fact that in this site selection process the environment factor (one of ten, but lumped together with 'Local Amenities') was given a weighting of just 6 (maximum 10), **it seems that Council's concern for the environment has not been high.**

S037_5

The reality is that other sites do exist and the above statement clearly indicates that Council's advisors understand that fact: what is needed is for an external authority to direct the Council to choose a different site.

Conclusion

We appeal to the DoP and Minister to withhold endorsement of this landfill proposal because beyond the finer details of impacts and offsets etc., the overriding fact is that the landfill will ultimately become a source of potentially quite toxic leachate that will inevitably find its way into the Gara River and ultimately threaten the biodiversity of the Oxley Wild Rivers National Park. As responsible 'citizens of the world', to borrow from the SBS news banner, Australians have the obligation and responsibility to protect this UNESCO World Heritage Property. We have an obligation to NOT wilfully condemn it to a future of on-going degradation.

[REDACTED]

Submission S037

Issue Number	Topic	Response
S037_1	W4	Leachate will continue to be generated after the landfill has closed and the landfill design and management plans will be prepared based on this understanding. Council would be required to monitor the site, including leachate generation, and comply with other post-closure conditions as specified by the EPL and/or approval conditions. Council is committed to monitoring and rehabilitating the site and the proposed offset area post-closure for a time yet to be specified in any approvals.
S037_2	H1	The heritage values of the GRAWHA have been considered in Section 8.12 of the EA. The impact on the GRAWHA has been assessed under the EPBC Act and a referral lodged with DSEWPC (formerly DEWHA). DSEWPC determined that the proposal constitutes a controlled action under the EPBC Act. The nature of the assessment process is such that proposals are assessed assuming no mitigation is in place. However, mitigation measures proposed in the EA, including stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage, would be implemented and would reduce the likelihood of impacts to surface and groundwater. In the unexpected event that leachate enters the groundwater, diluted concentrations reaching downstream would not pollute the existing environment or impact the aquatic ecology of the OWRNP or have a significant impact on the World Heritage Area.
S037_3	W4	<p>The Hydrogeological (Leachate) Assessment (Appendix I of the EA) demonstrated that in the event that leachate enters the groundwater, diluted concentrations reaching the downstream Gara River would not pollute the existing environment or have a significant impact downstream on the GRAWHA.</p> <p>The landfill and pond design have been designed in accordance with the recommended DECCW Landfill Guidelines Benchmark Techniques. The combination of composite landfill liner with a leachate collection system ensures maximum prevention of leachate leakage from the landfill into the surrounding environment. A review of available literature on the efficiency of different landfill linings was undertaken (refer Appendix I). Although the Leachate Collection and Conveyance Systems have a finite life ranging from under 70 years to over 200 years, the system will have a higher operational life provided it is installed in accordance with the construction specifications including the QA/CQC programmes and that the liner is protected from accidental tearing/piercing during construction. The LEMP will dictate efficient operation and management of the landfill to ensure landfill structures are used appropriately and the risk of leachate leakage from the landfill site is minimised.</p> <p>Any toxicity of leachate would be detected in monitoring wells (refer Surface and Groundwater Monitoring Program and Management Plan appended to the LEMP, Appendix B of the EA) and appropriately remediated in order to prevent impacts to the Gara River.</p> <p>Council would be required to monitor the site until leachate generation ceases and comply with other post-closure conditions as specified by the EPL and/or approval conditions.</p>
S037_4	FF1	The landfill facility will be constructed and operated in a manner that avoids offsite water quality impacts. The proposed landfill facility would not result in pollution of the existing environment at the OWRNP or have a significant impact on aquatic ecology of the World Heritage Area, given the implementation of the identified mitigation measures.
S037_5	P2	As part of the site selection process, over 50 alternative sites have been considered since the mid-1990s for the proposed landfill facility.

	<p>Sites were identified through several preliminary investigations involving consultation with Real Estate agents regarding availability for sale of appropriate sites, consultation with the Department of Mineral Resources regarding the availability of current and former extractive industry sites and consideration of sites within appropriate geological areas. The principles outlined in the document <i>Landfilling – EIS Guidelines</i> (DUAP, September 1996) were then used to develop appropriate criteria and weightings for the assessment of the potential landfill sites identified from the preliminary investigations.</p> <p>The relative importance of each site selection criteria used in the site selection process was weighted using a scale ranging from 'relevant' to 'essential'. The ranking process was determined to account for potential environmental issues and constraints as well as giving weightings to those criteria considered to be of greater significance for design or economic purposes. Groundwater and surface water environment was assigned a weighting of 10 (essential) as was level of service of the site. Local amenity and environmental considerations were weighted 6. Design-related criteria including set up and operating cost, site features and adequacy of service were weighted between 4 and 6. A full description of the rankings and weightings has been included in the <i>Regional Landfill Siting Study Final Report</i> (Maunsell, 2004; Appendix C of the EA), which concluded that the current site was the most suitable of the sites considered with respect to the assessment criteria determined as part of the site selection process.</p>
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I hereby state that I have no pecuniary interests, nor have I given political donations to anyone associated with this project. [REDACTED] 5 August 2010. I am unable to send attachment as PDF.

Submission objecting to ADC Regional Landfill proposal

Felicity.Greenway@planning.nsw.gov.au
Major Development Assessment
Department of Planning
GPO Box 39
SYDNEY NSW 2001

[REDACTED]
Project Officer
Armidale Branch
National Parks Association of NSW
PO Box 375, Armidale NSW 2350

Submission objecting to Proposed Armidale Dumaresq Regional Landfill, 06_0220 Comments on Environmental Assessment (EA)

On behalf of the Armidale Branch of the National Parks Association of NSW I wish to lodge an objection to the construction of a new putrescible landfill anywhere within the catchment area of the Oxley Wild Rivers National Park, which is part of the Gondwana Rainforests of Australia World Heritage Area (GRAWHA). The project should be rejected because of likely unacceptable impacts on the Gondwana Rainforests of Australia World Heritage Area in Oxley Wild Rivers National Park.

Grounds for my objection include the following:

1. Irregularities in site selection processes:

Initial site options were not adequately assessed, did not adequately consider possible impacts on world heritage or threatened species issues, and were not adequately discussed in public consultation.

The selected site on the Gara River was adopted without adequate public notification or transparency. It is on land owned by a former Councillor and a Real Estate Agent who was involved in site selection – a flawed and irregular process. Alternative technologies or better locations were not properly explored, and public protests and objections to the Gara River site were ignored and actively discouraged while Council proceeded to engage consultants for design and environmental assessment - without further consideration of site suitability or possible impacts on world heritage.

Additionally, Council sought to allay public concerns by "guaranteeing" that the new landfill would be for non-putrescible wastes only and therefore little risk to the environment. The current application for a licence (Class 1) to dump household waste including rotten food, dead animals and other animal by-products, soiled nappies, grease trap waste and other hazardous and toxic waste into the landfill shows that this was not an honest commitment. The public has every right to be concerned about Council obfuscation and possible impacts on world heritage, especially as Armidale Dumaresq may soon be amalgamated with adjacent Councils, increasing the scale of the project and its impacts.

The Preliminary Environmental Assessment (PEA) and other advice indicated that the Gara Valley site is NOT necessarily the best site available. The PEA assessed the possible environmental harm to the World Heritage Oxley Wild Rivers National Park downstream and incorrectly concluded that this was not likely to be significant. This was rejected by the 2007 ruling of the Australian Government's Environmental Protection and Biodiversity Committee (EPBC) that the Council's proposed landfill "will, or is likely to, have a significant impact upon World Heritage values" in the Oxley Wild Rivers National Park.

The site should have been abandoned and an alternative site chosen at this stage. Instead, further expensive environmental assessment and design work that will increase the cost to ratepayers has had to be commissioned for this Environmental Assessment, embarrassing an already financially stressed Council.

The Proposed Armidale Dumaresq Regional Landfill, 06_0220 should be rejected.

2. Unacceptable impact on World Heritage National Parks

The site for this proposed Class 1 landfill is adjacent to the Gara River and just 4km upstream of the Oxley Wild Rivers National Park and world heritage environment. This poses an unacceptable risk of contamination of ground and surface water flowing directly into the Macleay River and impacting the Gondwana Rainforests of Australia World Heritage Area (GRAWHA) in the Oxley Wild Rivers National Park.

The EA claims that there is little risk to ground or surface water quality from leaching or overflow of the landfill facility during flood events because of design conditions and proposed mitigation measures which address direct and indirect impacts. This cannot be substantiated by liner and surface containment details in the EA,

and is contradicted by the Federal Government EPBC decision stating the new landfill is likely to have a significant impact on world heritage environments. There is a high likelihood of leakage of leachate to the environment in the Gara valley, because of breaching of the liner systems over the expected 50-year life of the landfill, and because of unpredictable local flooding likely to be exacerbated as global warming/climate change accelerates.

No landfill design in the world can guarantee that leachate will never escape to pollute the environment.

This landfill will receive household waste including rotten food, dead animals and other animal by-products, soiled nappies, grease trap waste and other hazardous and toxic waste from the amalgamated local government areas of Armidale Dumaresq, Guyra, Uralla, Walcha and beyond, over a 50-year lifespan.

This kind of waste undergoes chemical changes inside the landfill. The leachates ("garbage juices") that develop attack the landfill liners, so that sooner or later, toxins will escape into the groundwater, then into the river system. This means that contamination of the Gara River is likely to occur. The Gara flows into the Macleay River in Gondwana Rainforests of Australia World Heritage Area, posing a risk that cannot be easily mitigated

To contain surface water the facility is to be built to 1 in 100 year flood containment standard. This is demonstrably inadequate in the Gara valley, known to be prone to flooding, and given the increasing likelihood of extreme storm events. We have already seen sudden storm flood rains breach the 1:100 year standard containment structures at the Timbarra gold mine near Tenterfield, only a few years after their construction.

Furthermore, the NPWS has expressed concerns that a vehicle accident involving a chemical or fuel spill poses a major threat to water quality where New England Highway, Oxley Highway and Waterfall Way cross the headwaters of most of the major streams that flow into Oxley Wild Rivers National Park at points close to the park boundaries. Vehicle accidents may be unavoidable but the placement of a Regional Dump in the proposed location undoubtedly poses a far greater ongoing threat to the environment, and it is avoidable.

The Proposed Armidale Dumaresq Regional Landfill, 06_0220 poses a risk to the environment and future generations that cannot be easily mitigated. The proposal should be rejected.

3. Habitat Degradation

If the landfill is built on the proposed site adjacent to the Gara River, it will require substantial clearing of habitat, which will degrade the endangered Box Gum woodland ecosystem at the access point on the TSR on Waterfall Way and cause further harm to already threatened wildlife that lives there.

If the landfill proposal receives approval, it should be conditional on altering the planned access/entry from Waterfall Way to avoid destroying the affected endangered ecological community and threatened species.

4. Offensive impacts of landfill garbage facilities, wherever sited

All garbage dumps produce offensive noise, odour, litter, dust, insects and vermin, which will be coupled with a modified and scarred landscape visible from Waterfall Way.

The Armidale Dumaresq Regional Landfill will emit greenhouse gasses and other toxic chemicals. Gas from breakdown of rubbish is about 40-60% methane and the rest carbon dioxide. Council is considering flaring the landfill gas. However, when combusted, this gas contains highly toxic and carcinogenic compounds, such as dioxin and mercury, which add a more serious dimension to any leachate pollution of waterways upstream of any urban water supplies such as those of Kempsey and other coastal villages.

5. Tourism Impacts

The dump will be visible from the Waterfall Way, one of the top three drives in Australia and a major contributor to tourism in Armidale and the New England region.

The Waterfall Way provides the gateway to a host of eco-tourism activities. Only a short distance along the Waterfall Way are the Bakers Creek, Wollomombi and Ebor Waterfalls, plus the National Parks which make up the World Heritage listed "Gondwana Rainforests of Australia". Only 3km downstream from the proposed landfill site is the "Blue Hole", a local swimming and recreation area at the edge of Oxley Wild Rivers National Park. Undoubtedly pollution contaminants in the form of litter or leachate chemicals have the potential to permanently affect this recreation area and the Macleay River downstream.

The Proposed Armidale Dumaresq Regional Landfill, 06_0220 poses a risk to the environment and future generations that cannot be easily mitigated. The proposal should be rejected.

End submission objecting to Proposed Armidale Dumaresq Regional Landfill. Beth Williams, 5. 08.10

Submission S038

Issue Number	Topic	Response
S038_1	H1	<p>The heritage values of the GRAWHA have been considered in Section 8.12 of the EA. The impact on the GRAWHA has been assessed under the EPBC Act and a referral lodged with DSEWPC (formerly DEWHA), who determined that the proposal constitutes a controlled action under the EPBC Act. The nature of the assessment process under the EPBC Act is such that determinations are made without having regard to mitigation measures that would be implemented. However, the measures proposed in the EA will reduce the likelihood of significant impacts on the environment including the World Heritage Area.</p> <p>Stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the likelihood of impacts to surface and groundwater. In the unexpected event that leachate enters the groundwater, diluted concentrations reaching downstream would not pollute the existing environment at the OWRNP or have a significant impact on the World Heritage Area.</p>
S038_2	P2 P3	<p>As part of the site selection process, over 50 alternative sites have been considered since the mid-1990s for the proposed landfill facility.</p> <p>Sites were identified through several preliminary investigations involving consultation with Real Estate agents regarding availability for sale of appropriate sites, consultation with the Department of Mineral Resources regarding the availability of current and former extractive industry sites and consideration of sites within appropriate geological areas. The principles outlined in the document <i>Landfilling – EIS Guidelines</i> (DUAP, September 1996) were then used to develop appropriate criteria and weightings for the assessment of the potential landfill sites identified from the preliminary investigations.</p> <p>The relative importance of each site selection criteria was weighted using a scale ranging from 'relevant' to 'essential'. The ranking process was determined to account for potential environmental issues and constraints, including flora and fauna and heritage, as well as giving weightings to those criteria considered to be of greater significance for design or economic purposes. Groundwater and surface water environment was assigned a weighting of 10 (essential) as was level of service of the site. Local amenity and environmental considerations were weighted 6. Design-related criteria including set up and operating cost, site features and adequacy of service were weighted between 4 and 6. A full description of the rankings and weightings has been included in the <i>Regional Landfill Siting Study Final Report</i> (Maunsell, 2004; Appendix C of the EA), which concluded that the current site was the most suitable of the sites considered with respect to the assessment criteria determined as part of the site selection process.</p> <p>The proposed landfill site would incorporate portions of the Sherralloy and Edington properties (refer to Figure 4 of the EA), which would be subdivided and appropriate portions, totalling 86 hectares, would be formally acquired by Council to facilitate the proposed landfill facility. The Edington property is currently owned by a former Councillor. The Sherralloy property is currently owned by one of the real estate agents engaged by Council to identify suitable land for sale.</p> <p>Council have considered the implementation of various AWT technologies. AWT refers to technologies such as MBT, thermal treatment or a combination of both MBT and thermal treatment. Council has demonstrated its commitment via its active pursuit of AWT processes over a number of years. Council is currently trialling and evaluating AWT at the Long Swamp Road Waste Transfer Facility before full scale adoption and implementation. Further facilities and processes to recover materials</p>

		for re-use will be added in future as markets and recovery costs dictate.
S038_3	E3	<p>Council and its consultants had previously identified in relation to Site 7 that the facility was intended to be operated essentially as a Solid Waste Class 2 or non-putrescible landfill but would be licenced as a Solid Waste Class 1 or putrescible landfill. This is in order to allow for odd occasions when disposal of difficult putrescible material would be required where such material is not suited to the composting or stabilising process that would be adopted for the proposed AWT facilities at the Long Swamp Road site.</p> <p>As described in Section 5.5 of the EA, Council will seek an operating licence to landfill putrescible material to accommodate the essential intermittent need for disposal of material for which stabilisation or composting is not a practical option. Emanating from this commitment is the need to augment Council's current processing facilities to deal with putrescible waste by way of composting of organic waste or stabilisation of residual waste containing putrescible material before landfilling - commonly referred to as AWT.</p> <p>Council is currently trialling and evaluating AWT at the Long Swamp Road Waste Transfer Facility before full scale adoption and implementation. Once the appropriate additional off-site sorting and/or treatment technologies are able to be employed, Council is proposing to operate the proposed landfill as a non-putrescible facility until final closure.</p>
S038_4	H1	The determination made by the Commonwealth Minister was made with respect to the impacts of the proposed landfill facility <i>without</i> mitigation measures implemented. It is considered that the EA has identified appropriate mitigation measures to manage potential impacts and prevent downstream contamination of the GRAWHA. Stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the likelihood of impacts to surface and groundwater.
S038_5	SE4	The planning approval pathway changed part way through the project, with the introduction of Part 3A of the EP&A Act. The legislation stipulated additional requirements for the environmental assessment, which required further work to be commissioned by Council and undertaken by AECOM and its sub-consultants. In addition, the EPBC Act referral determination required the preparation of additional specialist studies and assessment to determine the appropriate mitigation measures to minimise environmental impacts.
S038_6	W4 W3	<p>The landfill and pond design are based on recommended DECCW Landfill Guidelines Benchmark Techniques. The combination of a composite landfill liner with a leachate collection system ensures maximum prevention of leachate leakage from the landfill into the surrounding environment. A review of available literature on the efficiency of different landfill linings was undertaken (refer Appendix I for detailed study). Although the Leachate Collection and Conveyance Systems have a finite life, the system will have a higher operational life provided it is installed in accordance with the construction specifications including the CQA/CQC programmes and that the liner is protected from accidental tearing/piercing during construction. The LEMP will dictate efficient operation and management of the landfill to ensure landfill structures are used appropriately and the risk of leachate leakage from the landfill site is minimised.</p> <p>Any toxicity of leachate would be detected in monitoring wells (refer Surface and Groundwater Monitoring Program and Management Plan appended to the LEMP, Appendix B of the EA) and appropriately remediated in order to prevent impacts to the Gara River.</p> <p>Council would be required to monitor the site until leachate generation ceases and comply with other post-closure conditions as specified by the EPL and/or approval conditions. Council is committed to monitoring and rehabilitating the site and the</p>

		<p>proposed offset area post-closure for a time yet to be specified in any approvals.</p> <p>The water management system has been designed to accommodate the 1:100 ARI (flood event). The Guidelines recommend a 1:25 ARI thus the modelling carried out for the proposed landfill facility demonstrates the water management system will provide adequate protection against heavy rainfall and ensure containment of onsite dirty water and leachate.</p>
S038_7	W3	<p>The flood assessment undertaken for the project was in accordance with the procedures outlined in the ARR guidelines which are used for the analysis and prediction of flood events in Australia for design purposes. ARR was used to predict the 1 in 100 year ARI storm event from the existing creek catchment.</p> <p>Flooding will occur along the existing ephemeral creek during high rainfall events. The extent of the flooding will encroach the north-eastern boundary of the site (adjacent to the line of the creek) as per existing (natural) conditions however the leachate pond, sedimentation pond, dry basin and the landfill itself are all located outside the extent of the predicted 1 in 100 year floodplain.</p> <p>The water management system of the landfill site has been designed to contain the 24 hour duration, 1 in 100 year ARI surface runoff volume from the entire disturbed catchment area of the site in accordance with the ARR guidelines. This is considered to provide adequate protection against heavy rainfall and ensure containment of onsite dirty and leachate water. The proposed dry basin incorporates adequate freeboard storage to contain the 24 hour duration, 1 in 100 year ARI surface runoff volume (which equates to 153 mm rainfall or approximately 19 ML storage) from the entire disturbed catchment area of the site, without further containment or storage actions needing to be implemented.</p>
S038_8		Given the minor increase in traffic movements associated with the landfill operations, relative to the existing traffic movements on Waterfall Way, there would be a minor increased risk of potential chemical or fuel spills. This risk would be mitigated through the implementation of emergency response plans to be developed for the proposed landfill, which would incorporate procedures for emergency containment in the event of a chemical or fuel spill. Driver protocols for private and heavy vehicles using the proposed site access road and Waterfall Way would also be developed.
S038_9	FF2	<p>Potential impacts to Box Gum Woodland (an EEC) in the area were addressed in the Flora and Fauna Assessment (Appendix E of the EA). An Assessment of Significance was undertaken for the EEC. Less than 1 ha of the Box Gum Woodland and 3.3 ha of the grassland (degraded Box Gum Woodland) will be cleared from the TSR for the access track. This is unlikely to be significant to the long term survival of the EEC. Approximately 0.6 hectares of Box-gum woodland in the Travelling Stock Route (TSR) would be cleared in the construction of the access road. This loss of habitat would be offset within the biodiversity offset area of approximately 61 hectares that would be provided as part of the proposal. It would surround the landfill footprint and connect to the TSR.</p> <p>The impacts will be minimised through implementation of the mitigation measures outlined in Section 8.8.16 of the EA and Section 4 of the Flora and Fauna Assessment (Appendix E of the EA). Mitigation measures include minimising the extent of clearing; a staged approach to clearing; progressive rehabilitation and revegetation of spent landfill areas; and provision of approximately 61 hectares of compensatory habitat (biodiversity offset).</p> <p>Impacts associated with vegetation clearance will also be managed through implementation of a suite of management plans including a Vegetation Management Plan, Biodiversity Offset Management Plan (Appendix H of the EA) and Vegetation Clearing Protocol. Further details of the contents of these plans are provided in Section 4 of the Flora and Fauna Assessment (Appendix E of the EA). These plans will be developed during detailed design of the landfill and prior</p>

		to construction. The plans would be prepared in consultation with relevant government agencies (e.g. DECCW and DSEWPC) and in accordance with best practice guidelines and Recovery Plans for threatened species.
S038_10	FF2	<p>Three site access options were evaluated and presented in Section 5.4.1 of the EA. The constraints for each route option were identified with respect to flora and fauna, traffic, cost and noise. The access route proposed in the EA (Option 2) was selected as it provides a safe access point for traffic, has less impact on property severance and avoids clearance of the Narrow leaved peppermint, a vulnerable species protected under the NSW Threatened Species Conservation Act 1995 and EPBC Act 1999.</p> <p>Approximately 0.6 hectares of Box-gum woodland in the Travelling Stock Route (TSR) would be cleared in the construction of the access road. This loss of habitat would be offset within the biodiversity offset area of approximately 61 hectares that would be provided as part of the proposal. It would surround the landfill footprint and connect to the TSR.</p>
S038_11	N3 AQ1 V3 AQ2 O2	<p>An assessment of noise impacts was undertaken and is summarised in Section 8.7 of the EA. With the implementation of noise mitigation measures the proposed development would comply with the environmental criteria for the site under the neutral meteorological conditions that have been shown to be typical of the site, with minimal impacts to noise level amenity.</p> <p>Odour emissions from the site are predicted to be within acceptable levels at the nearest receiver and at the boundary of the site (Section 8.5 and Appendix O of the EA. Standard management strategies for landfill sites would be employed including sub surface and surface gas monitoring and the daily covering of waste. A complaints hotline would be set up in accordance with EPL requirements.</p> <p>Litter management was considered in Section 5.5.6 of the EA. The LEMP (Appendix B of the EA) sets out the control measures to prevent impacts from litter. A Pollution and Litter Management Plan for the operation of the landfill would be prepared and implemented for the site to ensure litter is contained.</p> <p>Total dust emissions due to the operations at the proposed landfill facility have been estimated by analysing the excavation and landfilling operations for three stages of the proposed landfill. Predictions of dust generation were very low and it was concluded that the proposed activities would be unlikely to cause exceedances of the DECCW air quality criteria. Overall, dust concentrations and deposition levels at all residential receivers were very low and it was concluded that air quality impacts arising from dust emissions from the proposed landfill facility would be negligible.</p> <p>Pest and vermin monitoring would be undertaken on a regular basis at the Project Site. Daily cover of the landfill would also discourage vermin and reduce odour emissions. Should the proposed techniques be unsuccessful in deterring pests and vermin, further investigations for additional measures would be undertaken such as engaging a firm of specialist exterminators if required.</p>
S038_12	AQ4	<p>GHG emission sources for the proposed landfill include emissions resulting from fuel use on site, vegetation clearance, landfill gas emissions and use of electricity. A GHG assessment has been undertaken as part of the EA (refer Section 8.6 of the EA) and in accordance with EPA Landfill Guidelines Benchmark Technique Number 11 – Extraction and Disposal of Landfill Gas. The assessment considered construction and operational GHG emissions.</p> <p>Landfill methane emissions were considered as part of the GHG assessment. Suitable options to manage landfill gas have been presented, including:</p> <ul style="list-style-type: none"> • Methane oxidation cap; • Passive venting and using a filter (e.g. activated carbon or the like) to

		<p>reduce emissions; and</p> <ul style="list-style-type: none"> • Landfill gas collection system and flaring of methane (combustion conversion to CO2). <p>The option selected to manage landfill gas will be determined once the proposed landfill facility is fully operational and accurate quantities of landfill gas produced can be ascertained.</p>
S038_13	HR2 W4	<p>Landfill gas would be produced within the landfill cells and trapped unless vented or other means. It is not expected that landfill gas will escape and pollute the air and affect nearby receivers. Suitable options to manage landfill gas have been considered and the most suitable option would be determined and implemented once data confirming landfill gas quantities is collected from the operational landfill.</p> <p>Substances such as mercury and dioxin compounds are not expected to be produced within the landfill due to the type of waste received – no hazardous or chemical waste would be received. As such, the release of these compounds into the local surface water system would not occur.</p> <p>Further, stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage would be implemented and would reduce the likelihood of impacts to surface and groundwater.</p>
S038_14	V1	<p>It is noted that the Waterfall Way is a National tourist drive and this is acknowledged in the EA. It is also noted that views towards the Project Site from Receivers 4 and 5 (and indicatively of the Waterfall Way) are considered to be reasonably significant, however these views would be partially masked by existing vegetation and further obscured once vegetation in the offset area has matured.</p>
S038_15	SE3	<p>The proposed landfill facility would utilise the Waterfall Way as an access route. It is noted that the Waterfall Way is a National tourist drive and this is acknowledged in the EA. It is also noted that the Waterfall Way is an existing haulage route for several existing facilities in the region. It is considered views from Waterfall Way would be partially masked by existing vegetation and further masked by vegetation of the offset area once matured.</p> <p>It is not expected the proposed landfill facility would significantly affect or impede tourism in the area. Armidale Dumaresq Council supports the promotion of tourism in the region through the Tourism Information Centre, provision of funding for local community infrastructure including public facilities for tourists and sponsorship of events to promote tourism in the region.</p>
S038_16	SE2	<p>The impact on the GRAWHA has been assessed under the EPBC Act and a referral lodged with DSEWPC (formerly DEWHA). DSEWPC determined that the proposal constitutes a controlled action under the EPBC Act. The nature of the assessment process is such that proposals are assessed assuming no mitigation is in place. However, mitigation measures proposed in the EA, including stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage, would be implemented and would reduce the likelihood of impacts to surface and groundwater.</p> <p>Impacts on the recreation values of the Blue Hole or on the water quality of the Macleay River are not expected. Water quality monitoring would be undertaken downstream of the proposed landfill (upstream of the Blue Hole).</p>

I do strongly object to the proposed building of the landfill facilities off Waterfall Way east of Armidale. I am most particularly concerned about the location, namely the close proximity to the Gara River and Gondwana Rainforest. I am deeply concerned about the negative impact it will have on our water resources and the flora and fauna of the area. It is a poorly conceived quick fix solution that could well have dire consequences for the community - not only in terms of clean up costs and the impact on tourism, but also in how it will label the community as the failed caretaker of a World Heritage site. Please reject the application for the sake of the wonderful environment of the region and for our children who have the right to enjoy it in the future. The Council would fare better if they directed their efforts towards lobbying for changes at the manufacturing level.

S039_1

S039_2

S039_3

S039_4

Name: [REDACTED]

Address:
[REDACTED]
[REDACTED]

IP Address: [REDACTED]

Submission for Job: #81 Armidale Landfill Project
https://majorprojects.onhlive.com/index.pl?action=view_job&id=81

Site: #74 Armidale-Dumaresq Waste Facility
https://majorprojects.onhlive.com/index.pl?action=view_site&id=74

Felicity Greenway

E: Felicity.Greenway@planning.nsw.gov.au

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Submission S039

Issue Number	Topic	Response
S039_1	P2	As part of the site selection process, several alternative sites were considered for the proposed landfill facility. The principles outlined in the document <i>Landfilling - EIS Guidelines</i> (DUAP, September 1996) were used to develop appropriate criteria and weightings for the assessment of the potential landfill sites identified from the preliminary investigations. This considered heritage and ecological constraints. The outcome of the weighting and assessment identified that the current location was most suitable. It is considered that environmental impacts to the Gara River and surrounding area can be adequately managed with the mitigation measures identified in the EA.
S039_2	W1 FF1	<p>An assessment of biodiversity including potential impacts of the proposed landfill facility on flora, fauna and habitat was presented in Appendix E of the EA and summarised in Section 8.8 of the EA. Further, the Surface and Groundwater Monitoring Program and Management Plan (appended to the LEMP in Appendix B) is designed specifically to detect and manage the quality of surface water and groundwater. Mitigation measures proposed in the EA, including stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage, would be implemented and would reduce the likelihood of impacts to surface and groundwater.</p> <p>Direct and indirect impacts to flora and fauna will be managed through implementation of the mitigation measures proposed in the EA, which will be documented in a suite of management plans to be prepared for the site. Further details of the contents of these plans are provided in Section 4 of the Flora and Fauna Assessment. These plans will be developed during detailed design of the landfill and prior to construction. The plans would be prepared in consultation with relevant government agencies (e.g. DECCW and DSEWPC) and in accordance with best practice guidelines, to ensure that measures to mitigate potential impacts of the proposal on biodiversity are implemented and effective.</p>
S039_3	SE4 SE3	<p>The proposed landfill has been designed in accordance with the recommended DECCW Landfill Guidelines Benchmark Techniques. The costs for implementing the safeguards and controls at the site have been incorporated into the cost estimates for the project and significant additional remediation costs are not likely to be incurred as the management measures to be incorporated into the site, such as a surface water management system, leachate containment and storage system, will reduce the likelihood of off-site environmental and social issues.</p> <p>It is not expected that the proposed landfill facility would significantly affect or impede tourism in the area. Armidale Dumaresq Council supports the promotion of tourism in the region through the Tourism Information Centre, provision of funding for local community infrastructure including public facilities for tourists and sponsorship of events to promote tourism in the region.</p>
S039_4	H1	The impact on the GRAWHA has been assessed under the EPBC Act and a referral lodged with DSEWPC (formerly DEWHA). The outcome of the Commonwealth assessment is that the proposal constitutes a controlled action under the EPBC Act. The nature of the assessment process is such that proposals are assessed assuming no mitigation is in place. However, mitigation measures proposed in the EA, including stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage, would be implemented and would reduce the likelihood of impacts of the proposed landfill project on surface and groundwater. In the unexpected event that leachate enters the groundwater, diluted concentrations reaching downstream would not pollute the existing environment or have a significant impact on the WHA.



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The Hon. Peter Garrett AM MP
House of Representatives
Parliament House
Canberra ACT 2600

Thursday, 5 August 2010

Dear Minister,

Re: Opposition to proposed Armidale Dumaresq Local Council Regional Solid Waste (Putrescible) Landfill Facility

On behalf of our 40,000 members, Humane Society International (HSI) wishes to state our opposition to the proposed landfill development put forward by Armidale Dumaresq Local Council.

The proposed project site is located 4 km upstream of the Oxley Wild Rivers National Park, part of the Gondwana Rainforests of Australia World Heritage Area (GRAWHA), which also has National Heritage listing. The proposed site also sits within the Gara River catchment and is just 1.2 km from the river, which flows directly into the Oxley Wild Rivers National park.

HSI strongly recommends that in considering the potential risks of the proposal, you should reject it. As the EPBC Act requires, where "...there are threats of serious or irreversible environmental damage, [and a] lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation."¹

The proposal's Preliminary Environmental Assessment (PEA) revealed that, for potential impacts on biodiversity

...it is clear from the nature of landfilling that impacts to biodiversity are intense and that they will span time scales that are at least inter-generational, if not permanent. Furthermore, the losses that occur at the landfill site also contribute to the already significant level of cumulative loss that has occurred at a regional scale on the New England Tablelands.²

Five listed threatened flora and fauna have been identified within the proposed site, or

within immediate surrounds: *Eucalyptus nicholii* (Narrow-leaved Black Peppermint), listed as vulnerable under both the TSC and EPBC Acts; *Pyrrholaemus sagittata* (Speckled Warbler); *Stagonopleura guttata* (Diamond Firetail Finch); *Miniopterus schreibersii oceanensis* (Eastern Bent-wing Bat); and *Phascolarctos cinereus* (Koala). Two other threatened species, the *Melanodryas cucullata cucullata* (Hooded Robin) and *Glossopsotta pusilla* (Little Lorikeet), have also been recorded in the area are likely to utilize the type of woodland existing within the site.

The PEA has reported that the loss of habitat resulting from the proposed development will have a significant impact on many of these local populations, especially the Diamond Firetail Finch and Speckled Warbler and Little Eagle, Scarlet Robin and vired sittella (pending listing) (2008, p.61).

A listed Endangered Ecological Community (EEC), *White Box Yellow Box Blakely's Red Gum Woodland*, also occurs on the site on the Gara Travelling Stock Route (TSR). This EEC is listed under both the TSC and EPBC Acts. The same EEC is further described as *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland*, and listed as critically endangered community under the EPBC Act.

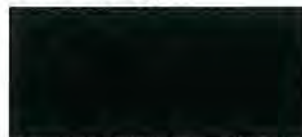
The Commonwealth has a responsibility to ensure such listed species and ecological communities are protected and managed properly. To allow the development of a landfill within such a sensitive area would have disregard for long-term conservation values and sustainable development of the area.

HSI's understanding is that Council has limited capacity to undertake such a large scale project and manage it in the long-term. Given the Council's limited borrowing capacities and operating deficits, there is added concern that managing the proposed project into the long-term with such issues will only diminish efforts in environmental protection.

According to the proposal's Environmental Assessment (EA) risk assessment, evaluated residual environmental risk for biodiversity¹ was calculated to be high to medium³. Furthermore, the EA states that "There are potential environmental impacts should the landfill operator not have the financial means within which to carry out remediation and implement adequate environmental safeguards."⁴

HSI strongly recommends that the proposal should be rejected, due to the likelihood of significant impacts upon clear matters of national environmental significance.

Yours sincerely,



Humane Society International

¹ Residual environmental risk analysis results take into account that the recommended mitigation measures are implemented. (AECOM, 2010, p.274)

Cc:
The Hon. Tony Kelly ALGA MLC
Governor Macquarie Tower
Level 34, 1 Farrer Place
Sydney NSW 2000

The Hon. Frank Sartor MP
Governor Macquarie Tower
Level 35, 1 Farrer Place
Sydney NSW 2000

Submission S040

Issue Number	Topic	Response
S040_1	H1	The impact on the GRAWHA has been assessed under the EPBC Act and a referral lodged with DSEWPC (formerly DEWHA). DSEWPC determined that the proposal constitutes a controlled action under the EPBC Act. The nature of the assessment process is such that proposals are assessed assuming no mitigation is in place. However, mitigation measures proposed in the EA, including stringent environmental controls to manage dirty stormwater runoff, leachate containment and emergency storage, would be implemented and would reduce the likelihood of impacts of the proposed landfill project on surface and groundwater. In the unexpected event that leachate enters the groundwater, diluted concentrations reaching downstream would not pollute the existing environment at the OWRNP or have a significant impact on the World Heritage Area.
S040_2	FF2	An assessment of biodiversity including potential impacts of the proposed landfill facility on flora, fauna and habitat was presented in Appendix E of the EA and summarised in Section 8.8 of the EA. The impacts will be minimised through implementation of the mitigation measures outlined in Section 8.8.16 of the EA and Section 4 of the Flora and Fauna Assessment. Mitigation measures proposed include minimising the extent of clearing; staged approach to clearing; progressive rehabilitation and revegetation of spent landfill areas; and provision of approximately 61 hectares of compensatory habitat (biodiversity offset). Impacts to threatened species will also be managed through implementation of a suite of management plans including a Vegetation Management Plan, Biodiversity Offset Management Plan (Appendix H of the EA), Vegetation Clearing Protocol and Native Fauna Management Plan. Further details of the contents of these plans are provided in Section 4 of the Flora and Fauna Assessment (Appendix E of the EA). These plans will be developed during detailed design of the landfill and prior to construction. The plans would be prepared in consultation with relevant government agencies (e.g. DECCW and DSEWPC) and in accordance with best practice guidelines and Recovery Plans for threatened species.
S040_3	E3	Council has the ability to raise funds by loans and any loan will be serviced by the waste management charge that is set by Council. Council has identified their long term financial situation and is establishing a process with the community to ensure viability and sustainability. New statutory integrated planning and reporting will provide ratepayers with long-term financial plans that will ensure the long term capacity of Council to meet its obligations to the community and authorities, including its commitments to environmental management of the proposed landfill in the long-term.

¹ *Environmental Protection of Biodiversity and Conservation (EPBC) Act 1999 (Cth)*, Chapter 1, Part 1, Sec 3(A)b

² NSW Dept. of Environment and Conservation, 2006, in Maunsell/AECOM, 2008, Armidale Regional Landfill: Preliminary Assessment Report, October 30, Armidale Dumaresq Council.

³ AECOM, 2010, Armidale Regional Landfill: Environmental Assessment, April, Armidale Dumaresq Council, p. 274.

⁴ Ibid., p.226

Dear Felicity,

FINAL_1 August 2010

The Gara Valley Environment Preservation Association Inc (GVEPA) strongly objects to Armidale Council's proposed regional landfill.

Attached, please find the following:

- Part A submission
- Part B detailed background information (two documents)
- Certificate of political disclosure signed by Geoff Fox, President of GVEPA
- Failure to address DGRs

We would be grateful if you would please confirm receipt of our submission.

Kind regards,

[Redacted signature block]

GVEPA submission to DOP



Executive Summary

1. Under section 5A of the New South Wales Environment Planning and Assessment Act 1979, a "test of significance" applies to major developments. Known as the seven-part test, this method assesses the potential impact of an activity on threatened flora, fauna, ecological communities and endangered populations (listed as either "Vulnerable" or "Endangered" in the NSW Threatened Species Conservation Act 1995).
2. Furthermore, the well-established precautionary principle states that if an action or policy has a suspected risk of causing harm to the public or to the environment, the burden of proof that it is *not* harmful falls on those proposing the action.
3. The Gara Valley Environment Preservation Association, Inc. (GVEPA) submits that the Armidale Dumaresq Council's (ADC) proposed regional landfill off the Waterfall Way, 12kms east of Armidale fails central elements of both the seven-part test and the precautionary principle. In this submission we will focus on the following key issues:
 - Environmental impact;
 - Governance;
 - Economic and social considerations; and,
 - Alternatives and other matters.

S041a_0

4. Given the risk for potential harm to the environment and human health, which the Proponent has been unable to sufficiently address, GVEPA maintains there is no alternative but to situate any new landfill outside the World Heritage catchment. Accordingly, we call on the NSW Department of Planning to find that the Proponent's Environmental Assessment (EA) fails to adequately address the environmental risks at the proposed site.

Introduction

5. Central to GVEPA's analysis and concerns regarding the proposed landfill is the potential impact on the Gondwana Rainforests of Australia World Heritage Area. This concern was recognised in 2007 by the Australian Government's Environment Protection and Biodiversity Conservation (EPBC) committee when it determined that the proposed landfill as outlined in the Preliminary Environmental Assessment (PEA) "will, or is likely to, have a significant impact on the World heritage properties and the National Heritage values of National Heritage places."¹
6. While the EA purports to be an impartial, technical document, we suggest it is more of an advocacy piece; based on ideal assumptions, old data (1998 – 2004) and improbable environmental safeguards. Throughout the document, future prudent action is asserted without substantiation, detailed plans or budget. While various individual elements in the EA may give the impression of a benign, holistic result; when considered in aggregate, the proposal is not realistic or credible. GVEPA notes particularly the following general concerns with regard to the EA's quality:
- Inadequate detail to justify conclusions
 - Lip service inclusion of key design and remedial issues
 - Key physical data used is subjective and contradictory in places
 - No project detail on design, construction, operation and maintenance costs (see below for detail)
 - No analysis of better waste disposal alternatives (see below for more detail and alternatives)
7. A very recent review of ADC by the NSW State Government ("Kibble Report") indicates that it has low levels of governance; is in precarious financial condition; and has poor community relations. The EA proposes 11 management protocols and plans that require high standards of implementation and monitoring. Yet, in light of Council's current circumstances, it is improbable that it would be able to successfully implement all the mitigation measures it considers necessary to achieve "stringent" standards of management and operation.

GVEPA and its objectives

8. The Gara Valley Environment Preservation Association Inc. (GVEPA) was formed in late 2002 to protest the then proposal by the Armidale Dumaresq Council to construct a putrescible landfill on "Ballantrae" (site 9) in the Gara Valley approximately 2 km from, and draining into, the Gara Dam which is the backup drinking water supply for Armidale. This proposal was eventually abandoned only to be replaced by the current, though equally unsatisfactory, proposal.

¹ Australian Government, DEWR 2007: *Notification of Referral Decision – Controlled Action*, Statement of Reasons, p.5.

9. GVEPA's objectives specific to the landfill are to:

- protect the Oxley Wild Rivers National Park, part of the UNESCO-listed Gondwana Rainforests of Australia World Heritage area;
- preserve threatened species (both flora and fauna) and habitats, including migratory birds; and,
- prevent pollution of the environment, in particular leachate and greenhouse gas emissions.

Environmental Issues

Sensitive water catchment area: World Heritage impact

10. The biggest threat from the proposed landfill is from leachate-contaminated water entering the World Heritage sites. The Proponent admits leachate containment within the landfill facility cannot be guaranteed.² The EA does not provide any proposal to detect and manage leachate contamination of groundwater when it does occur. Taken together, the implication is that contamination of the Gara River will occur. The Gara flows into the Gondwana Rainforests of Australia World Heritage Area. Given Australia's obligations under the World Heritage Convention to "protect and conserve" such areas, the potential for damage to waterways, such as the Gara River, which flow into the World Heritage site must be considered.
11. The Gara River is already under stress due to factors such as eutrophication and poor river structure. This is acknowledged in the EA (Section 8.3.1, p. 143) with reference to *The Southern New England Tablelands Region State of the Environment Report* (2004) and *Supplementary Report* (2004/05), as well as *The Stressed Rivers Assessment Report* 1998, produced by the former Department of Land and Water Conservation (DLWC), which gave the Gara River the highest overall stress classification.
12. Further stress on the Gara River comes from ADC's current Sewage Treatment Plant and the existing Armidale Landfill, both of which release leachate into the waterways. GVEPA's understanding is that leachate generation can be expected to continue for many decades after closure of any landfill, therefore leachate pollution of groundwater must be assumed to be on-going and possibly increasing, even after a landfill is shut down. While these impacts will continue for years to come, Council currently has the opportunity to reduce stress on the Gara, by locating any new landfill in a location that does not drain into it, and consequently into the World Heritage areas.
13. These problems are exacerbated by the restricted flow rates in the Gara during times of low rainfall. Release rates from Malpas Dam to improve flow to the river are controlled by a combination of State and Council authorities, none of whom have responded favourably to the repeated requests of Gara Valley landholders for additional flows. Restricted flow rates will magnify the possibility of environmental degradation from groundwater that is carrying leachate by limiting its dilution once it joins the river.
- Class 1 solid waste facility (putrescible fraction) resulting in toxic groundwater leachate*
14. Council has stated that it will seek to use the proposed landfill as a Class 2 (non-putrescible or inert) facility as soon as possible. However, this remains an aspirational statement. The

² EA, page 158.

reality is that for licensing purposes, the proponent has sought consent for a Class 1 (general solid waste) landfill. GVEPA's review of the literature suggests that such "General Solid Waste" can be expected to generate leachate of a potentially toxic nature.³ As noted above, this process may continue to pose an on-going threat to groundwater well beyond the active lifespan of the landfill.

S041a_4

15. GVEPA also notes the Proponent's acknowledgement that there is no landfill liner technology currently available to guarantee the prevention of long-term leachate pollution into groundwater. Even the most advanced landfill liner systems have a recognised limited protective lifespan due to, *inter alia*, the degrading effects of leachate upon the clays and/or plastics comprising liner systems; manufacturing faults and difficulties encountered during installation.

S041a_5

16. Indeed, the landfill design being proposed by ADC is one that has already been discredited in the USA and has been replaced by the "dry tomb" design, which adds a top liner in an effort to keep moisture out of the waste to minimise leachate generation. However, even this design only extends the timeframe before the inevitable liner degeneration, resulting in leachate escape and groundwater pollution.⁴

17. Leachate is most likely to escape through the bottom of the landfill where detection is very difficult. Even if detected, remediation is almost impossible. Therefore, groundwater pollution by leachate is essentially uncontrollable. While the potential for groundwater contamination due to liner failure over time is acknowledged by the Proponent, the Leachate Management Plan in the EA does not address how ADC proposes to prevent or manage the issue.⁵

S041a_6

18. The Gara River is a major feeder to the Macleay River, which ends up as Kempsey's drinking water supply. GVEPA believes that the potential for groundwater pollution, subsequent contamination of the World Heritage sites and the risk to human water supplies alone constitute grounds to refuse the application.

S041a_7

³ For a meta-analysis, see Lee, GF & Jones-Lee, A, 2010 *Flawed Technology of Subtitle D Landfilling of Municipal Solid Waste* <http://www.gfredlee.com/Landfills/SubtitleDFlawedTechnPap.pdf>.

⁴ For an overview of the evolution of US EPA design requirements see Lee GF & Jones-Lee 2010 *Flawed Technology of Subtitle D Landfilling of Municipal Solid Waste* <http://www.gfredlee.com/Landfills/SubtitleDFlawedTechnPap.pdf>, pp. 3-8

⁵ EA, Appendix I, p.9.



Illustration1: Photo Showing flooding on the 26th Feb 2007 at adjoining property following a storm of 28mm. Looking towards Waterfall Way adjacent to site entrance near Western boundary of proposed landfill site.

Biodiversity/habitat loss

19. GVEPA believes unconsolidated rubbish will find its way into the World Heritage Area, Gara River and nearby properties. Increased numbers of predatory wildlife will be attracted to the dump changing the biodiversity of the area. Containment of disease, weeds and insects has not been satisfactorily addressed by the EA.

S041a_8

20. The site is located in a treed valley, the habitat for a number of endangered species. It is part of a wildlife corridor linking Imbota Nature Reserve to the eastern side of the Gara River. The entrance and possibly the site contain White Box, Yellow Box, Blakely's Red Gum Woodland, which is listed as a Critically Endangered Ecological Community (CEEC) under the EPBC Act; and as an Endangered Ecological Community (EEC) under the Threatened Species Conservation Act 1995 (TSC Act).⁶

S041a_9

21. In addition to those above, the EA acknowledges an array of negative impacts upon flora and fauna, such as:

- Narrow-Leaved Black Peppermint (*Eucalyptus nicholii*), listed as vulnerable under both the NSW TSC Act and the Commonwealth EPBC Act;
- Bendemeer white gum (*Eucalyptus elliptica*), a Rare or Threatened Australian Plant (ROTAP) species;

⁶ EA, p. 197

- Two threatened bird species: the Speckled Warbler (*Chthonicola sagittata*) and the Diamond Firetail (*Stagonopleura guttata*), which is listed as vulnerable under the TSC Act;
 - Three species currently being assessed for probable listing under the TSC as vulnerable: the Little Eagle (*Hieraaetus morphnoides*), Scarlet Robin (*Petroica boodang*) and Varied Sittella (*Daphoenositta chrysoptera*).⁷
22. In addition to the above identified threatened or endangered species, the landfill site is recognised as 'suitable habitat' for a further 10 flora species and 14 fauna species that are recorded within a 20 km radius of the proposed site.^{8,9}
23. These were acknowledged at the PEA stage and no new mitigating measures have been identified by the Proponent since then. As the DEC noted in 2006: "... it is clear from the nature of landfilling that impacts to biodiversity are intense and that they will span time scales that are at least inter-generational, if not permanent. Furthermore, the losses that will occur at the landfill site also contribute to the already significant level of cumulative loss that has occurred at a regional scale on the New England Tablelands."¹⁰
24. Furthermore, the Proponent's own consultants state (as they did in the 2007 PEA), that: "...the proposed action will involve clearing which will result in a reduction in the area of woodland and grassland habitat that supports native flora and fauna, including five threatened species, one Rare or Threatened Australian Plant (ROTAP) species and one EEC. Hollow-bearing trees will be lost in the Box Gum Woodland in the TSR."¹¹ As noted above, the Box-Gum Woodland has been recognised as a CEEC. GVEPA understands that the practice of Habitat Compensatory Offset is *not* permissible where CEECs are involved.¹²
25. As in 2007, the Proponent claims that there will be no adverse impact downstream of the landfill. However, as noted above, leachate security is not guaranteed; and there is no data in the EA regarding the riparian and aquatic communities in the Oxley Wild Rivers National Park, thus making it impossible to fully assess what risks do exist.

Greenhouse gases (GHG) and other air emissions

26. The EA does not deal satisfactorily with risks associated with gas emissions (either GHGs or toxic emissions) from the proposed landfill. Landfill gas resulting from anaerobic degradation of organic material is about 40-60% methane, with the remainder mainly carbon dioxide. The former can cause explosions and both are GHGs. About 1% of landfill gas contains varying amounts of hundreds of contaminants, most of which are known as non-methane organic compounds, or NMOCs. These include toxic chemicals, such as benzene, toluene, vinyl chloride, carbon tetrachloride, 1,1,1 trichloroethane and chloroform. Usually, about 40 halogenated compounds are present in NMOCs. When combusted in the presence of hydrocarbons, these recombine into highly toxic carcinogenic compounds, such as dioxin

⁷ EA, Appendix E, pages 23 to 29.

⁸ EA, Appendix E, p. 45

⁹ EA, Appendix E, p. 54.

¹⁰ EA, Appendix E, Appendix A: NSW Department of Environment and Conservation, 2006, Offset Proposal, 9.2 See also, PEA, 2007, Appendix B, p. 32

¹¹ EA, Appendix E, page 31.

¹² TDA Environmental Consulting, 2007, Advice to EDO, Northern Rivers, p.2

S041a_9

S041a_10

S041a_11

S041a_12

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and furan. Similarly, mercury cannot be destroyed through combustion and so poses a potentially serious health hazard.¹³

27. Consequently, the EA's proposal to "flare" the landfill gas to remove the combustible methane component would likely result in a much greater, localised human health hazard. Well designed landfills have gas collection systems that filter out toxic contaminants which are then treated with a non-burn technology. The remaining gas is then captured to provide energy, or the methane converted to methyl alcohol.¹⁴

Amenity issues and impact on Waterfall Way

28. The proposed landfill location will have a negative impact on the iconic Waterfall Way, which has been identified by the NRMA as "One of the Ten Best Drives in NSW" and by *Australian Traveller* magazine as the third best drive in Australia (after the Great Ocean Road and the Great Tropical Drive). The Waterfall Way is promoted by both local government and tourist groups due to the numerous famous waterfalls and scenic landscapes in its nearby National Parks and World Heritage areas. The proposed landfill site will be visible to drivers and passengers for well over a kilometre of the Waterfall Way's length. For visitors approaching Armidale, it will be the first significant landmark they encounter, and for those departing, it will form the last thing they remember about our community.
29. Odour and dust impacts have been understated by the proponent. The modelling is based on ideal management practices, assumptions and commitments. Furthermore, the EA acknowledges that only a 50m property buffer zone exists, indicating that an unacceptable stench will be generated off site.¹⁵ Taken together, these facts undermining the assertion elsewhere in the EA that; "off-site odour impacts would be at an acceptable level".¹⁶ GVEPA notes the evidence from Coffs Harbour Council that landfill odour has negatively impacted residents up to 2.5 km away.
30. The Proponent states in the EA that: "noise levels generated by the proposed landfill would generally comply with environmental criteria".¹⁷ However, GVEPA contends that "generally comply" recognises that full compliance is impossible. The admission by the proponent that the proposal is reliant upon "engineered noise control" highlights the inappropriate location and inadequate buffer zones proposed by Council.¹⁸ Indeed, direct and real noise impacts from the chainsaws, trucks and drilling rigs that have been on site during the investigation phase have been already noted by neighbouring residents.

Other potential hazards (fire, explosions, oil, etc.)

31. Other potential hazards from the proposed landfill include fires and explosions from combustible waste or the proposed methane flare. There have been three significant bushfires during the last 10 years in the project area, the most recent of which destroyed almost 800 acres of grassland. Any increase in this risk is unacceptable given the ecological

¹³ BDA Group: *The Full Cost of Landfill Disposal in Australia*, prepared for the Department of the Environment, Water, Heritage and the Arts, 2009.

¹⁴ Energy Justice Network, *Landfill Gas Factsheet*, 2007.

¹⁵ Air Quality Impact Assessment, Figure 22: "Maximum Odour Levels OU Due to Landfill Operation"

¹⁶ EA page 171.

¹⁷ EA, Executive Summary, page xxvii.

¹⁸ Noise Impact Assessment, page19.

fragility and vulnerable economic activities in neighbouring areas. The EA does not address this risk.

S041a_17

Need for 25 years' post-closure monitoring and remediation

32. GVEPA notes the legislated obligation of any landfill licensee: "[t]o ensure that the landfill continues to be non-polluting and does not cause environmental harm after site closure..."¹⁹ Therefore, post-closure monitoring and maintenance will need to be an indeterminate, ongoing commitment, given the likely release of leachate into the environment.

S041a_18

33. As noted previously, once groundwater pollution is detected, damage will already have been done, which is virtually impossible to reverse. Principle Three of the NSW Groundwater Quality Protection Policy states: "...there are no quick or cheap solutions for groundwater clean up once contaminated. In many cases it is unlikely that contaminated groundwater systems can be returned to pre-contamination conditions. ... Contaminated groundwater can take tens or even hundreds of years to move from the pollution source to the discharge site. Remediation of polluted groundwater can cost millions of dollars to achieve water quality objectives. In the past, the effectiveness of remediation has been poor."²⁰

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34. It is therefore GVEPA's view that any "Closure Plan" to meet Council's declared objective of a landfill that "will not produce an adverse environmental legacy for any future generations" would be virtually impossible to devise.²¹

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35. Finally, we note that there are no details provided about the Closure Plan, rather these will not be provided until "closer to the completion of the landfill operation."²² Given this could be some 50 years hence; there seems little intergenerational equity in handing future generations the responsibility and cost of remediation.

Governance issues

AECOM conflict of interest preparing EA

36. GVEPA has serious concerns over the role played by AECOM in the landfill application development process. We note that AECOM has been engaged by Council to project manage the proposed landfill site until commissioning and undertake the Environmental Assessment on the new landfill site. We therefore believe that a significant conflict of interest exists, given AECOM's financial incentive to pursue a landfill option, rather than explore options that may not require their future services. AECOM is unlikely to provide impartial assessment, given the remainder of their funding is reliant on approval to proceed to the next stage.

S041a_20

Site selection process

37. GVEPA notes that the proposed site is owned by Ken Waters, who was a sitting Councillor at the time of site selection; and Derry Crisp, a local real estate agent, who was involved in the initial identification of sites for Council.²³ Council was obliged to obtain legal advice

S041a_21

¹⁹ EA, Appendix B, p.81

²⁰ DLWC, 1998, *The NSW Groundwater Quality Protection Policy*. pp. 19,20

²¹ EA, p. 267

²² EA, Appendix B, page 81.

²³ Mr Crisp has since sold his local real estate agency and Mr Waters is no longer a Councillor.

regarding the nature of the arrangement with the vendors. To the best of GVEPA's knowledge, neither these relationships and pecuniary interests, nor the existence or content of this legal advice, has been disclosed to the community.

38. The selection process included a "workshop" session and a committee to decide the final site. The vendor Derry Crisp was allowed to present to the Council workshop on behalf of Cr Waters and himself (at which there is some dispute as to whether interests were properly disclosed). The vendor, Derry Crisp was also selected by Council to sit on the Landfill Committee. No other site owners were selected. In an e-mail to the former GVEPA President, the current ADC General Manager acknowledged that: "it has been demonstrated that committee members have been able to influence change on selection criteria". GVEPA questions whether this constitutes best practice governance.

S041a_21

39. Furthermore, GVEPA draws the Department's attention to the manner in which data was collected and analysed to support Council's selection of the Waterfall Way site as its preferred location. AECOM did not visit some of the shortlisted sites. For example, the data used to ascertain flora and fauna on site 6 was from a 1998 desktop study. While the initial site selection criteria included objective quantitative factors such as slopes <5%, distance to adjacent dwellings >1km, etc., these were subsequently modified and subjected to more subjective "weighting" and re-ranking of sites, which resulted in such factors as "local amenity and environmental considerations" accounting for less than 10% of the total score. At one point in the process, Site 9 (Ballantrae) was being described by Council consultants as being 10% better than all other sites in almost all respects. However, after the "reweighting", AECOM announced that Site 7 (the current site) was better by 10% than all other sites.

S041a_21

40. GVEPA has requested access to the proposed site for independent consultants to collect their own data; however, this request has been denied by Council.

Council's inadequate/deceptive community/stakeholder consultation

S041a_22

41. Despite the following statement appearing on ADC's website: "there is no way that Armidale Dumaresq Council will support or allow any landfill site to be constructed, should it be any risk to the World Heritage areas, or damage the environment", GVEPA notes with concern Council's lack of transparency in communicating with the community about the landfill.

42. Examples of Council's inadequate approach to information dissemination include:

- The Chairman of ADC's Waste Management Committee, Cr Herman Beyersdorf, resigning from the committee in 2008, saying he was "being kept in the dark" about the landfill project.
- Council released information via its website in 2004 to the press stating that Council would be operating a Class 2 Inert Landfill, with all putrescible material removed.²⁴ Yet ADC has submitted a proposal for Class 1 Putrescible Landfill.
- ADC has not informed ratepayers through media release, website or newsletter of the EPBC decision making the submission a controlled action, given the concern that the project was "likely to have significant impact" on World Heritage sites.

S041a_23

S041a_24

²⁴ ADC Press Release, also sent to Kempsey Council: "New Tip to be Eco-friendly as Council Seeks High-Tech Alternatives".

- GVEPA has been restricted in its efforts to promote community awareness of the project. GVEPA members have been threatened with legal action and attempts to obtain information from Council have been thwarted. A FOI request required intervention by the FOI Ombudsman and took over a year to resolve, thus effectively enabling Council to close the door on future FOI efforts.

S041a_25

Economic and social issues

No financial and economic cost-benefit analysis

43. GVEPA is concerned that the EA provides no information on capital, operating or, importantly, closure and post closure costs. Nor does it appear that any detailed engineering, site operating or closure plans have been prepared. Even basic information, such as site acquisition or potential compensation costs, is not provided. Without such information, ratepayers cannot determine if they are getting value for money.
44. Nor are costs at the proposed site compared with those at other, more environmentally suitable, sites. There is also no financial comparison with Alternative Waste Technologies (AWT). Given the EPBC concerns and the Proponent's acknowledgement that the proposed site is fundamentally unsuitable, both geologically and environmentally, GVEPA believes such comparisons to be desirable.²⁵

S041a_26

S041a_27

GVEPA estimate of real costs using BDA and Council data

45. In 2008, ADC advised GVEPA of the following broad cost estimates (excluding closure costs):

Capital	\$
Design costs incurred	600,000
Approval costs incurred	400,000
Design costs budgeted	526,000
Land purchase (2003 valuation)	500,000
Close existing facility	2,000,000
Design & construct cell 1 ²⁶	16,000,000
Design & construct cell 2	4,250,000
Design & construct cell 3	4,250,000
Design & construct cell 4	4,250,000
Design & construct cell 5	4,250,000
Plant	1,000,000
Total capex	38,026,000
Operating (50 years)	
Salaries inc on-costs and training	28,000,000
Plant operating costs	6,000,000
Materials and contracts	91,350,000
Total opex	125,350,000
GRAND 50 YR TOTAL (ex closure)	163,376,000

²⁵ Volume 2 page 395/520; Conclusion of the Regional Landfill Siting Study, page 93.

²⁶ Cell 1 includes access road and Waterfall Way re-alignment, 3x leachate ponds, site fencing, biodiversity offset planting, truck wash and staff facilities. These costs were estimated to be between \$12m and \$18m, with \$16m being nominated by Council staff as the most likely outcome.

46. Based on the above costs, the facility would cost \$218/tonne of waste. Using BDA's data, GVEPA estimates that a medium landfill depositing 15,000 tonnes per annum (as per Council's proposal) should cost \$80/tonne.²⁷ GVEPA considers that some of the large difference between the two costs may be attributable to the Materials and Contracts cost including a waste collection component. If the Materials and Contracts is halved to eliminate the estimated waste collection component (which would be common to any proposal) then the facility would cost \$157/tonne. GVEPA is concerned that this cost is approximately twice the \$80/tonne indicated by the BDA report.

S041a_28

Council's financial and managerial capacity to manage project

47. In May 2010 a NSW Government report ("The Kibble Report") noted the proponent's poor record of managing its finances.²⁸ The report notes: "ADC's outstanding rates and annual charges over the last three financial years...highlight a poor record of debt control."²⁹ Kibble noted that ADC has recorded operating deficits after capital grants in three of the last five financial years with a cumulative loss of \$10.134 million. In 2008/09 alone, ADC recorded an operating deficiency of \$1.223 million.
48. In 2009 the financial sustainability review of Armidale Dumaresq Council by Fiscalstar Services rated Council "financially unsustainable" and noted: "The Council's existing policies are financially unsustainable...[t]he stability and predictability of the council's rates, fees & charges are therefore at risk, and its ratings burden presently does not seem to be shared fairly between the council's present and future ratepayers."
49. Council's capacity to borrow is limited; therefore it is not clear how the project will be financed. Given Council's operating deficits there is no capacity to reduce existing debt let alone service the extra debt such a project would incur.
50. Taken together, these matters raise concerns about Council's long-term ability to adequately safeguard environmentally-responsible operations at the proposed landfill, both during and after its operating life. GVEPA is most concerned that the proponent will be under such severe financial pressure that it will "cut corners" and therefore increase operating risk at the proposed landfill. As the EA notes at page 226: "[t]here are potential environmental impacts should the landfill operator not have the financial means within which to carry out...adequate environmental safeguards. Financial assurance of the landfill operators is an important aspect relating to the ongoing viability of landfill operations." GVEPA is also concerned to note that ADC appears to be considering the possibility of passing financial and operational risk to a third party.³⁰
51. In addition to financial mismanagement, Armidale Dumaresq Council's past environmental record, and in particular the management and operation of its current landfill site raises serious concerns about its ability to manage the proposed new landfill site. The NSW EPA's Industry Sector: Rural Waste Landfill Facilities Compliance Audit Report 2002 noted that 28 of 30 audited landfills failed to prevent water pollution. The Final Compliance Audit Report

S041a_29

S041a_30

S041a_31

S041a_32

²⁷ The Full Costs of Landfill Disposal in Australia, prepared by the BDA Group in July 2009 for the Department of Environment Water Heritage and the Arts. This document was peer reviewed by Dr Joe Pickin of Blue Environment Pty Ltd in December 2009.

²⁸ Government of NSW, A Proposal for the Creation of a New England Regional Council, prepared by Gabrielle Kibble AO, May 2010, Section 5.

²⁹ Ibid, page 18.

³⁰ EA, page 76.

into the Armidale City Council Solid Waste Landfill in December 2000 noted: "The findings of the audit indicate that the enterprise was not complying with a number of conditions attached to the Environment Protection Licence issued under the Protection of the Environment Operations Act 1997. Issues of concern identified through further observations include:

- The collection of uncontaminated surface water in the leachate collection system, increasing the quantity of leachate contaminated water that requires disposal
- Scouring of the landfill batter located in the south eastern corner of the premise, allowing infiltration of surface water into the landfill.
- The inadequate collection of surface water, contaminated by landfilling activities, likely to cause pollution of groundwaters.
- The degradation of local amenity through inadequate litter controls and inadequate covering of waste."³¹

Impact on household waste removal rates

52. While GVEPA is unable to precisely estimate the impact on ratepayers, given the lack of information in the EA; there will clearly be an increased burden if the proposed landfill is developed. GVEPA's best estimates of an increase are in the table below.

Possible Rate Increase (in 2010 prices)	
Interest rate	6.50%
Principal (staggered for cell construction)	\$38,026,000
Interest cost (50 year loan)	\$36,508,095
Total principal and interest	\$74,534,095
Annual cost for principal and interest	\$1,490,682
Rateable households	8,648
Current waste levy (est.)	\$145 ³²
Rate increase/household	\$172
Percentage increase	119%
New waste levy	\$317

53. The above analysis, however, does not take account of any differential in operating costs between the current facility and the proposed facility. As the proposed facility is environmentally risky it may be that there will be further increases due to the extra mitigation costs involved.

Alternatives and other matters

AWT and other relevant alternative technologies

54. While the Proponent states it is committed to ongoing evaluation of AWT, there is no rigorous analysis of current AWT options in the EA.³³ Indeed, it appears Council last evaluated AWT in February 2002.³⁴ Only four alternatives were identified and there are now

³¹ Which was assessed in the 2002 report. GVEPA has been unable to locate any more recent information in this respect.

³² Waste levies vary among households.

³³ EA, section 4.1.3, page 42.

³⁴ EA, section 4.1.1, page 37.

S041a_33

S041a_34

many more options available. While GVEPA recognises that not all AWT options would be applicable, the separation and processing of the organic fraction is relatively simple and devoid of risk. This can be via an in-vessel, tunnel (as used at Port Macquarie/Hastings) or bay system (as used at Coffs Harbour) or the SITA facility at Kemps Creek (SAWT). The EA makes no reference to these systems successfully operating in nearby Councils.

S041a_34

55. GVEPA believes that AWT costs would be economically competitive with landfill disposal. GVEPA does not have the resources to properly evaluate AWT costs but a 2008 trade publication suggests that AWT costs are in the order of \$75 to \$125/tonne.³⁵ The table below demonstrates that the economic arguments in favour of AWT are increasingly strong, as new technologies emerge.

LANDFILL v AWT COSTS	
ARMIDALE LANDFILL	
Estimated Cost per Tonne	\$157
Cost per tonne 2010	\$157
ALTERNATIVE WASTE TECHNOLOGIES (AWT)	
AWT Cost per Tonne	\$100
Residual percentage to landfill	20%
Cost per Tonne to landfill	\$157
AWT landfill cost (20% x \$157/t)	\$31
Total AWT Cost per tonne 2010	\$131

56. GVEPA is very concerned that the EA dismisses one AWT option due to its high capital cost (\$10m in 2002) without comparison to the capital cost of the landfill. Given that Council do not offer any cost figures for the landfill proposal such an argument is without logic. If one option is dismissed on cost grounds then the alternative option should be demonstrated as being more cost effective. The EA does not do this.

57. No waste levy is currently applicable in the Armidale Dumaresq local government area. The existence of a waste levy would further skew the economic argument in favour of AWT. GVEPA notes that the Sydney metropolitan area currently has a waste levy of \$70.30 per tonne of material deposited to landfill. NSW coastal councils (Regional Regulated Areas) are currently levied \$20.40/tonne and this is scheduled to increase to parity (\$70.30) with Sydney by 2015. GVEPA contends that a prudent council would anticipate the possible introduction of state wide waste levies and give serious attention to AWT options (as other neighbouring councils have).

S041a_35

Alternative sites (western fall)

58. When he became aware of the EPBC decision about the proposal in 2007, the former Chairman of the ADC Waste Management Committee, Cr Herman Beyersdorf, urged that the current proposal be abandoned and the search for another, less environmentally sensitive site, commence.³⁶

³⁵ Inside Waste, July/August 2008.

³⁶ Armidale Independent, 13 August, 2008, p.10.

Rehabilitate existing site

59. As noted above, the EPA's 2000 Compliance Audit Report indicated poor management of the existing ADC landfill at Long Swamp Road and stated that "it was likely to cause pollution of groundwaters"; therefore, GVEPA believes the current facility requires remediation.

S041a_32

Impact of Council amalgamation

60. The Kibble Report was a wide-ranging review of local government services currently provided by Armidale Dumaresq Council, Guyra Shire Council, Uralla Shire Council and Walcha Council. It recommended the forced amalgamation of Armidale Dumaresq, Guyra and Uralla Shires and recommended that an Administrator be appointed to oversee the implementation of the amalgamated Council. This amalgamation process may lead to other landfill options becoming more feasible, as well as increasing the catchment area for any new landfill. In particular, the new Local Government Area comprising the proposed new Council will include a much wider range of land draining to the west, and so away from the World Heritage properties located in the eastern fall country. Such options probably mean that the environmental threat that the EPBC identified in 2007, and which GVEPA believes is just as likely to emerge from the current proposal, could be prevented. Therefore, GVEPA believes the new Administrator will need to re-visit the current proposal and "begin from scratch".

S041a_36

Apparent Design Error

61. Council has designed a facility with a capacity of 1,056,000 m³. There are no calculations in the EA to show how this figure was arrived at. Using the volume data from Table 5 section 2.4.1 of the EA the average annual volume requirement is 28,700 m³ meaning that a 50 year facility would require a volume of 1,435,000 m³ which is 36% more volume (equivalent to an extra two cells). Alternatively the facility only has a life of 37 years.
62. Although it is not clear how the volume has been calculated, Council appears to infer that deposition from three recent "one off" events should be ignored. GVEPA contends that the three events mentioned would not have contributed significant volumes and that over a fifty year period it would be normal to have a number of such "one off" events. Further Council has assumed zero growth in the region. While this is supported by recent figures, growth in regional areas is often characterised by irregular spurts as new industries become established. With a reliable water supply Armidale is a likely candidate for some sort of growth so it seems sensible that growth should be allowed for.
63. GVEPA also notes that both the Guyra and Uralla landfills have relatively short lives and that any material from those centres will further exacerbate the shortage.
64. On the basis of some growth and the requirement to include material from Guyra and Uralla, GVEPA contends the proposed facility is approximately 40% smaller than required.
65. The consequences of this major design error are:
- The EA does not address the actual project; it addresses a much smaller project.
 - All calculations in the EA are questionable - if such a large error can be made on such a fundamental issue and remain undetected through the peer review process then it is reasonable to infer that other more complex engineering elements are flawed.

S041a_37

- It goes to the heart of competence. If this basic parameter is flawed then does the Council have the capacity to implement and manage the myriad "best practice management plans" it contends are necessary to manage the facility.
- All remediation measures are under engineered by 40%
- Leachate volume, traffic volumes and gas generation will all be 40% higher.
- Total costs will be higher but not by 40% due to scale economies.
- Extra cells will be required and these are not included in any proposed plan.
- Presumably more real estate will be required (or otherwise presumably buffer zones must be reduced).
- Post closure costs and monitoring requirements will be higher.
- Management plans will require revision to adjust for higher volumes.
- Any environmental spills will be commensurately larger with the potential for a much greater environmental impact.
- Any environmental spills will require commensurately more response resources.

S041a_37

Abbreviations

ADC	Armidale Dumaresq Council
AECOM	AECOM Australia Pty Ltd
AWT	Alternative Waste Technology
BDA	BDA Group
CEEC	Critically Endangered Ecological Communities
DEC	(the former) NSW Department of Environment and Conservation (now DECCW)
DLWC	(the former) NSW Department of Land and Water Conservation (now DWE)
EA	Environmental Assessment
EBPC	Commonwealth Environmental Protection and Biodiversity Conservation Act 1999
EEC	Endangered Ecological Communities
FOI	Freedom of Information
GHGs	Greenhouse Gases
GVEPA	Gara Valley Environment Preservation Association, Inc.
NMOCs	Non-methane organic compounds
NRMA	National Road Motorists Association
PEA	Preliminary Environmental Assessment
ROTAP	Rare or Threatened Australian Plant
TSC	Threatened Species Conservation Act 1995
UNESCO	United Nations Educational, Scientific and Cultural Organisation

Glossary of Terms

Biodiversity	The variation of life forms within a given ecosystem, biome, or on the entire Earth; often used as a measure of the health of biological systems.
Gara River	The Gara River forms a major catchment that rises north of Guyra and flows in a generally southern direction to the east of Armidale, crossing the Waterfall Way approximately 15 km from town, before falling into the Oxley Wild Rivers National Park, finally draining directly into the Macleay River, and the Gondwana Rainforests of Australia World Heritage Area.
Gondwana Rainforests of Australia World Heritage Area	This site, comprising several protected areas, is situated predominantly along the Great Escarpment of Australia's east coast. The outstanding geological features displayed around shield volcanic craters as well as the high number of rare and threatened rainforest species are of international significance for science and conservation. It was inscribed on the UNESCO register in 1986 and extended in 2007. Of particular pertinence to the landfill issue is the EPBC's identification of a sensitive aquatic ecology within the WHA that is clearly evolved from Gondwanan species.

Imbota Nature Reserve	A Nature Reserve established in January 1999 under the management of the NPWS. It is 218 hectares in area, approximately 8 km south-east from Armidale, and located between Long Swamp and Castledoye Roads.
Landfill[ing]	Also known as a dump or rubbish dump is a site for the disposal of waste materials by burial.
[Proposed] Landfill Site	As per AECOM, the entire section of land encompassing the proposed landfill to which the EA applies. Total area is c. 86ha and incorporates c. 20ha for the actual landfill site, with site access from Waterfall Way and a biodiversity offset area of c. 61ha.
Leachate	Leachate is any liquid that, in passing through municipal waste matter, dissolves chemicals and carries suspended solids of the material through which it has passed. It contains significantly elevated concentrations of undesirable chemicals and is toxic to the environment.
Putrescible	Putrescible wastes are wastes that are subject to putrefaction (i.e. liable to decay, spoil or to become putrid) and includes the following: <ul style="list-style-type: none"> • food waste (including meat, fish, poultry, fruit, vegetables and their cooked or otherwise processed by-products). • waste consisting of animal matter (including dead animals and animal parts). • grease trap waste. • biosolids (as categorised as Stabilisation Grade C in accordance with the criteria set • out in the EPA's Biosolids Guidelines), including manures and animal materials.

a) Failure to address Director General Requirements

Director General's Requirements	Comments	
a conclusion justifying the project on economic, social and environmental grounds, taking into consideration whether the project is consistent with the objects of the <i>Environmental Planning and Assessment Act 1979</i> ;	- No economic justification, budgets or financial assurances	S041b_1
a description of the measures that would be implemented to avoid minimise, mitigate, rehabilitate/remediate, monitor and/or offset the potential impacts of the project, including detailed contingency plans for managing any potential significant risks to the environment	-No measures proposed to remediate potential impacts ie How do Council propose to remediate in case of groundwater pollution ? -No contingency plans	S041b_2
a description of the existing environment, using sufficient baseline data	-No GDE's no flooding data	S041b_3
plans of the proposed landfill, leachate management systems and associated infrastructure	- 'concept design' are not plans	S041b_4
alternatives considered, including not proceeding and expansion of the existing landfill;	-Not seriously attempted	S041b_5
cell and landfill lining design and integrity;	-Contradictory liner details throughout EA	S041b_6
a water balance for the site detailing water sources and quantity, water consumption and recycling, and the estimated quantity of leachate and stormwater;	-Created from 'modelled' data	S041b_7
proposed leachate management systems including pond management and remediation measures, and potential risks on the Gara River and the Oxley Wild Rivers National Park	-Remediation measures not stated -Potential risks not adequately addressed.	S041b_8
water access and harvestable rights; and	-Harvestable rights not addressed	S041b_9
floodings impacts; impacts on aquatic habitats and groundwater dependent ecosystems;	-Aquatic habitats not addressed	S041b_10
weed management, including potential risks to the Oxley Wild Rivers National Park;	-Potential risks not addressed	S041b_11

Table 1 Failure to address DGR's

As an example of the major failure to address the DGR's an example is selected below.

Council claim there are no Groundwater Dependent Ecosystems (GDE's) in the Oxley Wild Rivers National Park.

'No groundwater dependent ecosystems have been identified in the study area, nor in the Oxley Wild Rivers National Park downstream of the proposed new landfill (DNR 2002). Thus, the proposed new landfill is not likely to have any impacts on groundwater dependant

*ecosystems, either in the study area or further downstream in Oxley Wild Rivers National Park.'*¹

Highlighted in the below extract from the NSW Groundwater Dependent Ecosystem Policy it is CLEARLY STATED that GDE's include Fauna which directly depend on groundwater as a source of drinking water or that live within water which provide a source.

S041b_3

The proponent is therefore of the opinion that no Fauna drink or live in the water in the Oxley Wild Rivers National Park.

This is clearly wrong !!!

NSW Department of Water and Energy (DLWC), 2002)

Groundwater Dependent Ecosystems (GDEs)

The assessment is required to identify any impacts on GDEs.

GDEs are ecosystems which have their species composition and natural ecological processes wholly or partially determined by groundwater. GDEs represent a vital component of the natural environment. GDEs can vary dramatically in how they depend on groundwater from having occasional or no apparent dependence through to being entirely dependent. GDEs occur across both the surface and subsurface landscapes ranging in area from a few metres to many kilometres. Increasingly, it is being recognised that surface and groundwaters are often interlinked and aquatic ecosystems may have a dependence on both.

Ecosystems that can depend on groundwater and that may support threatened or endangered species, communities and populations, include:

_ Terrestrial vegetation that show seasonal or episodic reliance on groundwater. _ River base flow systems which are aquatic and riparian ecosystems in or adjacent to streams/ivers dependent on the input of groundwater to base flows.

_ Aquifer and cave ecosystems.

_ Wetlands.

_ Estuarine and near-shore marine discharge ecosystems.

_ Fauna which directly depend on groundwater as a source of drinking water or that live within water which provide a source.

The NSW Groundwater Dependent Ecosystem Policy provides guidance on the protection and management of GDEs. It sets out management objectives and principles to:

_ Ensure the most vulnerable and valuable ecosystems are protected.

¹ Flora and Fauna Assessment Page 33

_ *Manage groundwater extraction within defined limits thereby providing flow sufficient to sustain ecological processes and maintain biodiversity.*

_ *Ensure sufficient groundwater of suitable quality is available to ecosystems when needed.*

_ *Ensure the precautionary principle is applied to protect GDEs, particularly the dynamics of flow and availability and the species reliant on these attributes.*

Noting also that the 'Precautionary Principle' applies to GDE's, Council's lack of knowledge and investigation is not a reason to proceed with this inappropriate site.

Political donations and gifts disclosure statement

[INSERT COUNCIL LOGO]

S041c_1

Office use only:

Date received: ____/____/____

Planning application no. _____

This form may be used to make a political donations and gifts disclosure under section 147(4) and (5) of the *Environmental Planning Assessment Act 1979* for applications or public submissions to a council.

Please read the following information before filling out the Disclosure Statement on pages 3 and 4 of this form. Also refer to the 'Glossary of terms' provided overleaf (for definitions of terms in *italics* below).

Once completed, please attach the completed declaration to your planning application or submission.

Explanatory information

Making a planning application to a council

Under section 147(4) of the Environmental Planning and Assessment Act 1979 ('the Act') a person who makes a *relevant planning application* to a council is required to disclose the following *reportable political donations and gifts* (if any) made by any *person with a financial interest* in the application within the period commencing 2 years before the application is made and ending when the application is determined:

- (a) all reportable political donations made to any local councillor of that council
- (b) all gifts made to any local councillor or employee of that council.

Making a public submission to a council

Under section 147(5) of the Act a person who makes a *relevant public submission* to a council in relation to a relevant planning application made to the council is required to disclose the following reportable political donations and gifts (if any) made by the person making the submission or any *associate of that person* within the period commencing 2 years before the submission is made and ending when the application is determined:

- (a) all reportable political donations made to any local councillor of that council
- (b) all gifts made to any local councillor or employee of that council.

A reference in sections 147(4) and 147(5) of the Act to a reportable political donation made to a 'local councillor' includes a reference to a donation made at the time the person was a candidate for election to the council.

How and when do you make a disclosure?

The disclosure of a reportable political donation or gift under section 147 of the Act is to be made:

- (a) in, or in a statement accompanying, the relevant planning application or submission if the donation or gift is made before the application or submission is made, or
- (b) if the donation or gift is made afterwards, in a statement of the person to whom the relevant planning application or submission was made within 7 days after the donation or gift is made.

What information needs to be in a disclosure?

The information requirements of the disclosure are outlined in the Act under section 147(9) for political donations and section 147(10) for gifts.

Pages 3 and 4 of this document include a Disclosure Statement Template which outlines the relevant information requirements for disclosures to a council.

Note: A separate Disclosure Statement Template is available for disclosures to the Minister or the Director-General of the Department of Planning.

Warning: A person is guilty of an offence under section 125 of the *Environmental Planning and Assessment Act 1979* in connection with the obligations under section 147 only if the person fails to make a disclosure of a political donation or gift in accordance with section 147 that the person knows, or ought reasonably to know, was made and is required to be disclosed under section 147. The maximum penalty for any such offence is the maximum penalty under Part 6 of the *Election Funding and Disclosures Act 1981* for making a false statement in a declaration of disclosures lodged under that Part. Note: The maximum penalty is currently 200 penalty units (currently \$22,000) or imprisonment for 12 months, or both.

Glossary of terms (under section 147 of the Environmental Planning and Assessment Act 1979)

gift means a gift within the meaning of Part 6 of the *Election Funding and Disclosures Act 1981*. Note: A gift includes a gift of money or the provision of any other valuable thing or service for no consideration or inadequate consideration.

Note: Under section 84(1) of the *Election Funding and Disclosures Act 1981* gift is defined as follows:

gift means any disposition of property made by a person to another person, otherwise than by will, being a disposition made without consideration in money or money's worth or with inadequate consideration, and includes the provision of a service (other than volunteer labour) for no consideration or for inadequate consideration.

local councillor means a councillor (including the mayor) of the council of a local government area.

relevant planning application means:

- a formal request to the Minister, a council or the Director-General to initiate the making of an environmental planning instrument or development control plan in relation to development on a particular site, or
- a formal request to the Minister or the Director-General for development on a particular site to be made State significant development, or declared a project to which Part 3A applies, or
- an application for approval of a concept plan or project under Part 3A (or for the modification of a concept plan or of the approval for a project), or
- an application for development consent under Part 4 (or for the modification of a development consent), or
- any other application or request under or for the purposes of this Act that is prescribed by the regulations as a relevant planning application, but does not include:
 - an application for (or for the modification of) a complying development certificate, or
 - an application or request made by a public authority on its own behalf or made on behalf of a public authority, or
 - any other application or request that is excluded from this definition by the regulations.

relevant period is the period commencing 2 years before the application or submission is made and ending when the application is determined.

relevant public submission means a written submission made by a person objecting to or supporting a relevant planning application or any development that would be authorised by the granting of the application.

reportable political donation means a reportable political donation within the meaning of Part 6 of the *Election Funding and Disclosures Act 1981* that is required to be disclosed under that Part. Note: Reportable political donations include those of or above \$1,000.

Note: Under section 86 of the *Election Funding and Disclosures Act 1981* reportable political donation is defined as follows:

86 Meaning of "reportable political donation"

(1) For the purposes of this Act, a reportable political donation is:

- in the case of disclosures under this Part by a party, elected member, group or candidate—a political donation of or exceeding \$1,000 made to or for the benefit of the party, elected member, group or candidate, or
- in the case of disclosures under this Part by a major political donor—a political donation of or exceeding \$1,000:
 - made by the major political donor to or for the benefit of a party, elected member, group or candidate, or
 - made to the major political donor.
- A political donation of less than an amount specified in subsection (1) made by an entity or other person is to be treated as a reportable political donation if that and other separate political donations made by that entity or other person to the same party, elected member, group, candidate or person within the same financial year (ending 30 June) would, if aggregated, constitute a reportable political donation under subsection (1).
- A political donation of less than an amount specified in subsection (1) made by an entity or other person to a party is to be treated as a reportable political donation if that and other separate political donations made by that entity or person to an associated party within the same financial year (ending 30 June) would, if aggregated, constitute a reportable political donation under subsection (1). This subsection does not apply in connection with disclosures of political donations by parties.
- For the purposes of subsection (3), parties are associated parties if endorsed candidates of both parties were included in the same group in the last periodic Council election or are to be included in the same group in the next periodic Council election.

a person has a financial interest in a relevant planning application if:

- the person is the applicant or the person on whose behalf the application is made, or
- the person is an owner of the site to which the application relates or has entered into an agreement to acquire the site or any part of it, or
- the person is associated with a person referred to in paragraph (a) or (b) and is likely to obtain a financial gain if development that would be authorised by the application is authorised or carried out (other than a gain merely as a shareholder in a company listed on a stock exchange), or
- the person has any other interest relating to the application, the site or the owner of the site that is prescribed by the regulations.

persons are associated with each other if:

- they carry on a business together in connection with the relevant planning application (in the case of the making of any such application) or they carry on a business together that may be affected by the granting of the application (in the case of a relevant planning submission), or
- they are related bodies corporate under the *Corporations Act 2001* of the Commonwealth, or
- one is a director of a corporation and the other is any such related corporation or a director of any such related corporation, or
- they have any other relationship prescribed by the regulations.

Political Donations and Gifts Disclosure Statement to Council

If you are required under section 147(4) or (5) of the Environmental Planning and Assessment Act 1979 to disclose any political donations or gifts (see page 1 for details), please fill in this form and sign below.

Disclosure Statement Details					
Name of person making this disclosure statement President, Gara Valley Environment Preservation Association, Inc. (GVEPA)		Planning application reference (e.g. DA number, planning application title or reference, property address or other description) 06_0220			
Person's interest in the application (circle relevant option below)					
You are the APPLICANT		NO	OR	You are a PERSON MAKING A SUBMISSION IN RELATION TO AN APPLICATION	
YES					
Reportable political donations or gifts made by person making this declaration or by other relevant persons					
* State below any reportable political donations or gifts you have made over the 'relevant period' (see glossary on page 2). If the donation or gift was made by an entity (and not by you as an individual) include Australian Business Number (ABN).					
* If you are the applicant of a planning application state below any reportable political donations or gifts that you know, or ought reasonably to know, were made by any persons with a financial interest in the planning application, OR					
* If you are a person making a submission in relation to an application, state below any reportable political donations or gifts that you know, or ought reasonably to know, were made by an associate.					
Donation or gift?	Name of donor (or ABN if an entity); or name of person who made the gift	Donor's residential address or entity's registered address or other official office of the donor; address of person who the made the gift or entity's address	Name of party or person for whose benefit the donation was made; or person to whom the gift was made	Date donation or gift was made	Amount/ value of donation or gift
Please list all reportable political donations and gifts—additional space is provided overleaf if required.					
By signing below, I/we hereby declare that all information contained within this statement is accurate at the time of signing.					
Signature(s) and Date					