Submission S062

Issue Number	Topic	Response
S062_1	E3	The Draft Strategic Plan (2011-2021) sets out the strategic objectives for the Council and includes a commitment to maintaining the *provision of quality sustainable public utilities that are safe, affordable and environmentally responsible*, including provision of effective waste management services. The proposed new landfill is part of a strategy for managing waste produced in the Armidale region in the long term. The proposed landfill forms a key component of Council's Waste Strategy (2010), which has the objective of providing *waste collection and disposal services to maximise reuse of materials and to minimise waste to landfill in order to:* • *Protect public health;* • *Conserve scarce natural resources;* • *Take better care of the environment.*
S062_2	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.
S062_3	P3	Council have considered the implementation of various AWT technologies, including 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. 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.
S062_4	E3	The *National Waste Policy* (2009) sets Australia's waste management and resource recovery direction to 2020. Council's Waste Strategy and proposed new landfill are generally consistent with the aims of the *National Waste Policy*, which are to: • Avoid the generation of waste, reduce the amount of waste (including hazardous waste) for disposal; • Manage waste as a resource; • Ensure that waste treatment, disposal, recovery and re-use is undertaken in a safe, scientific and environmentally sound manner; and • Contribute to the reduction in GHG emissions, energy conservation and production, water efficiency and the productivity of the land. Despite the increasing trend in recycling rates and improvements in technologies (such as AWT), there is currently still a need in the Armidale region to dispose of residual waste that cannot be recycled, stabilised or composted. Therefore 'zero waste' is not a feasible waste management option at present. The proposed landfill will provide landfill capacity that is projected to be required to dispose of residual waste over the next 50 years. Council will continue to investigate alternative technologies and implement these as markets and recovery costs dictate.

To Whom It May Concern

I wish to lodge my objection to the current Landfill proposal by Armidale Dumaresq Council

I would like to see considerable additional scrutiny by both the Australian Government and the N.S.W. Government because of the significant impact this project could have on both World and National Heritage sites. S063_1

Armidale Dumaresq Council has yet to fully report to its ratepayers with a full explanation of all ongoing construction costs and costs of operation - this project is planned at a time of considerable financial debt for the Council and ongoing uncertainty as to the future makeup and management of the Council. S063_2

Landfill site are an unavoidable necessity for a community but the choosing of such a site requires very considerable buffer zones to prevent contamination of water ways and pollution by dust, pest and traffic, this consideration is NOT evident in this proposal. S063_3

There is proximity to the World Heritage listed Oxley Wild Rivers National Park beginning with the Gara Falls Reserve with inevitable contamination of both the Gara and Macleay Rivers. At a time of increasing awareness and concern regarding the health and sustainability of our rivers and waterways such development in the area seems highly inappropriate. S063_4

I have great concerns regarding the original site proposal processes undertaken by the Armidale Dumaresq Council and the committee set up to undertake those processes. S063_5

I wish to repeat my strong opposition to the proposed Landfill site under consideration by Armidale Dumaresq Council at this time.

I wish to advise that I am a resident and ratepayer of Armidale Dumaresq Council. I am not a contributor to any political party. My name is [redacted]midale

Yours faithfully,

[redacted]

Submission S063

Issue Number	Topic	Response
S063_1	H1	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 (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. However, 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 Gara River would not pollute the existing environment at the OWRNP or have a significant impact on the World Heritage Area.
S063_2	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 recently incurred $10.13M in losses, predominantly caused by the requirement to write down its CDO investments reduced in the Global Financial Crisis as required by Australian Accounting Standards. Council recorded a $2.7M surplus for 2009/10 after capital grants, has healthy surpluses projected for the next 4 years and is currently working on a 10 year financial plan.
S063_3	W1 N1 AQ2	The required buffer distance of at least 250 metres to the nearest dwelling is met at the proposed site, based on the conceptual landfill design. A 50 metre vegetated buffer zone has been included into the design of the proposed landfill facility to provide visual screening of the site from surrounding properties and the Waterfall Way and will form part of the proposed 61 hectare biodiversity offset area that has been included in the design of the Project Site. This offset area would surround the proposed landfill footprint and access route. Management measures proposed for the landfill are designed to prevent dirty 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. These measures have been designed in accordance with the DECCW Landfill Guidelines Benchmark Techniques. 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 waterways would be negligible. Both air quality and noise modelling was undertaken as part of the EA in order to assess the potential for impacts on the surrounding environment. Air quality and noise contours were presented in the respective appendices to the EA (refer **Appendix O** and **Appendix Q** of the EA). Dust concentrations and deposition levels at all residential receivers are predicted to be very low. Standard management strategies for landfill sites would be employed in addition to the daily covering of waste and landfill gas monitoring. A complaints hotline would be set up in accordance with EPL requirements. With the implementation of mitigation measures, noise emissions are expected to comply with the environmental criteria for the site under the neutral meteorological conditions that have been shown to be typical of the site. Minor exceedances of the criterion of up to 3dB(A) may occur at certain times near the end of the operating life of Cell 1, however the modelling assumed a worst case scenario where all equipment would be working in unison at the extremities of construction area. In general however, the equipment and therefore the noise generated, would generally be distributed across the site with minimal impacts to noise level amenity.
S063_4	W4	Community concerns have been noted regarding potential for pollution of the Gara River and downstream waterways, such as the Macleay River, through surface water runoff and leachate migration from the landfill. These issues are addressed in **Sections 8.3** and **8.4** of the EA. A range of 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.
S063_5	P2	As part of the site selection process, over 50 alternative sites were considered for the proposed landfill facility including sites within several of the surrounding LGA's. Site evaluation included consideration of environmental impacts, proximity to sensitive receivers and their likely magnitude at each site. The *Regional Landfill Siting Study Final Report* (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.

Armidale Regional Landfill
Environmental Assessment - Submissions Report
AECOM

I WISH TO HAVE MY NAME WITHHELD FROM ANY PUBLIC DISPLAY OF THIS SUBMISSION.

S064_1

My family property backs onto Oxley Wild Rivers National Park. As far as I am aware there was very poor/biased decision making in relation to the site of the proposed rubbish dump, including actions by members of council that require investigation by ICAC. Along with any corrupt activity, the very position of the proposed tip, on a busy tourist drive is so poorly thought out. This adds to the potential environmental threat to the pristine area. I would hope to see a full Inquiry into the positioning of the dump before any further action are taken. S064_2

Name: [redacted]

Address:
[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 S064

Issue Number	Topic	Response
S064_1	P2 E3	As part of the site selection process, over 50 sites were evaluated since the mid-1990s. 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 *Landfilling – EIS Guidelines* (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. Criteria analysed during the site selection process included: • 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. Site evaluation included consideration of environmental impacts, proximity to sensitive receivers and their likely magnitude at each site. The *Regional Landfill Siting Study Final Report* (Maunsell, 2004), *Regional Landfill Siting Study* (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.
S064_2	SE3	It is noted that the Waterfall Way is a National tourist drive and this is acknowledged in the EA. The proposed landfill facility would not significantly affect or impede tourism in the area. The proposed landfill facility would utilise the Waterfall Way as an access route. It is also noted that the Waterfall Way is an existing haulage route for several existing facilities in the region. 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.

To whom it may concern,

I wish to object the Proposed Armidale Dumaresq Regional Landfill, 06_0220.

I have many concerns regarding the site selection process and find it unbelievable that the best site in our region for a landfill just happens to be on a (now former) councillor's land. S065_1

I understand that there have been "Handshake Deals", Selection Criteria Changes, "hand picked" Committee members, Land Zoning Changes, reweighting of data and numerous other deceitful events that have led to this site being selected as the best. S065_2

I am glad that Armidale Dumaresq Council is not the consent authority for this development.

I feel the landfill proposal should be rejected at this site and a proper investigation be conducted for a suitable site.

Perhaps transparent and appropriate negotiations for a new and suitable dump site will be allowed to transpire when the Armidale Dumaresq Council is forced to amalgamate, allowing for "fresh blood".

Regards,

[redacted]

[redacted]

[redacted]

Armidale NSW 2350

Submission S065

Issue Number	Topic	Response
S065_1	P2	As part of the site selection process, over 50 sites were evaluated since the mid-1990s. 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 *Landfilling – EIS Guidelines* (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. Criteria analysed during the site selection process included: • 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. Site evaluation included consideration of environmental impacts, proximity to sensitive receivers and their likely magnitude at each site. The *Regional Landfill Siting Study Final Report* (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.
S065_2	E3	Council refutes any suggestion of "handshake deals". 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.

From [redacted]
Sent: Friday, 6 August 2010 4:49 PM
To: 'Felicity.Greenway@planning.nsw.gov.au'
Subject: Proposed Armidale Dumaresq Regional Landfill, 06_0220

Attention: Felicity Greenway

Re: Proposed Armidale Dumaresq Regional Landfill, 06_0220

We would like to express our strong objection to the Proposed Armidale Dumaresq Regional Landfill, 06_0220.

The reasons we object to the Proposed Armidale Dumaresq Regional Landfill, 06_0220 are as follows:

The new landfill:

- Will be an ***environmental disaster!!!*** S066_1
- Will ***increase our rates!!!*** S066_2
- Has been located based on ***old data*** and designed using ***discredited technology!!!*** S066_3
- Will be on land owned ***by a former Councillor*** and a Real Estate Agent ***who was involved in site selection!!!*** S066_4
- Armidale Dumaresq should be recycling more of the waste collected from households and then do a deal with Tamworth Regional Council to take what can't be diverted from landfill. S066_5

Key Points

Damage to World Heritage National Parks

- Council is seeking 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.
- This kind of waste undergoes chemical changes inside a landfill and the leachate ("garbage juices") that develop attack the landfill liners, so that sooner or later, toxins will escape into the groundwater, then into the river system. S066_1
- This means that contamination of the Gara River is likely to occur. The Gara flows into the Gondwana Rainforests of Australia World Heritage Area.
- 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.

Habitat Degradation

- If the landfill is built on the proposed site adjacent to the Gara River, it will require substantial clearing of habitat which in turn will further harm already threatened wildlife and degrade a critically endangered bush environment. S066_2
- Examples include: koalas, rare birds such as the Diamond Firetail and Speckled Warbler, and critically-endangered Box Gum woodland.

Health Issues

- The dump will emit greenhouse gasses and other toxic chemicals.
- Landfill gas from breakdown of rubbish is about 40-60% methane and the rest carbon dioxide. S066_3

- Council is considering flaring the landfill gas. However, when combusted, this gas contains highly toxic and carcinogenic compounds, such as dioxin and mercury.
- Dumps produce offensive noise, odour, litter, dust, insects and vermin which will be coupled with a modified and scarred landscape. S066_4

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. S066_5
- The Waterfall Way provides the gateway to a host of eco-tourism activities. 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 Rainforests of Australia".
- 3km downstream from the proposed landfill site is the "Blue Hole", swimming and recreation area. Undoubtedly pollution contaminations in the form of litter or leachate chemicals have the potential to permanently affect this recreation area. S066_6

Hip Pocket Impact

- Council won't say, but GVEPA estimates it will cost at least $35m million to build the dump. S066_7
- Our waste removal rates could increase by more than 100% to pay for this.

Council Is Not Planning Properly!!!

- In 2008, when Cr Beyersdorf (former Chair of the Council's Waste Committee) learned about the EPBC ruling he told the *Armidale Independent* that Council should halt all further expenditure on this project, return to the site selection process and find a site that does NOT drain into the Gondwana Rainforests of Australia World Heritage Area water catchment.
- Council hasn't properly explored alternative technologies or better locations. Council has been advised that the Gara Valley site is NOT necessarily the best site available. S066_8
- Council is not looking to the future. New landfill levies are being introduced across the State, to reduce waste generation, encourage recycling and reduce landfill sizes. A forward-thinking Council would plan for a minimum landfill solution to minimise costs to ratepayers.

No need for Armidale Dumaresq Council to develop and run a new landfill facility!

- Alternate waste disposal and improved recycling technologies should be utilised to reduce the need for dumping anything into landfill. S066_8
- A deal should be done with Tamworth Regional Council to take any residual waste that can't be diverted from landfill. Tamworth keep enlarging the hole available for landfill every time they need to upgrade the levy banks on the Peel River. (This would be a win for Tamworth – added income – and a win for Armidale Dumaresq Council – lower total costs of waste disposal.) S066_9
- Trucks delivering fertilizer made from processed chook manure to the Armidale region from Tamworth could backload with the residual waste for landfill at a much cheaper overall cost per tonne than will be the cost for the operation of the proposed new landfill. S066_10

[redacted]

Submission S066

Issue Number	Topic	Response
S066_1	W4	The landfill and pond design are based on 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** for detailed study).In general, leachate collection and conveyance systems have a finite life ranging from under 70 years to over 200 years, however a higher operational life can be achieved by installing the liner in accordance with the construction specifications and by protecting the liner from piercing/tearing during construction and operation. The Landfill Environmental Management Plan that has been prepared for the site 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. 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.
S066_2	FF2	An assessment of biodiversity including potential impacts of the proposed landfill facility on threatened species such as the Box-gum woodland and threatened birds 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 such as the Box-gum woodland and threatened birds, will also be managed through implementation of a suite of management plans including a VMP, 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.
S066_3	AQ4 HR2	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. Landfill methane emissions were considered as part of the GHG assessment. Suitable options to manage landfill gas have been presented, including: • Methane oxidation cap; • Passive venting and using a filter (e.g. activated carbon or the like) to reduce emissions; and • Landfill gas collection system and flaring of methane (combustion conversion to CO2). The most suitable option would be determined and implemented at the proposed landfill facility once data confirming landfill gas quantities is collected from the

		operational landfill. 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 in the local surface water system would not occur. The proposed development would not pose a significant risk to human health 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.
S066_4	N3 AQ1 V3 O2 V2	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. 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. 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. 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 is was concluded that air quality impacts arising from dust emissions from the proposed landfill facility would be negligible. 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.
S066_5	V1 SE3	The proposed landfill facility would utilise the Waterfall Way as an access route. It is noted that the Waterfall Way provides access to eco-tourism activities and is a National tourist drive. 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 obscured by offset vegetation once matured. 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.
S066_6	W4	Stringent environmental controls to manage dirty stormwater runoff, leachate

	SE2	containment and emergency storage would be implemented and would reduce the likelihood of impacts to surface and groundwater. Impacts on the recreation values of the Blue Hole are unlikely. Water quality monitoring would be undertaken downstream of the proposed landfill.
S066_7	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.
S066_8	P2 P3	Over 50 alternative sites were considered for the proposed landfill facility as part of the site selection process, including sites within several of the surrounding LGA's. Site evaluation included consideration of environmental impacts, proximity to sensitive receivers and their likely magnitude at each site. The *Regional Landfill Siting Study Final Report* (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. Council estimates that based on current trends recycling rates will increase over the next few decades. In order to supplement the diversion of waste to landfill, Council have considered the implementation of various AWT technologies. 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. 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 Waste Management Centre.
S066_9	P3	Disposal of Armidale's waste to Tamworth or Coffs Harbour, being the closest potentially available landfills to accept the waste, was considered in the EA (refer to **Section 4.1.4**). This is not considered a viable option for waste management in the long term as: • Haulage and disposal costs to transport waste to Coffs Harbour or Tamworth landfills would be significant; • Socio-economic impacts associated with waste generated in one region being transported to another region for disposal; • The impact on landfill life of surrounding regional landfills; • An unresolved need to provide a long-term waste disposal solution for the region; and • Unforeseeable cost escalations for transport and disposal due to both market forces and changes in policy legislation.
S066_10	P3	Transport of waste from Armidale to Tamworth via backloaded fertiliser trucks is not considered a viable option, particularly due to the volume of waste requiring disposal, the need for guaranteed waste transport capacity (up to 4 loads each day) and the socio-economic impacts associated with transporting waste generated in one region to another region for disposal.

Hello,
We are concerned that a decision on this proposal comes at a time when amalgamation of Armidale Dumaresq Council with two adjoining local government areas seems inevitable. The proposed site is not well placed to serve the enlarged area. Rather than risk development near a sensitive conservation area it would seem more sensible to review the decision taking into account access to a facility for the whole area perhaps making use of the rail line for transport to the site. S067_1 S067_2

Thank you

[redacted]

Submission S067

Issue Number	Topic	Response
S067_1	P2	The need and strategic justification for the proposal is presented in **Section 2** of the EA. The existing Armidale Waste Management Centre landfill, currently used by both Armidale Dumaresq and Guyra Shire Councils, is almost at full capacity with only limited and unapproved possibilities for further expansion. In addition, other landfills in the region, used by Walcha and Uralla Shire Councils, will progressively reach their final capacities within 15 years and cannot accommodate the ongoing landfill needs of Armidale Dumaresq and Guyra Shire Councils. Therefore, Armidale Dumaresq Council proposes to develop a new regional landfill which would service the waste management needs of several local government areas within the region, including Walcha, Guyra and Uralla shires, as opposed to multiple, smaller scale landfills for each individual council area. The development of a regional landfill is considered to be the most efficient waste disposal solution for this region.
S067_2	P3	The use of the existing road network to transport waste to the proposed site on Waterfall Way would result in a minor increase of traffic (up to 6 movements per day) and would not decrease the level of service of the road (refer **Section 8.14** of the EA). Considering the volume of waste expected to be disposed of at the proposed landfill facility each day, transport via rail is unlikely to be economically viable.

Hello,

I am writing in to lodge my objection to the new landfill proposed by the Armidale Dumaresq Council. I firmly believe that given the findings of the Federal Governments EPBC towards the likely potential of 'significant impact' upon the surrounding areas of Oxley Wild Rivers National Park and Blue Hole recreation area, that such a development could be highly damaging towards the local environment and the biodiversity that such areas provide. Consequently, in my opinion, such a proposal should not be allowed to proceed until further assessment can be performed and the environmental integrity of these Heritage listed areas can be guaranteed. S068_1

Kind Regards,

[redacted]
Armidale
NSW, 2350

Submission S068

Issue Number	Topic	Response
S068_1	H1 FF3	Potential impacts on biodiversity were summarised in **Section 8.8** and **8.12** of the EA. The full assessment is provided 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) and the heritage values of the GRAWHA (including the OWRNP) 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 have impacts on aquatic ecology of the OWRNP or have a significant impact on the World Heritage Area.

Ms. Felicity Greenway
NSW Department of Planning
23-33 Bridge Street
Sydney NSW 2000

Dear Felicity,

RE: ARMIDALE DUMARESQ COUNCIL LANDFILL PROPOSAL 06_0220

I am not familiar with the formal procedure in submitting documentation to oppose a local council project however, I felt that I should raise my serious concerns to your department regarding the proposed Armidale Dumaresq Council Landfill Project. I would not normally involve myself in matters associated with local development as I understand that issues such as waste management are a part of any progressive community.

The proposed location of the landfill project, which will except waste from Armidale, Uralla, Guyra and Walcha councils, is in an area of significant importance. The site itself contains several species of vulnerable flora and fauna including Eucalyptus Nicholii, Eucalyptus Elliptica along with the Little Eagle, Scarlet Robin and Koala which were all identified in the environmental evaluation done on site. What I consider to be a greater concern the fact that the proposed site acts as a significant catchment area feeding in to the World Heritage listed Oxley Rivers National Park and the popular recreational area referred to as the Blue Hole. S069_1

My family relocated to the property [redacted]" back in 1981 and I have spent the majority of my life growing up regarding this area as my home. The proposed site will not have any significant direct impact on [redacted]r, I do have some knowledge of the area down stream.

During the 29 years in the area, I have experienced all extremes in weather and climatic conditions and how the surrounding areas manage these events. My main concern regarding the proposed council favoured site is the inability to contain the volumes of surface water run-off in an extreme rain event. S069_2 The area that is referred to as the "eastern fall country" is known to have a long term average annual rainfall which is significantly higher than the township of Armidale and the direct surrounding areas. What is also of great concern is the increased frequency of these significant rain events in more recent times causing increased run-off and localised flooding. I have noted that the environmental study has used data that has been collected from the Armidale Airport weather records which is some 30 km to the West of the area in question. This means that the data is seriously compromised. S069_3

I believe that there are NO measures that could possibly be put in place to control the volume of water that flows through the proposed landfill location resulting down stream via the Gara river to the East and Commissioners Waters to the South of the site. S069_2 Once this volume of water travels a short way down stream from the site it enters into the "Blue Hole" recreational area and the greater Oxley Rivers National Park, it very quickly becomes inaccessible to people. Should an environmental degradation event occur, this inaccessibility means that there are no measures that can be taken to either contain the problem or treat the consequences. S069_4

[redacted] is a unique property as its [redacted] boundary is identified by the cliff edge created by Gara Gorge and the Oxley Rivers National Park. A 250+ acre area west of the Gorge, but still part o[redacted]s permanently fenced in and managed as a refuge. The area is recognised to be home to several threatened and endangered species of flora and fauna and a large amount of environmental studies have been conducted into the importance of the maintaining it as a recognised refuge.

It is my understanding that in 2008, the area only some 5 km to the South East of the site was declared a "Critical Habitat" by the Department of Environment and Climate Change under the NSW *Threatened Species Conservation Act 1995* (TSC Act) and the Commonwealth *Environment Protection and Biodiversity Conservations Act 1999* (EPBC Act). This was established under the approved "Recovery Plan" for the brushed-tailed rock wallaby (Petrogale penicillate) signed off by Lisa Corbyn, Director General and Verity Firth MP, Minister for Climate Change and the Environment.

"The EPBC Act provides for the identification and declaration of critical habitat. It is an offence under the EPBC Act for a person to knowingly take an action that will significantly damage critical habitat, unless the Act specifically exempts the action. This offence only applies to Commonwealth areas. However, an action which is likely to have a significant impact on a listed species or community is still subject to referral and approval under the EPBC Act."

With this in mind, on the 1st of October, 2007, the Commonwealth Environment Protection and Biodiversity Conservation (EPBC) committee ruled that the proposal for the development of the landfill, that was prepared by Maunsell Australia and submitted as part of the Armidale Dumaresq Council proposal, was of sufficient concern. EPBC went further stating that "The project is likely to have significant impact on the World Heritage properties (section 12 and 15A) and National Heritage places (section 15B and 15C). S069_1

Image 1, Red illustrates the location of the largest known colony of brushed-tailed rock wallabies, Green illustrates the proximity of the start of the "Blue Hole" and Oxley Rivers National Park which is a popular recreational and swimming area. Blue represents the home paddocks at [redacted]" which continues predominantly south and east of this image.

Image 2 illustrates the volume of surface water that the proposed landfill site is subjected to in times of significant rain events. (This image is not one that I have take however, it can be confirmed that this was taken of the proposed landfill site.

It is difficult for me to leave out emotions from this letter of objection to the proposed landfill site as I find even the consideration of this site illogical. Unfortunately there are not many things that I feel passionate about however, the protection of this pristine wilderness in once of them.

The stated protection measures are, in my opinion, inadequate and dated with several proposed practices proven to fail. For Armidale Dumaresq Council to consider that a 50 year waste management project is a responsible long term means is a careless approach. S069_5

I thank you for your time as I am aware that this is one of a number of submissions that your department have to consider.

Yours faithfully,

[redacted]

[redacted]

I took this photo of my sister which illustrates both the beauty of the area and also the remoteness. If the reviewal process means that you have to visit the area, I would be happy to show you some of the spectacular, untouched wilderness areas just downstream. Look out for the BBC series now showing on the ABC called *Life* they travelled out from the UK to film the brush-tailed rock wallabies and concentrated on the colony highlighted in image 1. just some 5km downstream from the proposed site.

http://www.bbc.co.uk/expeditions/australia

Submission S069

Issue Number	Topic	Response
S069_1	H1 SE2	Potential impacts on biodiversity were summarised in **Section 8.8** and **8.12** of the EA. The full assessment is provided 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) and the heritage values of the GRAWHA (including the OWRNP) 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 have impacts on aquatic ecology of the OWRNP or have a significant impact on the World Heritage Area. Impacts on the water quality or recreation values of the Blue Hole are unlikely. Water quality monitoring would be undertaken downstream of the proposed landfill (upstream of the Blue Hole).
S069_2	W3	Flooding and stormwater containment at the site are addressed in **Section 8.3** of the EA. The proposed landfill is located within the upper reaches of the catchment and the diversion drains that collect both the "clean" and "dirty" stormwater runoff will be designed to convey the peak flows from the 1 in 100 year Average Recurrence Interval (ARI) storm event from the catchment, in accordance with Australian Rainfall and Runoff guidelines. 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 of storage) from the entire disturbed catchment area of the site, without further containment or storage actions needing to be implemented. This design event has been chosen to minimise the risk of contamination of downstream waters. The Water and Leachate Management Plan details all aspects of the design and operation of the proposed water management system for the site including the Leachate Pond, Sedimentation Basin and Dry Basin. The water management system would contain all dirty and leachate water on the site. The Surface and Groundwater Monitoring Program and Management Plan (appended to the LEMP) details procedures for the management of surface water and groundwater including water quality monitoring and reporting.
S069_3	W1	The modelling undertaken for the water balance for the site used Bureau of Meteorology rainfall data from the Armidale (Radio Station 2AD) weather station, which is located approximately 12km to the west of the site (refer to the Water and Leachate Management Plan appended to the LEMP). This weather station is considered representative of the annual rainfall experienced at the project site.
S069_4	W5	An emergency response plan would be prepared for the site. 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. The emergency response plan would be contained within the final LEMP. In the unlikely event that the landfill is found to be the cause of downstream water

		quality degradation, Council would evaluate available remediation measures and implement these measures in accordance with the Water and Leachate Management Plan which would be prepared in consultation with DECCW. Arrangements for access to areas downstream of the site would form part of the emergency response plan.
S069_5	W5	The landfill and pond design are based on 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. 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. 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.

[redacted]
ARMIDALE NSW 2350

RE: Proposed Armidale Dumaresq Regional Landfill, 06_0220

To Whom It May Concern,

I refer to the proposed site for a new landfill in Armidale, NSW. Armidale Dumaresq Council plan to create a new landfill site, near the Gara River on the Waterfall way. I object to this proposed site as it is not an appropriate location for the following reasons.

S070_1

Firstly, there would be a detrimental environmental threat to the surrounding area and to the Rainforest and World Heritage Areas located nearby. Secondly, there would not only be a detrimental effect to the nearby environment but also the tourism of Armidale. This site is located on a major road into the town of Armidale. This road S070_2 links Armidale to Coffs Harbour. Many tourists drive past this proposed landfill site and the landfill, if it was to go ahead, would be seen from the road. Tourists would leave with this image in their mind rather than the beautiful countryside, national parks and landscape that surround the area. Finally there would be an effect on the S070_3 community of people who live nearby. Some of the houses in the vicinity will be able to see the dump from their house. Not only this, but with the increases of flies, odours and vermin created by the dump their living conditions will be seriously affected. With possible spread of disease from the dump the possibility for future framing will also S070_4 be affected.

I strongly urge you to consider this objection as the proposed site is not appropriate for the above stated reasons. Besides these reasons stated above, the Gara River also joins other rivers so not only this river and local area will be affected, but other areas and rivers too.

Yours Sincerely

[redacted]

Submission S070

Issue Number	Topic	Response
S070_1	H1	Potential impacts on biodiversity were summarised in **Section 8.8** and **8.12** of the EA. The full assessment is provided 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) and the heritage values of the GRAWHA (including the OWRNP) have been considered in **Section 8.12** of the EA. 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 have impacts on aquatic ecology of the OWRNP or have a significant impact on the World Heritage Area.
S070_2	SE3 V1	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 offset vegetation once matured. 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.
S070_3	SE2 V1	The site would be screened by the offset planting proposed as per 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 montages did not take into account future screening from the proposed biodiversity offset area. An analysis of the socio-economic impact of the proposed landfill facility was undertaken and described in **Section 8.9** of the EA. Management measures for social impacts have been provided throughout the EA relating to visual (including amenity issues), transport and traffic, air quality, noise, surface water, groundwater, flora, fauna, heritage issues and land use impacts. The proposed landfill facility would have a positive economic impact on the Armidale Dumaresq LGA through the employment of local contractors and through the increase in efficiencies associated with waste transport.
S070_4	O2 AQ1 O1	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. 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 a sub surface gas and surface gas monitoring programme and the daily covering of waste. A complaints hotline would be set up in accordance with EPL requirements. 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

Armidale Regional Landfill
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		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. 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. A Disease Monitoring Protocol would be prepared which will identify potential pests and diseases and appropriate management measures for controlling these. Contingency plans to deal with outbreaks that may be detected on site during operation will be prepared.

I object to the proposal to build a landfill on the proposed site for the following reasons:

1. The close proximity of the site to the Gara River and the Oxley Wild Rivers National Park. The pollution mitigation intentions are not sufficient to safeguard the critical waterway, the surrounding environment and the National Park. This area can be subject to severe summer storms with considerable runoff and I do not believe it is possible to protect the river from either run-off or ground water pollution, either now, or for the century ahead. S071_1

2. In addition to concerns about the National Park, the proposed site is very close to a large area of regrowth forest, immediately to the east of the Gara River and stretching from there to the Metz Gorge. Although private land, spreading over a number of properties, this bushland is a wildlife habitat and a number of threatened species have been sighted in the area, including a spotted quoll, numerous koalas, and ring-tail possums. An extensive landfill so close will threaten these animals through an increase in predators (rats, cats, dogs etc) and toxic pollutants in water systems. S071_2

3. The proximity of the landfill to the heavily-treed regrowth bush mentioned in the previous point is likely to constitute an increased bushfire risk. Combustion can and does occur in landfill sites, and the prevailing winds from the west and north west, would too easily carry embers or burning substances the short distance to the forest, endangering the forest, its wildlife, and the properties nearby. S071_3

4. Given the close involvement in the identification of the site of the two owners of the land proposed to be acquired for the landfill, it is impossible to trust that the identification of the site as the most suitable is not tainted by personal interest. There must surely be more suitable sites that are not located so close to a National Park. S071_4

5. The site is also unsuitable in that the heavy traffic of trucks from all the surrounding shires dumping landfill many, many times a day will be dangerous on a major tourist route, which has few overtaking opportunities between Armidale and the site. S071_5

Name: [redacted]

Address:
[redacted]
[redacted]
NSW 2350

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

Submission S071

Issue Number	Topic	Response
SO71_1	W5 W3	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. The landfill and pond design are based on 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. 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. 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. Flooding and stormwater containment at the site are addressed in **Section 8.3** of the EA. The proposed landfill is located within the upper reaches of the catchment and the diversion drains that collect both the "clean" and "dirty" stormwater runoff will be designed to convey the peak flows from the 1 in 100 year Average Recurrence Interval (ARI) storm event from the catchment, in accordance with Australian Rainfall and Runoff guidelines. 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 of storage) from the entire disturbed catchment area of the site, without further containment or storage actions needing to be implemented. This design event has been chosen to minimise the risk of contamination of downstream waters. The Water and Leachate Management Plan details all aspects of the design and operation of the proposed water management system for the site including the Leachate Pond, Sedimentation Basin and Dry Basin. The water management system would contain all dirty and leachate water on the site. The Surface and Groundwater Monitoring Program and Management Plan (appended to the LEMP) details procedures for the management of surface water and groundwater including water quality monitoring and reporting.
SO71_2	FF2 O2	An assessment of biodiversity including potential impacts of the proposed landfill facility on threatened species such as the Box-gum woodland and threatened birds 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. A Pest Management Plan will be developed to minimise the potential impacts of pest animals such as rabbits, rodents, cats, crows and flies. This plan will include measures such as provision of fencing, poisoning of pest animals, redistribution of log piles, covering of waste and ongoing monitoring.
SO71_3	HR1	A Fire Management Plan would be prepared and implemented for the landfill site (including the surrounding bushland) which would provide for monitoring of fuel loads, fuel reduction techniques and other management controls. Suitable fire fighting equipment would be kept on site.
SO71_4	P3	Over 50 alternative sites were considered for the proposed landfill facility as part of the site selection process, including sites within several of the surrounding LGA's. Site evaluation included consideration of environmental impacts, proximity to sensitive receivers and their likely magnitude at each site. The final siting study was appended to the EA (refer **Appendix C** of the EA) and concluded that the current site was the most suitable with respect to the identified criteria.
SO71_5	T3	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 LoS A (based on the RTA's *Guide to Traffic Generating Developments*). LoS 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 LoS A, assuming an increase in traffic movements from the proposed landfill facility of 6 movements per day (one way), of which only 4 would be heavy vehicles transporting waste from the existing Armidale Waste Management Centre. 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 will remain stable or may decrease over time and as a result potential impacts on traffic generation are considered acceptable.

[redacted]
ARMIDALE NSW 2350

RE: Proposed Armidale Dumaresq Regional Landfill, 06_0220

Dear Sir/Madam,

The proposed site for the new Armidale Dumaresq Regional Landfill is outrageous! S072_1
This planned site is not suitable because of the inevitable environmental damage that will result as it is close to a major waterway (Gara River) which leads to Oxley Wild Rivers National Park.
Not only this but also detrimental effect to the surrounding environment and residents, who will have an unsightly view and a foul odour from the nearby homes. S072_2
The Waterfall way is a major gateway into Armidale and is an important tourism route and is commented on as one of the most scenic drives in Australia, this would be ruined by a dump visible from the highway. S072_3
There has been minimal community consultation and the landfill site is to be situated on a councillor's land, and a real estate agent asked to find a suitable site which conveniently is his land and is certainly financially beneficial to the associated. S072_4 S072_5
I strongly object to the proposed landfill site, it would be a catastrophe if this proposal proceeds!

Yours sincerely

[redacted]

Submission S072

Issue Number	Topic	Response
SO72_1	FF3	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 (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. However, 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 Gara River would not pollute the existing environment at the OWRNP or have a significant impact on the World Heritage Area.
SO72_2	AQ1 V1	Visual montages from various receptors 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. It is considered views from Waterfall Way would be partially masked by existing vegetation and further obscured by offset vegetation once matured. Measures will be implemented during the operation of the proposed landfill that will accommodate visual absorption capacity such as daily covering of waste, capture and removal of windblown litter and sympathetic building design (including suitable colour schemes). Odour emissions from the site are predicted to be within acceptable levels at the nearest receiver and at the boundary of the site. Standard management strategies for landfill sites would be employed in addition to the daily covering of waste and landfill gas monitoring. A complaints hotline would be set up in accordance with EPL requirements.
SO72_3	SE3	Waterfall Way is a National tourist drive, which is acknowledged in the EA. Views from Waterfall Way would be partially masked by existing vegetation and further obscured by offset vegetation once matured. 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.
SO72_4	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.
S074_5	E3	Council engaged three real estate agents to search for suitable land on the market, which was part of the site selection criteria. During the site selection process, over 50 sites were evaluated, including consideration of environmental impacts and their likely magnitude at each site. The *Regional Landfill Siting Study*

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		Final Report (Maunsell, 2004) was appended to the EA (refer **Appendix C** of the EA) and concluded that the current site was the most suitable with respect to the identified criteria. Land on which the proposed landfill will be sited is currently owned by a former Councillor and one of the real estate agents commissioned by Council during the site selection process.

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

[redacted]
Armidale, NSW 2350

Submission objecting to the Proposed Armidale Dumaresq Landfill (06-0220)

As a land-owner, resident and ratepayer of the Armidale Dumaresq LGA I wish to lodge an objection to the construction of a new landfill at the proposed Waterfall Way site. This proposal will fail to achieve an economic and sustainable solution to the Armidale region's waste disposal needs.

My evaluation is based on the following grounds:

1. Waterway site

Twelve years ago, (1996-98) when ACC/ADC began its site selection process to cover future landfill needs, it was anticipated that a Greenfield site would provide a low cost and long term solution for future capacity for Armidale City/Dumaresq Shire and other potential regional requirements, with a good environmental outcome.

The proposed new landfill site (12 km east of Armidale off the Waterfall Way) will be high in cost to both establish and run , and despite the incorporation of extensive and expensive safeguards, would still expose both the Gara River and the adjacent World Heritage Area at Oxley Wild Rivers National Park to unacceptable risk of contamination. S073_1

The landfill component of waste charges levied by ADC on urban/rural dwellings will (9650 assessments) have to rise by 480% (nearly 5 times) to cover the current estimated cost of just Stage 1 (10 years) of a new Waterfall Way landfill (based on figures provided by ADC) S073_2

2. ADC Landfill Requirements

The combination of council/community education and the encouragement of recycling have halved landfill input over the last 10 years (15,000 Tonnes/YR in 2008/09). Further waste separation at source and sorting reward/penalty programs targeting both residential and commercial waste has the potential to reduce landfill needs to around 10,000 tonnes/yr. If ADC was then to incorporate alternate waste technologies including composting techniques this would produce a non-putrid output that would be easier to contain (reduced volume, no leachate) S073_3

3. Longswamp Landfill Site (see attached photo/diagram)

The current landfill cell (1) being utilized will be filled to capacity in approximately two years (with putrid material). The opportunity exists for ADC to apply to the Environmental Protection Authority to extend the capacity of this existing landfill site (29 ha) by constructing another cell alongside (2) within the existing landfill boundary. An application as a non-putrid cell (composted material) combined with surface water diversion or containment would be viewed favourably by the EPA. This additional cell would extend the life of the current site by 10 to 15 years (inclusive of Guyra/Uralla LGA) S073_4

The opportunity also exists for council to purchase an adjoining block (3) (Lot 919 DP 755808) currently listed for sale. This 10 ha block (zoned 'commercial') would provide council with the space required to both practice AWT and store separated/recycled material prior to re-use/re-sale by ratepayers and/or commercial clients.

Council also has the opportunity to assess the potential and capacity of a large gravel quarry (4) situated less than 1 km east of the current Longswamp Landfill site. The remediation of this quarry site appears to be an ADC responsibility, hence it could be filled with composted, non-putrid, stable landfill and re-surfaced with excess clean fill/topsoil/green waste, then replanted with native vegetation in a manner that would advantage both neighbours and ratepayers. S073_4

4. Regional Landfill/Waste

Economic modeling currently indicates that a viable methane harvesting landfill (that would not be severely penalized by a carbon tax) would need the waste from a minimum 100,000 population, preferably 200,000, hence the entire New England region will need to combine to use a well located landfill utilizing rail or backloading road transport.

The proposed Armidale Dumaresq Regional Landfill at Waterfall Way would burden its residents and ratepayers with an unnecessary economic drain and also an avoidable environmental liability. The proposal should be rejected.

[redacted]
06/08/2010

Submission S073

Issue Number	Topic	Response
SO73_1	W4	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 (Oxley Wild Rivers National Park) which supports 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. In the unexpected event that leachate enters the groundwater, 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.
SO73_2	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.
SO73_3	P3	The need and strategic justification for the proposal is presented in **Section 2** of the EA. Council estimates that based on current trends recycling rates will increase over the next few decades, however landfill space is required to provide for the intermittent need for disposal of material for which stabilisation or composting is not a practical option. In order to supplement the diversion of waste to landfill, Council have considered the implementation of various AWT technologies. 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.
SO73_4	P3	The option to continue long-term landfill operations at the current site was rejected many years ago, hence the search for a new site commencing in the early 1990s.

Dear Felicity,

I understand that the web-based submission system has failed and we therefore need to re-send our submissions by e-mail. This is most disappointing, as it means the number of objections and their views from our community mobilisation efforts will be reduced. I wish to register my protest at this failure of DoP's community consultation mechanisms, and seek your response as to how this failure will be rectified, as I find it hard to believe our comments have just "vanished". S074_1

Herewith my comments and attached please find my certificate relating to political contributions.

I strongly OBJECT to the proponent's proposed regional landfill.

My concerns are:

1. Environmental: It is well-known that landfills inevitably produce greenhouse gas emissions and leachate. In this case, the environmental impact is especially problematic, as the proposed site adjoins a World Heritage-listed National Park. S074_2
2. Procedural: The site was chosen in a non-transparent manner which favoured vested interests (a sitting Councillor and a real estate agent who was involved in site selection). Data were manipulated to achieve the outcome favoured by Council. S074_3
3. Alternatives not fully explored: Council has not fully explored either alternative sites or technologies. S074_4

This week's *Economist* magazine states: "for years [we have] chucked rubbish into...holes in the ground, rather than recycling or burning it. But waste in landfill emits greenhouse gases as it rots, and can poison groundwater. Now...European Union rules are putting paid to new landfill." Why would Australia approve an obsolete technology, when other advanced economies, such as those in Europe, recognise that there are better alternatives? We must encourage a reduction in rubbish at production source; recycling of waste and small-scale, locally-based alternative treatment technologies for the remainder. Approving a landfill does not shift social priorities, it simply encourages "business as usual". S074_5

I urge the NSW Department of Planning to demonstrate real environmental leadership and reject the EA.

I would be grateful if you would please confirm receipt of this e-mail.

Yours truly,

[redacted]

Submission S074

Issue Number	Topic	Response
S074_1	C1 E1	It is noted that during the period that the EA was on Public Exhibition, 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 beyond the already 60 day exhibition period. 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.
S074_2	AQ4 W4 H1	It is noted that GHG are emitted into the atmosphere as a result of construction works and operation through emissions such as fuel and electricity usage in addition to the generation of landfill gas. This was acknowledged in the GHG assessment that was undertaken as part of the EA (refer **Section 8.6** of the EA). The estimated GHG released would not trigger facility thresholds identified by the National Greenhouse and Energy Reporting (NGER) requirements. Active collection of landfill gasses with a landfill gas collection system and flaring the methane has been considered an option for the future of the landfill with regard to management of landfill gas. Other options include: • The application of a methane oxidation cap; and • Passive venting and using a filter (e.g. activated carbon or the like) to reduce emissions. The most suitable option would be implemented at the proposed landfill facility however this would not be known until the facility has been in operation and once accurate quantities of landfill gas produced have been determined. The impact of the proposal on the GRAWHA has been assessed under the EPBC Act and a referral lodged with the Commonwealth (DSEWPC, formerly DEWHA). DSEWPC determined that the proposal constitutes a controlled action under the EPBC Act 1999, however 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.
S074_3	E3	Council engaged three real estate agents to search for suitable land on the market, which was part of the site selection criteria. During the site selection process, over 50 sites were evaluated, including consideration of environmental impacts and their likely magnitude at each site. 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 *Landfilling – EIS Guidelines* (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. The *Regional Landfill Siting Study Final Report* (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. Land on which the proposed landfill will be sited is currently owned by a former Councillor and one of the real estate agents commissioned by Council during the site selection process.
S074_4	P3	Council has considered the implementation of various AWT technologies and 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.
S074_5	P3	The landfill and pond design are based on 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. 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. The proposed new landfill is part of a strategy for managing waste produced in the Armidale region in the long term. The proposed landfill forms a key component of Council's Waste Strategy (2010), which has the objective of providing *waste collection and disposal services to maximise reuse of materials and to minimise waste to landfill in order to:* • *Protect public health;* • *Conserve scarce natural resources;* • *Take better care of the environment.*

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Dear Felicity,

This is my second submission, the first being sent via your website and it not being registered as received in DOP. This is extremely frustrating for those of us who have worked for years to raise public awareness about the unsatisfactory location of the Armidale Dumaresq Council landfill (ADC). We had built the public campaign to register community disapproval of the landfill to a peak corresponding with DOP's submission deadline and now we find the official website for public consultation is flawed. Since many of the submitters are unknown to GVEPA and/or me personally I have no way to contact them to have them re-submit their views via email. So some of the community views about the proposed landfill and the degree of public concern is lost. S075_1

I strongly object to the proposed Class 1 landfill for the following key reasons:

- It is inevitable that toxic chemicals in the leachate from the landfill will eventually find its way into the Gara River and from there to the World heritage and National heritage Oxley Wild Rivers National Park, an environment icon. Clay+ liners (double or single layered) are now discredited as a 'fail-safe' means of containing leachate. In USA the EPA issued an opinion to this effect in 1991 and the UK are about to place a moratorium on future landfills given the many serious negative outcomes from them over time. I question why the Council has not been diligent examining AWT options which would be much more environmentally benign, and with recent new technologies, financially and economically cheaper to operate over the 50 years of intended use. Why start with a dinosaur technology when so many better options are available? What happened to the mandatory use of the 'precautionary principle' when assessing landfill risks and contingency plans? S075_2 S075_3

- As a social scientist and an economist I am seriously offended by the amateurish attempt by ADC to provide DOP and the public with social and economic justifications for the landfill. The proposal is not costed, there is no intelligent risk analysis and suitably detailed environmental safeguards to ameliorate these, and there was no professional effort to assess the social amenity (particularly recreation and tourism) and community concerns. There was no meaningful consultation of the public by ADC at any step in the process identifying the site, designing the landfill and the plans for operation and maintenance. The community had to resort to frustratingly complex 'freedom of information' enquiries that took over a year to pry information from the Council on key issues. Council continues its disinformation campaign by insisting that the landfill will be used only for benign solid waste, yet its application is for a Class 1 'putrescible' component. S075_4 S075_5 S075_6 S075_7 S075_8

- I believe it is premature to be deciding ADC's management and financial capabilities constructing and operating the landfill until the matter of the amalgamation of Uralla, Guyra and Armidale into a 'regional' government is resolved in the next few months. The NSW government has approved the main recommendations of the recent Kibble Report that proposes amalgamation and it is now following up with the Boundaries Commission on the details. Amalgamation will result in a very different set of demands for landfill design (particularly with improved economies of scale for AWT options), it will increase considerably the options for landfill location on the western watershed away from the complex of rivers flowing east into World Heritage and National Heritage national parks, and it will afford time for the appointed Administrator to address the lamentable poor governance and financial condition of ADC. S075_9

Many thanks for hearing me out. I have tried not to repeat most of the points with which I firmly agree that have been covered in other submissions. In view of the problems encountered with the DOP website I should be grateful for an acknowledgement of receipt of my submission that includes as an attachment the disclosure form.

Yours sincerely,

Submission S075

Issue Number	Topic	Response
S075_1	E1 C1	It is noted that during the period that the EA was on Public Exhibition, 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 beyond the already 60 day exhibition period. 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 Council and responses provided in this Submissions Report.
S075_2	W4 P4	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. The landfill and pond design are based on 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** for detailed study). In general, leachate collection and conveyance systems have a finite life ranging from under 70 years to over 200 years, however a higher operational life can be achieved by installing in accordance with the construction specifications and protection of the liners during and after construction. The LEMP that has been prepared for the site 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. 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.
S075_3	P3	Council have considered the implementation of various AWT technologies. 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. However, this does not completely eliminate the need for the disposal of putrescible waste to landfill. It is envisaged that the AWT would further contribute to Council's waste diversion from landfill and therefore minimise any future waste levy charges. Several management plans would be implemented to prevent impacts to the surrounding environment, including the Water and Leachate Management Plan and the Surface and Groundwater Management and Monitoring Plan. These plans would be prepared in consultation with DECCW and in accordance with regulatory requirements.
S075_4	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.
S075_5	P6	A Residual Environmental Risk Analysis for the proposed landfill facility was included in **Section 10.0** of the EA. The analysis considered the identified risks (environmental issues described in the EA) and assessed their residual impact once the proposed mitigation measures (presented throughout the EA) has been put in place. The residual risk of the project was generally low/medium.

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S075_6	SE2 SE3	An analysis of the socio-economic impact of the proposed landfill facility was undertaken and described in **Section 8.9** of the EA. Management measures for social impacts have been provided throughout the EA relating to visual (including amenity issues), transport and traffic, air quality, noise, surface water, groundwater, flora, fauna, heritage issues and land use impacts. The LEMP would also include provisions for corrective action for any complaints received from the community during operation of the proposed landfill facility and maintaining security. Once mature, the offset area would further screen views of the site. It is recognised in the EA that Waterfall Way is a National tourist route. The proposed landfill facility would not significantly affect or impede tourism in the area. Further, 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.
S075_7	C1	**Section 7** of the EA describes the consultation that has been undertaken during the site selection and environmental assessment processes 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 has 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.
S075_8	E3	Council staff and consultants had previously indicated in relation to Site 7 the proposed new landfill would operate essentially as a Solid Waste Class 2 or Non-putrescible landfill but would be licencing the facility as a Solid Waste Class 1 or Putrescible landfill. This is in order to cover the odd occasion where disposal of difficult putrescible material is required as it is not suited to the composting or stabilising process that would be adopted for the proposed AWT facilities at the Long Swamp Road site. 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. However, 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. 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 being transported to the proposed new landfill.
S075_9	E3	It was announced on 17 November 2010 that the proposed amalgamation will not proceed. The site selection process evaluated over 50 sites including sites in surrounding LGAs, of which a number were located in inland (west)-draining catchments. These sites were eliminated due to a number of unsatisfactory criteria ratings such as underlying geology, hydrogeology, access and distance of travel.

[redacted]

To whom this may concern,

I am writing to you to strongly oppose the proposed site for the new rubbish tip for the Armidale/Dumaresq shire.
We live on a beautiful piece of land approx 108acres 6.5kms from Armidale.
Our address is 650 Waterfall Way the scenic path that joins the inland to the sea.
Armidale Dumaresq Council recommend tourist's to make this journey to enjoy the natural beauty and magnificent gorges as an attraction.
We even have an attraction to go by chopper to witness the gorges from the air. I can imagine how beautiful this will look with a rubbish tip in full view for no extra cost. S076_1
No one willingly keeps their rubbish in the front yard for all to view.
We can not make a mockery of nature's gift and be as greedy to use this magnificent area for a giant mega rubbish tip of the entire shire.
Currently we drive past an electricity sub station and the shires treatment works; we may be soon sandwich between these two and a mega rubbish tip.
The human race is realising the destruction our land has experienced through poor decision making. We are a witness to these man made disasters everyday and in many cases embarrassed. Very embarrassed.
It is very easy to go rushing in with earth moving equipment with all the right intentions but when natural and historic sites are put under pressure the destruction cannot be repaired. S076_2
The land needed for the site is, land that will not put what we are most proud of as a community under threat.
The land needs to be in area that has been abandon like a disused gravel pit or land that is not suitable for profitable farming and certainly not on a scenic drive with wildlife and waterways with magnificent waterfalls. S076_3
To use land that has been once viable but is no longer would show great insight on the council's part. It shows our forward thinking for a sustainable future.
I do not feel as though I need to insult anyone's intellect as to the threat the rubbish we generate everyday as a human race puts on waterways and the wide life that relies on it.
Our property has Commissioners Waters running through it and for a waterway that is supposed free from human waste and rubbish at times it is mystery why the water seems so polluted. Imagine the pressure of a giant infrastructure built for rubbish could create.
Council's assurance is heavy trucks and vehicles will be kept to a low minimum. But this is not possible for a community that is growing and will continue too. S076_4
How many heavy vehicles can we expect to come past our front door in 5 years, 10 years even 20 years? These are all considerations that are not being seriously considered. It is my front door they will be coming past. Day in day out for ever, with the 'occasional' spill of rubbish on the way.
Add a Mega tip to this area and we will all be a witness to the disaster. An irreversible disaster.

Please help the residents of the Armidale Dumaresq to be spared from the decision of placing the new rubbish tip in Gara Road Armidale.
Please help the Armidale Dumaresq realise the benefits to be most proud of when they think of a sustainable future.

Yours Sincerely [redacted]

Submission S076

Issue Number	Topic	Response
SO76_1	V1	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 montages did not take into account future screening from the proposed biodiversity offset area. Views would be partially masked by existing vegetation however it is expected these views would be further obscured by offset vegetation once matured. Views from the air are not able to be masked to the extent of ground level views. However, several mitigation measures would be implemented to accommodate visual absorption capacity such as daily covering of waste, capture and removal of windblown litter and building design (including suitable colour schemes).
SO76_2	H1 H2	Community concerns have been noted regarding potential for impacts on surface and groundwater quality and on sites of natural historic importance such as the OWRNP and the GRAWHA through leachate migration from the landfill. These issues are addressed in **Section 8.3**, **8.4** and **8.12** 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 impacts to surface and groundwater. In the unexpected event that leachate enters the groundwater, 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. An Indigenous Heritage Management Plan (IHMP) would be prepared to set out appropriate mitigation measures to protect the known Aboriginal sites and management actions that would be implemented during construction and operation in the unlikely event that further artefacts are encountered.
SO76_3	P3 LU1	Over 50 alternative sites were considered for the proposed landfill facility as part of the site selection process, including sites within several of the surrounding LGA's. Site evaluation included consideration of environmental impacts, proximity to sensitive receivers and their likely magnitude at each site. The *Regional Landfill Siting Study Final Report* (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. The difficulty with using non-viable land or land associated with a former land use such as gravel pits or quarrying activities is that previous mismanagement may also be carried over to the proposed use. The site needs to be suitable to accommodate the installation of the proposed design measures such as the landfill liner in order to contain the waste and generated leachate. The site selection process included consideration of the Metz Site (Site 1), a basalt quarry 25km east of Armidale.
SO76_4	T1	Traffic modelling has been undertaken as part of the EA and has determined that Waterfall Way would continue operating at Level of Service A, assuming an increase in traffic movements from the proposed landfill facility of 6 movements 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**), traffic movements to the proposed landfill facility will remain stable or may decrease over time. As a result, potential impacts on traffic generation are considered acceptable.

To whom it may concern,

I [redacted] Armidale N.S.W am opposed to project application no. 06_0220 the proposed tip site in the Gara River catchment area. The area is unsuitable on the grounds that such waste will contaminate areas in need of our protection. The site is also positioned in an undesirable area at the entrance to our city, causing an eyesore for our beautiful region. [redacted]

S077_1

S077_2

Submission S077

Issue Number	Topic	Response
SO77_1	W4	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 Gara River would not pollute the existing environment or have a significant impact downstream on the OWRNP or the GRAWHA.
SO77_2	V2	Tourism and scenic values of the region are not likely to be significantly affected by the proposal. 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 montages did not take into account future screening from the proposed biodiversity offset area. Views of the proposed landfill from the Waterfall Way would be partially masked by existing vegetation and topography and further obscured by offset vegetation once matured.

From [redacted]
Sent: Tuesday, 10 August 2010 7:58 AM
To: 'felicitity.greenway@planning.nsw.gov.au'
Subject: FW: Proposed Armidale Dumaresq Regional Landfill, 06_0220

From: [redacted]
Sent: Friday, 30 July 2010 9:20 AM
To: 'felicitity.greenway@planning.nsw.gov.au'
Cc: [redacted]
Subject: Proposed Armidale Dumaresq Regional Landfill, 06_0220

To whom it may concern,

[redacted]hereby object to the proposal of the Armidale Dumaresq Regional Landfill 06_0220.

Reasons;

1. We live here.

2.It was rejected previously at a location 2klm upstream because of seepage into the river system, same river same land type. S078_1

3.Tourism, What a welcome to Armidale, A Landfill on the banks of the pristine Gara River and right beside Waterfallway. Main route from Coffs coast. S078_2

4.Habitat degradation. What about the wildlife, they live here too. S078_3

5.Health. I live on Gara Rd with Gara Gorge in eyesight, and a valley direct from the proposed landfill. Smell, infections, greenhouse gases and litter. S078_4

6.Cost, How much do I have to pay for something I don't want? S078_5

7. Planning/Council Who organized this, where did the land come from, why did they pay so much for the land etc, etc? S078_6

Regards,

[redacted]

[redacted]

Submission S078

Issue Number	Topic	Response
SO78_1	P2	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. The landfill and pond design are based on 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** for detailed study). In general, leachate collection and conveyance systems have a finite life ranging from under 70 years to over 200 years, however a higher operational life can be achieved by installing in accordance with the construction specifications and protection of the liners during and after construction. The Landfill Environmental Management Plan that has been prepared for the site 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. 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.
SO78_2	SE3	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 industrial facilities in the region. It is envisaged that views of the proposed landfill facility from Waterfall Way would be partially masked by existing vegetation and further obscured by offset vegetation once matured. It is not expected the proposed landfill facility would significantly affect or impede tourism in the area. Council currently supports and will continue to support 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.
SO78_3	FF1	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. 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 several management plans as presented in Section 4 of the Flora and Fauna Assessment (**Appendix E** of the EA). These plans would 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. The provision of a biodiversity offset area is expected to provide habitat for those species utilising the existing and surrounding vegetation.
SO78_4	O1 AQ1	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

	AQ4 V3	hazardous nor offensive discharges from the development site would occur. Odour emissions from the site are predicted to be within acceptable levels at the nearest receiver and at the site boundary. Standard management strategies for landfill sites would be employed including a sub surface gas and surface gas monitoring programme and the daily covering of waste. A complaints hotline would be set up in accordance with EPL requirements. While it is noted that GHG would be emitted into the atmosphere as a result of construction works and operation through emissions such as fuel and electricity usage (refer **Section 8.6** of the EA), the estimated GHG released would not trigger facility thresholds identified by the National Greenhouse and Energy Reporting (NGER) requirements. 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.
SO78_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.
SO78_6	P1	As part of the site selection process, over 50 sites were evaluated since the mid-1990s. 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 *Landfilling – EIS Guidelines* (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. The *Regional Landfill Siting Study Final Report* (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. 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.

Dear Felicity, I understand that there were some problems with receipt of on-line submissions on the proposed Armidale Dumaresq landfill site.

For cautions' sake my very short submission is provided again below.

Thanks and regards

[redacted]

I grew up on the eastern side of Armidale and have been kept informed of this proposal by others who live in the area. I wish to express my concern about the proposal given the unique beauty and heritage value of the environment surrounding the proposed dump site. Having read the summary of the environment assessment, I am concerned to note the potential impact on water quality of surrounding rivers and areas downstream from the site, an impact that does not appear to have been / be able to be fully assessed at this time. S079_1

I also note with concern the 50 year lifespan of the project, and suggest that assurance should be given that in the intervening time, regardless of the eventual location of this dump, time, money and effort will be spent to find better alternatives to landfill, to encourage all to reduce waste significantly, and to develop safer, more innovative ways of disposing of remaining waste. S079_2

I note that other submissions will raise the potential impact of the proposed dump on flora and fauna in the area. While this is not an area in which I have any specific expertise, any potential for adverse impact is nonetheless of great concern. S079_3

Thank you for the opportunity to comment on this proposal.

(view on proposal: opposed).

Submission S079

Issue Number	Topic	Response
SO79_1	W1	Management measures proposed for the landfill are designed to prevent dirty 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. These measures have been designed in accordance with the DECCW Landfill Guidelines Benchmark Techniques. 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 waterways would be negligible.
SO79_2	P3	The Armidale Dumaresq *Draft Strategic Plan (2011-2021)* sets out the strategic objectives for the Council and includes a commitment to maintaining the *provision of quality sustainable public utilities that are safe, affordable and environmentally responsible*, including provision of effective waste management services. The proposed new landfill is part of a strategy for managing waste produced in the Armidale region in the long term. The proposed landfill forms a key component of Council's Waste Strategy (2010), which has the objective of providing *waste collection and disposal services to maximise reuse of materials and to minimise waste to landfill in order to protect public health; conserve scarce natural resources; and take better care of the environment.* As part of an integrated and strategic approach to waste management, Council have considered the implementation of various alternative waste treatment (AWT) technologies, including Mechanical Biological Technologies (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. 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.
SO79_3	FF1	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.

On Page 93 of the Regional Landfill Sitting Study
Final Report March 2004

which is also page 395/520 of "Armidale VOLUME 2 Appendix A to D.pdf"

The proponents says

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

It is obvious we have the situation where Council are trying to make an unsuitable site 'suitable' with no regard to the 'cost considerations'. S080_1
Mitigation measures required are at the extreme end of the scale due to the high environmental cost of failure. S080_2

Please reject this proposal.

[redacted]

Submission S080

Issue Number	Topic	Response
SO80_1	P2	As part of the site selection process, over 50 sites were evaluated since the mid-1990s. 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 *Landfilling – EIS Guidelines* (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. The ranking process was determined giving weightings to those considered to be of greater significance for design purposes but also to account for potential environmental issues, costs and constraints. Comparative set-up and operating costs were considered as part of the *Regional Landfill Siting Study Final Report* (Maunsell, 2004) which was appended to the EA (refer **Appendix C** of the EA). A full description of the rankings and weightings has been included in Maunsell (2004). The study concluded that the current site was the most suitable with respect to the assessment criteria determined as part of the site selection process.
SO80_2	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 Mitigation measures are required for all developments likely to have an impact on the environment. Mitigation and design measures of the proposed landfill have been prepared in accordance with DECCW Benchmark Techniques and guidelines. The costs for implementing the mitigation measures proposed in the EA have been incorporated into the cost estimate for the proposed landfill. The proposed landfill facility would operate within its EPL granted by the DECCW and the conditions of approval, if granted by the Minister for Planning.

STOP ARMIDALE COUNCIL DAMAGING THE WORLD HERITAGE OXLEY WILD RIVERS NATIONAL PARK!!!

Armidale Council wants to build a new Landfill just off the Waterfall Way next to the Gara River.
The dump site is immediately upstream from the World Heritage-listed Oxley Wild Rivers National Park. Council have submitted an Environmental Assessment (EA) which requires approval from the NSW and Federal Governments. Please urge the NSW Department of Planning to **reject Council's plan** by sending an objection letter or making an on-line submission at: http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=81

Written submissions must contain:	Submitting your statement:
• Your name and address; • The project name and application number (Proposed Armidale Dumaresq Regional Landfill, 06_0220); • A statement declaring your objection to the proposal; and, • The reasons you object to the proposal.	*E-mail:* Felicity.Greenway@planning.nsw.gov.au *Fax:* (02) 9228 6466 *Post:* Major Development Assessment Department of Planning GPO Box 39 SYDNEY NSW 2001

Make your voice heard NO LATER THAN 6 AUGUST 2010!!! *(late submissions may be accepted)*

The Landfill now also requires Federal Government approval as it was deemed (under the EPBC Act) that the proposal ***'will, or is likely to have significant impact on World Heritage Properties'***. The landfill must not proceed.

The new landfill:

- Will be an ***environmental disaster!!!***
- Will ***increase your rates!!! and cost at least $35 million dollars!!!***
- Has been located based on ***old and questionable data*** and designed using ***discredited technology!!!***
- Will be on land owned ***by a Councillor**** and a ***Real Estate Agent**** ***who was involved in site selection!!!***

** (at the time of Council's application)*

Key Points

Damage to World Heritage National Parks

- Council wants 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. This kind of waste undergoes chemical changes inside a landfill and the leachate ("garbage juices") that develop attack the landfill liners, so that sooner or later, toxins will escape into the groundwater, then into the river system.

For further information, Please see our website:
www.worldheritagedump.com.au
Gara Valley Environment Preservation Association Incorporated (GVEPA)

- This means that contamination of the Gara River is likely to occur. The Gara flows into the Gondwana Rainforests of Australia World Heritage Area.
- 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.
- The Federal Government found that 'weeds and rubbish were likely to escape from the landfill and enter the World Heritage and National Heritage area'.

Habitat Degradation

- If the landfill is built adjacent to the Gara River, it will require substantial clearing of habitat which in turn will further harm already threatened wildlife and degrade a critically endangered bush environment.
- Examples include: koalas, rare birds such as the Diamond Firetail and Speckled Warbler, and critically-endangered Box Gum woodland.

Health Issues

- The dump will emit greenhouse gasses and other toxic chemicals. Landfill 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.
- Dumps produce offensive noise, odour, litter, dust, insects and vermin which will be coupled with a modified and scarred landscape.

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 lie the Bakers Creek, Wollomombi and Ebor Waterfalls plus the National Parks which make up the World Heritage listed "Gondwana Rainforests of Australia".
- 3km downstream from the proposed landfill site is the "Blue Hole", swimming and recreation area.

Hip Pocket Impact

- Council won't say, but GVEPA estimates it will cost **at least $35 million** to build the dump.
- Your waste removal rates could increase by more than 100% to pay for this.

Your Council Is Not Planning Properly!!!

- In 2008, when Cr Beyersdorf (former Chair of the Council's Waste Committee) learned about the EPBC ruling he told the *Armidale Independent* that Council should halt all further expenditure on this project, return to the site selection process and find a site that does NOT drain into the Gondwana Rainforests of Australia World Heritage Area water catchment.
- Council hasn't properly explored alternative technologies or better locations. Council has been advised that the Gara Valley site is NOT necessarily the best site available.
- Council is not looking to the future. New landfill levies are being introduced across the State, to reduce waste generation, encourage recycling and reduce landfill sizes. A forward-thinking Council would plan for a minimum landfill solution to minimise costs to ratepayers.

For further information, Please see our website:
www.worldheritagedump.com.au
Gara Valley Environment Preservation Association Incorporated (GVEPA)

Armidale Council Landfill Submission

I had heard that Council was looking for a new tip some years ago but had decided to expand the current one. I was surprised and disgusted that the Waterfall Way property is still being looked at.

I wish to voice my strong opposition to the site chosen for the planned Armidale landfill on the following grounds.

1. I am not convinced that the chosen site was selected on merit. Many articles have appeared in the local newspapers suggesting inappropriate dealings. I am concerned that if Councillors are claiming not to be informed about the project then the rest of the Community has little hope. S081_1
2. The chosen site is in an environmentally sensitive area. The Armidale gorge area is only a couple of kilometres away and the Gara River is just too close to the proposed site. I have hiked down the Macleay Gorges and I wish to keep the downstream waterways pristine. S081_2
3. Tips should be out of public view and located in areas with little environmental impact. It appears that the over riding requirement was for the tip to be as close as possible to Armidale. Eastern fall country close to the main road is a poor location. S081_3
4. Choosing a site that requires clearing is illogical when the majority of the tablelands has already been over-cleared. Surely a better option exists. S081_4
5. Locating a tip site on a tourist route is ridiculous. S081_5
6. The EIS makes it clear there are potential problems with the site. Why not take the threat away from the area to ensure no environmental impact ?
7. $35 million dollars !!. Luckily I now live in Tamworth S081_6

[redacted]

N&H

Submission S081

Issue Number	Topic	Response
SO81_1	E3	As part of the site selection process, over 50 sites were evaluated since the mid-1990s. 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 *Landfilling – EIS Guidelines* (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. The *Regional Landfill Siting Study Final Report* (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.
SO81_2	W1	Management measures proposed for the landfill are designed to prevent dirty 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. These measures have been designed in accordance with the DECCW Landfill Guidelines Benchmark Techniques. 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, including the Gara River, would be negligible. The Surface and Groundwater Monitoring and Management Plan appended to the LEMP (**Appendix B** of the EA) outlines the monitoring that will be undertaken to monitor water quality during operation of the proposed landfill.
SO81_3	V1	Over 50 sites were evaluated as part of the site selection process. 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 montages did not take into account future screening from the proposed biodiversity offset area. Views of the site would be partially masked by existing vegetation and further obscured by offset vegetation once matured.
SO81_4	FF5	An assessment of biodiversity including potential impacts of the proposed landfill facility on threatened species such as the Box-gum woodland and threatened birds was presented in **Appendix E** of the EA and summarised in **Section 8.8** of the EA. The proposed works would involve clearing of less than 1 ha of Box gum woodland, 12.7 ha of the regrowth Stringybark woodland and approximately 3.3 ha of ground cover. 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). Mitigation measures to minimise impacts of clearing on flora and fauna, including threatened species, will be documented in a suite of management plans including a VMP, 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.
SO81_5	SE3	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. 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.
SO81_6	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.

NSW GOVERNMENT | Planning

Cover Sheet and Instructions for Scanning Documents to an Objective File

File Number 10/10388

File Name Armidale Landfill Project - MP06_0220 - Waterfall Way - Argyle - Arn

Printed By Mitchell Gelland **Printed On** 20/05/2011

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Contents

Note:
Yellow highlighting is text highlighted by the author of the submission.

Orange highlighting is text highlighted as part of the response to the submission.

Introduction

My family had 1500 acres on which to build a house yet Council approved our dwelling 600 metres from, and overlooking the proposed dump site and access road. We were not told of 'handshake deals' between Council officers and the vendors which included a sitting Councillor and a Real Estate agent involved in site selection. We were not told of plans to construct the dump within 50m of our property, or that a road for trucks to haul waste would hug our fence line for 1.8km.

We have serious concerns for our local amenity, future and current land use, bore water quality, olive and feijoa orchard, livestock and property devaluation.

It is irresponsible for Council, whatever deals may have been previously negotiated, to pursue a location in such an environmentally sensitive area.

The proponent has spent to date over 1 million dollars attempting to justify the proposed site.

This will require the MAXIMUM environmental safeguards that will then only **REDUCE** the environmental risks. A further minimum of 35 million dollars will be required to construct the dump, due to its sensitive location.

The EPA sum up the necessary requirements in the NSW Solid Waste Landfilling Guidelines when it states;

> ***'Judicious location of a landfill is the single most effective environmental management tool. The aim is to avoid the need for impact mitigation and ongoing management by selecting a site where natural barriers protect environmental quality and where there will not be adverse impact on existing and future development.'***

The guidelines have clearly not been followed by the proponent.

The proponent has nominated at least 13 separate 'environmental plans' and over 1600 pages of assessment, modeling and proposed mitigating techniques. It is obvious that any proposed site that requires 1600 pages to justify is not a 'judicious site' selection.

The potential risks are magnified with the realization that a World Heritage Area, which is part of the Gondwana Rainforests of Australia is less than 4km downstream . Very few areas within Australia can lay claim to having a World Heritage Area on their doorstep. Armidale is one.

The Gara River which lies immediately below the site enters the Oxley Wild Rivers National Park 3.6km away.

The Gara Reserve is directly opposite the proposed site is described by NPWS as an area of 'key habitat'. Thousands of trees require clearing, affecting habitat for many endangered flora and fauna species, and affecting linkages to other areas of environmental significance.

We have now been assured in this EA that there will be no negative impacts on us or the environment because of the 'stringent safeguards' put in place and the quality of the 'modelling' used by the proponent. We are not reassured by Council's commitments to satisfy every conceivable issue that may arise in the future, as most of the plans are yet to be devised and are not included in the EA.

The unfortunate truth is Armidale Dumaresq Council has an appalling Environmental track record, is in a financial crisis and will soon be under the control of an administrator, and amalgamated with Uralla and Guyra Shires. Its record does little to encourage placing any trust in its pretensions.

The EA is an advocacy piece. AECOM has a conflict of interests. Its desire as a business to continue to accept ratepayers' money and continue its association with Council could influence the tone of its report. The list of superlatives to highlight the positive aspects of the proposal are endless, yet negative aspects are left without conclusion— requiring the reader to investigate further through mountains of data.

AECOM's brief from Council was to pursue a landfill option and to 'reweight' and evaluate three **previously** 'selected sites'.

There has been little attempt to find more suitable sites, AND NONE IN THE LAST 9 YEARS.

Council has tried over the last 12 years to justify a corrupted landfill site selection decision by manipulating and modifying selection criteria. Ten years of Council 'sitting on their hands' is not an 'exhaustive' 10 year site search. The selection criterion has been modified to fit the site rather, than the site fitting the selection criteria.

Council has attempted to quell public opposition to the site by releasing false and misleading statements pertaining to the integrity of waste containment. Council's 'future plans' have been portrayed to the Community as a done deed.

The overriding issue that the proponent has failed to address is the environmental impacts resulting from an astonishingly poor and dodgy site selection.

With local knowledge of the severe flooding that has been known to occur in adjacent catchments, and the lack of assurances on leachate containment, the proponent concedes that toxic leachate will at some time in the future enter nearby waterways.

Council didn't consider environmental issues important when 'weighting' selection criteria, choosing instead to favor a 'cosy' deal on an RTA funded road, with willing vendors who apparently had serious 'conflicts of interests'.

In the proponents own words the selected site is not an 'ideal site'. I would conclude it is close to the worst possible site.

Armidale Dumaresq Council's proposal to build a Regional Waste dump on the Waterfall Is opposed on the following grounds.

1. **Corruption of process and procedures in site selection method.**
2. **Inaccurate, aged and subjective data used in site selection process.**
3. **Misinformation disseminated to the Community, and an information 'vacuum' created by Council.**
4. **Significant environmental impacts, Including contamination of the Gara River and World Heritage listed Oxley Wild Rivers National Park.**
5. **Unacceptable and understated local Amenity impacts.**
6. **Landuse Conflicts.**
7. **Detrimental tourism impacts.**
8. **Lack of EA content, including Landfill Design and mitigation measures.**
9. **General EA anomalies.**
10. **No financial information and alternative option details.**

1. Corruption of process and procedure in site selection.

a) Site Ownership.

The proposed site is owned by Ken Waters at the time a sitting Armidale Dumaresq Councillor[1], and the proprietor of LJ Hooker Real Estate Agency[2] , Derry Crisp. Derry Crisp was requested by Council to identify sites for sale that would be suitable for landfilling. He proposed his own and Cr Waters parcels of land as a suitable option for Council to purchase. Surely there is a major conflict of interest in these simple facts.

S082_1

Derry Crisp represented the vendors at a Council Workshop offering their land to Council. Derry Crisp also asked that 'nobody'[Figure 25] be informed of his offer. The secretive process culminated in a 'handshake deal' at 8 times market value with a previous Council General Manager.

Significant 'conflict of interests' appear to exist in this most inappropriate and alarming coincidence. It appears beyond the realms of reasonable chance that the 'best site in the region' happens to be owned by someone involved in the site selection process and a sitting Councillor.

Following the 'handshake deal' Council sought legal advice from solicitor Hugh Piper as to the nature of the deal.

In letter of 31 October 2001, Mr Piper advised

"Council has not entered into a legally binding contract with either of the prospective vendors." and "that in the event that Council resumes either site in the future, then the negotiations may be accepted as valuation evidence by a Court or Mediator. It is not possible however, to determine the significance or weight of these negotiations in compensation proceedings before the Land and Environmental Court".[3]

It is concerning that Council had previously agreed to purchase the properties for an undisclosed sum and the nature of existing agreements are also unknown. The vendors have signed the Preliminary Environmental Assessment (PEA) in 2007 stating they consent to the proponent making the application their behalf.

AECOM state in the project plan that land sale negotiations are to be undertaken in 2010, 3 years after the PEA signatures. The evidence appears to suggest offers have already been made to the vendors. It would be unimaginable that a landowner would consent to a dump being built on their land without an indication of the financial rewards. The precise nature of the deal between council and the vendors needs to be investigated by an independent body.

S082_2

b) Site Identification and initial selection anomalies.

Initial site identification was based on regional geology, and availability of land that was for sale.

'The site selection process was based on:

- 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.

- Consideration of sites within appropriate geological areas."[4]

The key selection criteria that the site should come from properties that were for sale created possible conflicts of interest ,and dramatically reduced the available potential sites in the required 'window of time' to very few. It is unclear if more than two Real Estate Agents were involved in the site selection process, but it is disturbing that one of the Real Estate Agents involved was offering his own property to Council.

S082_1

One has to question the fairness and defensibility of this process.

A host of errors were made in initial site selections and assessments. These errors were perpetuated due to the reliance on the alleged accuracy of the original data.

The initial site assessment for site 7 [Figure 26] was of extremely poor standard. The diagram clearly shows our property boundary some 300m from the actual property boundary. The Consultant has obviously failed to distinguish the difference between a closed road easement and the property boundary. This resulted in the conclusion that a suitable property buffer existed and that suitable

S082_3

[1] Ken Waters was a sitting Councillor at time of application. He has since failed to gain re-election.
[2] Derry Crisp has since sold LJ Hooker Real Estate Agency

[3] Landfill Workshop Discussion Paper page 19
[4] EA page 43

construction and cover materials were available. These of course were not within the proposed property boundary.

S082_3

It was not until I pointed out this error that Maunsell (AECOM) changed the site boundary to the correct position.

When I was sent an initial draft Regional Landfill Siting Study on 25/11/2003 the boundary remained uncorrected, although a later draft which appeared on the ADC Website was corrected.

c) Site Selection Committee membership irregularities.

The original preference of Council for its new landfill was Site 9 ('Ballantrae'), After strenuous opposition from local landowners Council decided to use a 'hand picked' committee, called a Community Consultative Committee to 'reweight' existing data to re-evaluate site suitability of the three most favoured sites.

Council selected members for this Committee, and included one site owner of the proposed sites on the committee, CONTRARY TO ADVERTISED COMMITTEE MEMBERSHIP CRITERIA. I contacted the Chairman of the Waste Management Committee Cr Herman Beyersdorf, to voice my concerns that Council had failed to follow documented selection protocols. He informed me he was not aware of the selection requirements.

S082_4

Derry Crisp (owner site 7) was the only site owner chosen by Council to sit on the committee and obviously the only member of the Committee with a vested interest in the selection of that site as the future dump. The resultant decision raises issues of a conflict of interest.

Council also ignored its own 'sunset clause' and disbanded the Committee immediately after it had provided Council with a recommendation, long before the stated new 'landfill commences operation' as stated in the Terms of Reference. This raises doubts as to the 'real' purpose of the committee.

S082_5

Council's Terms of Reference for the Committee was to 're-weight' the evaluation rankings of 3 selected sites. There was no attempt to look for genuine site options as promised by GM Shane Burns at a Waste Management forum, Council instead opting to modify existing data.

d) Council Policies, procedures and actions

Failure to follow Recommendations

The basis for selection of sites which received consideration in the project was flawed and in no way was ever going to deliver the 'best site in the region' as stated by Council.

Only properties that were for sale within close proximity to Armidale were considered. At a Council workshop the recommendation was to revisit the total area to ensure ' the absolutely best location selected'.

S082_3

THIS DID NOT OCCUR

In conflict with the recommendation below, the site is not 'completely out of public view', and does not have 'sufficient buffer zone' to 'ensure there is little if any impediment to neighbours'.

S082_6

Council Workshop - Strategy for Obtaining a Site for a New Regional Landfill - Discussion Paper - February 2002

9. THE WAY FORWARD

Until the General Manager's recommendations of 27 August 2001 the approach to obtaining a site for a new landfill had been to locate properties with satisfactory potential to develop a landfill and which could be negotiated to purchase.

This has limited Council's investigations to properties that owners are willing to negotiate a sale. Many owners are not willing to sell land to Council for a landfill site for fear of criticism by family and/or neighbours. Some have even intimated that they would fear reprisal from neighbours.

However with the option to resume a site, a totally new alternative is available to Council.

Firstly, the total area can be revisited and the absolutely best location selected. Then any responsibility is completely removed from the property owner if Council compulsorily resumes the site leaving the owner no alternative and for which he can be apportioned no blame.

Also by resuming a selected property or portion thereof at a Just Terms Price, a site with sufficient buffer zone can be selected to ensure there is little if any impediment to neighbours or the public, that is completely out of public view and which provides the ability to operate a supplementary commercial activity on the land surrounding the landfill facility. This could provide an opportunity for alternate income to offset some of the operational expenses of the landfill.

Alarmingly the proponent, contradicting Council's recommendation proceeds to say;

'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.

S082_6

Unless a site is specifically excluded by way of legislation/planning, it could always be developed into a landfill, dependent upon what mitigation measures are required to make it comply with both the DUAP and EPA Guidelines. In these instances however, cost considerations then become increasingly important.'[5]

It is clear that the best available site in the Region has not been selected.

[5] Regional Landfill Siting Study – Final Report - Conclusion Page 93

Inaccurate Record Keeping

An example of Council's inability to keep accurate records is highlighted by the fact the proponent is unable to confirm how many sites were investigated. At different times officers have claimed 40, 50 and over 150 sites were investigated.

There appears to be no record of the majority of sites Council claim they have assessed.

Council contends in the EA that;

> ***'since the early 1990's council has investigated over 40 potential landfill sites in an exhaustive search.'***[6]

S082_7

Later in the document they state;

> ***'A site selection process was undertaken since the mid 1990's which identified a total of over 50 sites for investigation.'*** [7]

More recently council are on record saying they looked at **'over 150 sites'** in a recent NBN Television media release. There is no evidence or data presented by the proponent that confirms the 90 missing sites. No doubt Council's intention was to create the public perception that an 'exhaustive search' had actually been undertaken.

Council's record keeping and documentation of this project is obviously not up to an acceptable standard.

Inappropriate behavior

During the last Council election Mayor Ducat sent a letter to candidates [Figure 37] prior to a 'meet the candidates' forum at the Armidale City Bowling Club. The letter was sent on a Council letterhead urging candidates not to comment on the proposed landfill as they did not have access to all the information. Such an attempt to stifle debate on a contentious issue because of Council's reluctance to keep Councillors, would-be Councillors and the general public sufficiently informed of the situation can only be viewed as bizarre. Mayor Ducat was also standing at this election and his actions appear inappropriate and probably against local government protocols.

S082_8

It is extraordinary that Council who have publically stated their process has been 'honest, open and transparent' are then able to contend that not all information has been available to the public

[6] EA Page xxiii
[7] Environmental Assessment – Armidale Regional Landfill 4.2.1 landfill Siting Studies p43

Cr Beyersdorf, former chairman of the Waste Management Committee resigned due to 'being kept in the dark' over the landfill project. Eight months after the EPBC decision was handed down the Chairman of the Waste Management Committee had still not been informed of the decision. This lapse in communication reveals either incompetence by Council or its officers, or a deliberate withholding of information from elected councillors by Council Officers.

S082_10

In the Armidale Independent newspaper in 2008, Cr Beyersdorf was quoted as follows;

> ***'I am afraid that the fact that this five-page assessment was effectively hidden from Councillors and the Waste Management Committee, as well as from the general public, including residents potentially directly affected by this scheme, does not give me any confidence in the process so far, and I call upon Council to halt any further progressing of this particular proposal until it has been subject to a thorough transparent public review," Cr Beyersdorf said.'***

This was the second time that Cr Berersdorf believed that Council Officers were deliberately withholding information from the committee.

An incomplete list of inappropriate actions is listed below;

- Armidale Dumaresq Council intends to build a new multi-million dollar landfill on a site (site 7) that is currently part-owned by a sitting Armidale Dumaresq Council Councillor, Mr Ken Waters (at time of Council application). The site has previously been ruled out, failed to meet initial selection criteria and immediately prior to formation of the ADLCCC was not the selected site.
- Council approached local real estate agents to identify suitable landfill sites. Mr Derry Crisp (of L J Hooker) identified over half the sites to Council including a site which included his own property and the neighbouring property owned by Councillor Waters. He then recommended the site to Council and also acted as agent for the vendors (himself and Councillor Ken Waters).

S082_1

- Ken Waters failed to declare a pecuniary interest in at least one meeting in March 2001
- Mr Crisp and Councillor Waters concluded a 'handshake' deal with the then General Manager of Armidale Dumaresq Council, Mr Peter Straw, to purchase their combined properties as the new landfill site for 800% more than the land market value. (March 2002).

S082_1

- Later legal advice from Hugh Piper (ADC's solicitor), advised that " Council had not entered into a legally binding contract with either of the prospective vendors" "...in the event that Council resumes either site in the future, then the negotiations may be accepted as valuation evidence by a Court or Mediator.."

S082_1

- Council approved construction of a new dwelling in PIZ (Primary Impact Zone) on our property adjoining Site 7. We were not told of any current or previous purchase

S082_9

negotiations, handshake deals nor given any indication that the dwelling would overlook the landfill area.

- Councillor Waters intended to address a Council Workshop on the new landfill, with the intention of outlining reasons why his property was best suited as the new landfill site. This intention was defended by Mayor Brian Chetwynd, while being condemned by other Councillors (Councillor Beyersdorf) as a matter of pecuniary interest. Councillor Beyersdorf demanded Cr Waters invitation to address the April 8 2002 workshop be revoked. It is believed Mr Derry Crisp addressed the workshop.

- Armidale Dumaresq Council convened a Landfill Community Consultative Committee (ADLCCC) after public outcry. Council selected neighbouring property owners objecting to site 8 and 9, , but for site 7, Council selected the owner Derry Crisp as a site representative. Contrary to released nomination criteria wherby he required group nomination, he nominated himself. S082_10

- Under the Terms of Reference in the "Sunset Clause" the group would be disbanded once the new facilty commenced operation or if decided at a full meeting of Council. This did not occur and the committee was disbanded the night their recommendation was given to Council. Cleary indicating that this Committee was formed to select a site only.

- Declaration from GM Shane Burns that "..the committee members have been able to influence change on selection criteria.." Results in Site 7 now being the 'most suitable' site using changed selection criteria.

- A later application for a vacant position on the committee by a neighbouring property owner was rejected with minutes showing Derry Crisp (owner site 7) objected. Council refused to release information on how the Committee was selected. S082_5

- Letter of protest to ADC General Manager Shane Burns regarding inappropriate selection of the site owner, Derry Crisp, to a position on the committee resulted in the response that no local government guidelines exist for Consultation Committees and Council could select who they want.

- Perceived conflict of interest with Maunsell (AECOM) being employed by Council to project manage and undertake the Environmental Assessment on the new landfill site, will also being in partnership with Council to advise them of waste management strategies. S082_11

- Maunsell (AECOM) also undertook the project to 're-weight' existing data with changes to ADLCCC selection criteria, that changed the recommendation from site 9 to site 7.

- Maunsel (AECOM)I was also given the task of dealing with the purchase of site 7. A draft project Timeline showed property purchase (site 7) before the completion of a successful EIS. After public outrage this proposal was changed. S082_12

e) AECOM conflict of interests.

AECOM is not in a position to provide an impartial document in the eyes of the community due to its employment by the Council to manage the proposed site. AECOM has been engaged by Council to project manage the proposed landfill site until commissioning, and at the same time to undertake the Environmental Assessment of the site. There are obvious financial incentives for AECOM to gain approval so they may proceed to gain further payment for design and commissioning of the dump. How can the company who is acting in partnership with Council to recommend the way forward for future waste management issues also be the same Company who is being paid by Council to undertake an EA, and paid by Council to project manage the proposed landfill? It would not be in their interests to recommend pursuing alternative landfill options such as transporting waste to the nearby Tamworth Regional Landfill. Not many companies would willingly severe their contract and lose millions of dollars of income by recommending options so decisively opposed to their interests S082_11

The current Mayor Peter Ducat has stated that over $1 million dollars has already been spent on consultants [Figure 27] indicating the vast financial remuneration that is available for continuation of services.

2. Inaccurate, aged and subjective data used in site selection process.

a) Failure of site to satisfy initial site selection criteria.

Initial technical requirements for site selection were detailed in the Preliminary Regional Landfill Siting Study as indicated in the Landfill Siting Study - Aerial Photographic Survey[8]

A number of selection requirements were to be met for sites to be deemed suitable for use as a landfill. From the below evidence it is clear the proposed site failed the vast number of required selection parameters.

Slope

Preliminary Landfill Siting Studies PRLSS [Figure 29] state that

Sites with slopes> 5% discarded.

[8] EA Appendix J

(2.1.1 Site Selection Criteria) AECOM note that some of the proposed site 'contains relatively steep gradients of up to 30 %'[9]

Criterion 7 - Site Features	
Topography/Terrain	Sloping site from maximum 990 metre elevation to 960 metres: Some of the site contains relatively steep gradients of up to 30%:
Capacity To Accept Defined Waste	Capacity between 50 and 100 years could be made available subject to detailed design and analysis:

Regional Landfill Siting Study
Final Report March 2004
20023563.01\2004_0203 Regional Landfill Siting Study Rev 3.doc Page 69

Simple graphical analysis [Figure 28] proves slope is well over 5 %. The intermittent first order watercourse which flows through the middle of the site, filling the two farm dams in the valley is indicitive of the sloping nature of the site.

The proponent acknowleges slopes of up to 15% on site when highlighting the soil stability problems.

' Slopes of up to 15% occur on the site.'[10]

Again, the site failed to satisfy basic criteria. S082_13

Flooding

Preliminary Landfill Siting Studies PRLSS [Figure 29] state that the requirement for the site to be flood free.

'Adequate road access Elevated, flood free, alignment.

Elevated Flood free'

Of serious concern to is an observation of the site by Armidale Dumaresq Council's own consultants:

'Flooding – Site is located mid-catchment therefore potential for flooding exists;[11] S082_14

Previous evidence of flooding:'

[9] Regional Landfill Siting Study – Final Report Page 69
[10] EA Page 137
[11] Regional Landfill Siting Study Site 7 'Sherraloy' Page 67

Flood prone locations are a prohibited location as listed under the Solid Waste Landfill EPA Guidelines and it is clear that as the proposal is to construct culverts over the 2 waterways on the entrance road. Hardly a 'flood free, alignment'. S082_14

The use of an 'equation' to estimate localised flooding and waterflows is disturbing noting the importance of this criterion with regards to site selection.

Figure 1 Below proposed site after 54mm of Rain

Local evidence suggests that the proposed dams and ponds are not capable of holding the waterflows that have been experienced in the past. S082_15

Figure 2 Adjacent smaller catchment (Quaife 2007)

'No flood studies have been conducted in this area, instead, calculations using Manning's equation were used to estimate the 100 year Average Recurrence Interval (ARI) flow and the 100 year flood level in these creeks. The results of these calculations indicate that the proposed landfill site is well outside the extent of the 100 year floodplain

The design for the landfill and stormwater ponds (dry basin) incorporates adequate freeboard to contain 100 year ARI flows on site.' [12]

The nearby Timbarra mine disaster highlights the inadequacies in management controls to respond to our rapidly changing and erratic climate. The tailings dams at Timbarra were designed for a 1 in 400 year rain event, yet within two months of opening had failed to contain a rainfall event, contaminating the environment. The mine was then closed.

The Timbarra mine is only 2 hours drive from the proposed landfill site.

The landfill has been designed with a proposed site life of 50 years and incorporated freeboard to contain a '100 year ARI' event. By definition the landfill has been designed with less than a one in two chance of 'over-topping' and contaminating the environment. S082_16

It is clear that the proposed management of floodwaters have been insufficiently addressed.

Compatibility with adjoining development

Preliminary Landfill Siting Studies PRLSS [Figure 29] state an adequate buffer distance of greater than 1km is required.

'Adequate buffer distance> 1 km approx.'

It is clear from [Figure 30] that buffer distances are well under 600m to the site, 900m to the tipping face and the site should have been rejected on these grounds. This of course assumes a deal with the vendor as his house is even closer.

The inconsistencies in the selection process are again highlighted below. The proponent states that it considered 2km 'adjacent' when considering other sites for selection and was ruling sites out on this basis.

'Visually exposed and adjacent (- 2km) closely developed area. West orientation not desirable. Proximity and access to Armidale good. Not recommended'. [13]

[12] EA 8.3 Surface Water P 144
[13] Landfill Siting Study – Aerial Photographic Survey P4

There are significant implications on our local amenity due to the inadequate buffer zone that will be addressed in section 5.

b) Dubious 'reweighting' of site selection criteria.

Reweighting Analysis

An analysis of the flaws and subjective judgements with the 're-weighting' and ranking system employed by AECOM is demonstrated below.

When Maunsell's draft report 'Regional landfill Siting Study ' was released there was a significant error that was pointed out to Maunsell (AECOM), notably that Site 4 was wrongly accessed as NOT being in a target geological area when in fact it was. It then had a criterion rating of 3.

After the error had been corrected the criterion rating in the final report was changed to 4.

As part of the selection process AECOM deemed that being in a 'target geological area', (and site being for sale) was a primary criteria for site selection. S082_17

It seems inexplicable that a major change in primary criteria such as this was only worth an increase in score from 3 to 4 !

A simple example of the fatally flawed process is illustrated below.

As is illustrated AECOM have documented almost identical assessments for Criterion 9 – 'Operational Costs' for the two sites used in this example, sites 4 and 7.

The score difference of 3 between these two sites cannot possibly be justified on the basis of AECOM's data. Multiply by a weighting factor and significant errors are apparent.

Site Assessment for Site 4 'Annerleey' P346 vol 2

Criterion 9 - Operational Costs	
Compaction	Presence of suitable cover materials on site; subject to further investigation; Compaction costs will be lower than those sites where intermediate daily cover is not readily available;
Transfer Operations	Haulage costs amongst the lowest of the sites evaluated due to lower distances to areas serviced (taking into account average haulage levels) and good quality road access;
Operation and Maintenance	Cover and construction materials appear to be available in the short to medium term, but detailed investigation is required; Topsoils would need to be collected and stored for future use in rehabilitation;
Criterion Ranking	5

Site Assessment for Site 7 'Sherraloy' P372 Vol 2

Criterion 9 - Operational Costs	
Compaction	Presence of suitable cover materials on site; subject to further investigation; Compaction costs will be lower than those sites where intermediate daily cover is not readily available;
Transfer Operations	Haulage costs amongst the lowest of the sites evaluated due to lower distances to areas serviced (taking into account average haulage levels) and good quality road access;
Operation and Maintenance	All base materials appear to be in good supply; Topsoils would need to be collected and stored for future closure and rehabilitation;
Criterion Ranking	8

The above is not an isolated example of subjective data judgements being inconsistent with data provided. It is endemic in the presented site selection ratings. When a multiplication factor is then applied, already suspect ratings are further exacerbated.

Council's hypocrisy with regards to Criterion 4 'Local Amenity and Environmental Considerations', is highlighted by the fact that this category was given a weighting of 6 out of 10. It is also alarming that 'environmental considerations' were also not considered important enough even to have its own 'criterion'.

Of a total possible score of 590, environmental considerations, even if they were absolutely perfect, would only account for 60/590 = 10% of the total score. Yet Council announce on their website.

> ***'The protection of our environment, with its unique flora and fauna is one of the foremost challenges facing our community. Armidale Dumaresq Council has a record of environmental responsibility and Council is committed to ensuring that all decision making processes and procedures take environmental, social and economic factors into consideration.***
> ***Council's focus is to protect our environment, with its unique ecosystems and World Heritage areas for the enjoyment of future generations. Council is proud of its record to date, with a first class Recycling Centre, and a community that supports recycling on a daily basis.'*** **Cr Peter Ducat, 12/10/05**
> **http://www.armidale.nsw.gov.au/environment/95838/103329.html**

S082_17

The weighting system employed by the proponent makes the evaluation of this vitally important criterion almost insignificant, contrary to Council's stated 'focus'.

The owner of the current site was able to gain a position on the ADLCCC landfill committee. This is of serious concern as this committee changed the site criteria, weightings and recommendations. The current General Manager acknowledged in an email to a former GVEPA president.

> ***' It has been demonstrated that committee members have been able to influence change on selection criteria'***

This 'change on selection criteria' resulted in the 'selected site' being changed from site 9 to site 7.

At least 5 of the 9 sites (1, 4, 7, 8, 9) had previously been the 'selected site' with site 9 being described by Council consultants as being 10% better than all other sites in 'almost all respects'[Figure 31]. After dubious 'reweighting' of existing data, ADC's new consultants Maunsell (AECOM) , revealed that site 7 was better by 10% than all other sites. This 20% turnaround using the same base data demonstrates the ease in which sites could suddenly be the 'best site in the region'.

S082_17

c) Selective use of available data

Land Classification

Council has attempted to portray the land quality in the district of being poor quality. They have attempted to misrepresent the Land Class Capability Mapping inferring that there is a 5 class system when in fact there are 8 classes of which up to 6 are suitable for production.

Council's current sewerage irrigation site is on class 4 land. I would refute that 'overall level of production is comparatively 'low'. Compared to what? If the comparison was with areas West of the site which does not drain into the World Heritage Area then, due to the increased rainfall, the level of production on the proposed site would be comparatively high.

> ***'The majority of the surrounding land within a two kilometre radius of the Project Site (as well as the majority of the land within the proposed landfill footprint) is classified by DII as "suitability Class 4", defined as "land suited to grazing but not cultivation. Overall level of production is comparatively low due to major environmental constraints".'***[14]

The selective use of extracts from the NSW DPI Land classification guidelines is predictable but disappointing. The DPI state in Agfact AC.25[Figure 39] (Emery) for Class 4 land that.

S082_18

> ***'comprises the better classes of grazing land of the state and can be cultivated for an occasional crop.'***
>
> ***"Class 4 lands play an important role in some agricultural industries: for example, fine wool production on the tablelands of New South Wales depends on comparatively large areas of Class 4 agricultural land."***

The Land & Water Conservation 8 class Rural land capability classification system considers that the top 5 classifications are suitable for production purposes, only Classes 7 and 8 are unsuitable for agriculture, thus class 4 land is in the top half for productive agricultural land use.

The proponent is aware that a portion of the 'Sherraloy' property owned by Council's agent in the site selection process, Mr Derry Crisp is 'improved pasture'. Our property, 'Strathaven', adjacent to

[14] EA page 16

the road entrance for over 1 km had also been previously improved and had in fact successfully regularly cropped corn in the adjacent paddock.

The property owned by Councillor Ken Waters 'Edington' (at time of site selection) regularly fattens steers as does 'Sherraloy', 'Strathaven' and most other surrounding properties in this relatively high rainfall Macleay Catchment, eastern fall country.

S082_18

As noted in 2.2 Land ownership & existing development mention is made of

'Pasture land for intermittent cattle grazing'[15]

If the above is to infer that cattle are intermittently run on this country due to land constraints this is incorrect. Cattle are fattened then sold. The surrounding properties, 'Gara Station', 'Mining Vale' and 'Brookside' comprise some of the major cattle producers and studs in the district.

Whilst aware that a desktop survey would be unable to ascertain these details, consultation with neighbours would have revealed these omitted facts.

Landfilling over designated watercourse (Prohibited)

Council has attempted to remove any record that they propose to landfill over a 1st order watercourse. This of course requires Ministerial approval.
Virtually all mapping has omitted the watercourses running through the site and no mention is made of it throughout the document only ' 2 small farm dams' are mentioned.
Obviously with the proposal to landfill a valley, or as the proponent puts it, 'a depression between two hills' a waterway through the middle of the site (South to North) and its underlying features has not been assessed.

The Department of Water and Energy mad a clear point of this in their DGR's

'Department of Water and Energy
General Assessment Requirements for Major Project Proposals
Under Part 3A of *Environmental Planning & Assessment Act 1979 Page 5 (Vol2 P23)*[16]

S082_19

The Department of Water and Energy (DWE) provides the following advice for consideration:

Although Part 3A Major Projects are exempt from requiring a controlled activity approval (s91 of WMA), the assessment is required to take into account the objectives and provisions of relevant legislation and guidelines.

Note: Recommended Core Riparian Zones (as applicable):

_ Minimum of 10m for any intermittently flowing 1st order watercourse;'

[15] EA page 15
[16] Department of Water and Energy General Assessment Requirements for Major Project Proposals Under Part 3A of *Environmental Planning & Assessment Act 1979 Page 5*

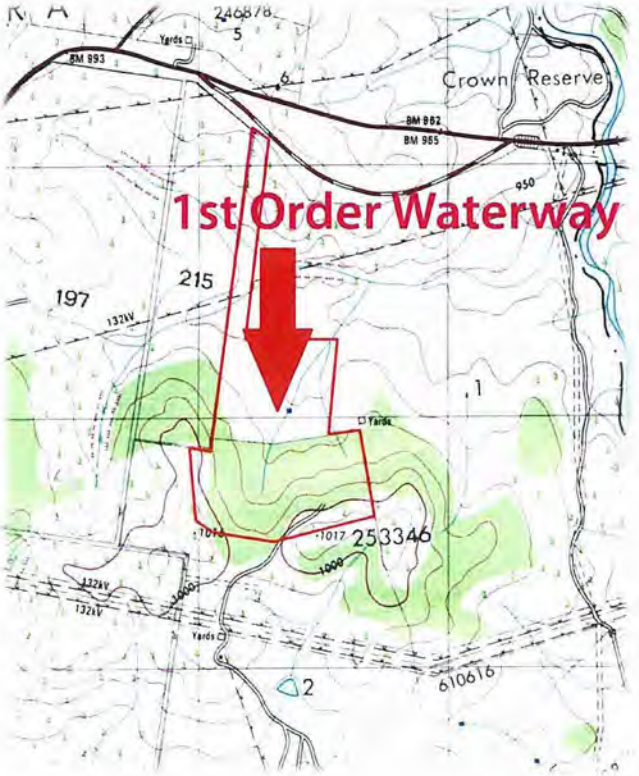

Figure 3 Designated Watercourse

It is clear from the above 1:25,000 map that the recommended core riparian zone objective for landfill exclusion has not been met.

A 1st order waterway is designated as a 'blue' watercourse on the 1:25000 map. The joining of two 1st order Waterways result in a 2nd order Waterway which is also apparent on the North Eastern site boundary.

Council intends to landfill the valley over 1st order watercourse. This is not acceptable.

S082_19

The EPBC decision *(Rishniw, 2007)* handed down by Tania Rishniw in 2007 also made reference to the drainage line that is still yet to be addressed in the EA.

'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.'

Figure 4 1st Order Watercourse viewed from Landfill Western Boundary

Fault Line

There appears to be much confusion over the potential fault line running through the site.

Dr Paul Ashley in his conclusion states;

> ***'It is considered that the fault shown on the map has no basis in fact, at least in the proposed landfill site area and for 1-2 km along strike to the northeast and southwest.'***[17] S082_20
>
> ***'As shown on the 1992 Dorrigo-Coffs Harbour geological map, the fault is indicated to cross over geological boundaries, but yet there is no displacement indicated.'***

[17] Geological report on proposed Armidale Dumaresq Council landfill site, with emphasis on investigation of a possible geological fault - Conclusion

The map he is referring to is the 1992 Dorrigo-Coffs Harbour geological map. Unfortunately this was that map that the 'Targeted Geological Locations' that formed the basis for all initial site identifications in the Preliminary Landfill Siting Study (PRLSS) came from.

If errors in the mapping or mis-interpretation of data of this magnitude are possible then the whole site selection process may have been severely corrupted.

It is extremely concerning that although experts have been employed by Council to substantiate their claims, basic and important areas of the assessment remain unaddressed.

An example of the unknown underlying geology is given below.

> ***'A hydrogeological investigation undertaken in 2007 (Appendix F) reported the abandonment of two bores during drilling near the southern boundary of the Project Site. It was reported that confining pressure was lost due to a subsurface void or possibly a fault in the rock structure.'***[18]

It is clear that the information provided in the EA with the unknown subsurface geology, unknown quantities of construction material but known soil profile which lists, permanently high water tables, gully erosion risk, high erodability and dispersive soils that there is a high likelihood of pollution and sedimentation making its way from the proposed landfill site into the Oxley Wild Rivers National Park. S082_21

Soils

Clearly previous studies on the proposed landfill site have highlighted the dispersive and unstable nature of the soils and the unknown quantities of such materials.

> ***'As demonstrated by the presence of the incised gully and Emerson Class results of 3.3 for both samples, soils exposed in the investigation area were readily erodable though with slight dispersive potential.'*** [19]

Although the proponent acknowledges the soil limitations of the site, THEY ARE NOT ADDRESSED. Again the proponent has included a commitment of a future 'plan' to address the issue. S082_22

> ***'If there are insufficient volumes of appropriate clay material available from site excavation works to construct the required recompacted clay liner (to be determined during the detailed design phase),..'***[20]

[18] EA page 140
[19] Geotechnical investigation Proposed Landfill Site 63F5Z7A690 page 3
[20] EA Page 57

Erodability of the area is obvious from pictures included in the EA, and the more obvious fact that the proposed site is on the rim of a gorge with many hundreds of feet of waterfalls and cascades.

The Environmental Assessment accepts the potential for slope destabilization.

> ***'Soil Stability***
>
> ***There is some potential for the existing slopes to become destabilised during vegetation clearance and construction. Slopes of up to 15% occur on the site. Due to the dispersive nature of the existing soils on the site, there is the potential for slope instability. Appropriate controls will therefore need to be in place to retain soils on site.'***[21]

Yet Council grossly understates the engineering hazards produced by the dispersive nature of the soils, high erodability, high volume water flows and other limitations highlighted below under the headings Argyle, Middle Earth and Commissioners Waters. The fragile soils that have been detected on the proposed site and the significant planned changes to water drainage lines, diversion drains and bulk movement of soils reveal the potential for high levels of pollution to enter the Gara River. S082_21

> ***'Soil Landscapes***
>
> ***A soil survey of the area undertaken by the (former) DNR (now DWE) indicates that the Project Site occurs predominantly within the two soil landscape groups 'Argyle' and 'Middle Earth'. A small section of the site, located along the drainage gullies, is classified as 'Commissioners Waters'. A description of these soil landscapes is presented in the Table 23.'***[22]

Council has used selective data extracted from the DNR soil profile survey (King) to populate Table 23 on page 127 of the Environmental Assessment.

For each of the soil types a heading called 'Qualities and Limitations' highlights the inadequacies of the three mentioned soil types in the DNR survey. These have been **omitted** from the EA. These limitations ignored by Council are presented below.

Argyle

> *'Qualities and Limitations – Hardsetting (localised – lower slopes), poor seedbed conditions (localised), Shallow (localised – upper slopes), strongly acid soils, high organic matter (localised – topsoils), high erodability, sodicity (localised), rock outcrop (localised), steep slopes (localised), sheet erosion risk, gully erosion risk, water repellence (localised)acidification hazard (very low pH buffering capacity.'*

[21] EA page 137
[22] EA Soil Landscapes P127

Middle Earth

> *'Qualities and Limitations – Hardsetting soils of low fertility, severe gully erosion (localised – lower slopes / depressions), high organic matter (localised), rock outcrop (localised), sheet erosion risk, shallow soils (localised), low wet bearing strength, sodicity / dispersibility (localised, high shrink-swell potential (localised), acid soils (localised)'*

Commissioners Waters

> *'Qualities and Limitations – High water erosion hazard, loose, incoherent soils (localised), high organic matter (localised), permanently high water tables, gully erosion risk, engineering hazard, sodicity (localised) high erodibility (localised).'*

There appears to be a significant 'unknown' component in relation to site soils and geology in the Environmental Assessment. Due to only 'concept' drawings based on 'typical' landfill construction site specific factors are unknown. The proponent assures us that this will be addressed once construction and the 'detailed design phase' commences. This does not satisfy the Director General's Requirements, nor reassures me.

3. Misinformation disseminated to the Community, and an information 'vacuum' created by Council.

a) Restriction of information dissemination

Council's effort to inform the community of any aspect, including the location of the proposed landfill, has been nothing short of appalling. The proposed site had been offered to Council over 16 years ago, the last minute rush to 'tick the boxes' is not acceptable. S082_23

Efforts to restrict information dissemination include.

- A website maze that required navigation through multiple pages to obtain information. (A nice site has now been created as part of this submission).
- During the Council elections in 2008 the standing Mayor requested all candidates not to comment on the proposed landfill.
- 'Palming Off' of all Community contact to a sub-contracted Community Liaison Officer distanced from Council, with no ability/permission to answer queries, offering only 'lip service.'
- Community claims refuted with mis-information in order to halt public opposition ie Kempsey Council told that site would be 'inert', Class 2 or any other type of landfill except putresible.

- Failure to signpost proposed site as promised during the public submission period.
- Legal action to force me to remove a mobile sign in my property highlighting the proposed sites location.
- 3 press releases in the last 8 years. None of which mentions proximity to the Gara River, World Heritage Area or potential impacts.
- Repeated requests to gain site access for independent flora and fauna experts were denied by Council. These requests have been noted in the EA, council claiming

'Discussions relating to site access would be undertaken only after land acquisition.'[23]

b) Inadequate and deceptive Community Consultation process

After promises of newsletters throughout the process none had been received until GVEPA members requested action on Council's promise. A 'concept design' stand at the local mall also required GVEPA to insist that the promised activity was undertaken, albeit a photograph of the proposed site was far short of the promised 3D concept design model.

Any material released by the proponent has been misleading to the point of deliberate deception or at best total incompetence. Please note the reoccurring themes of a promise of an Inert Class 2 facility and the promise of rejection of the project if there was the 'slightest chance' of damage to the environment.

Mayor Chetwynd continually made reference to the proposed landfill being an 'inert' landfill [Figure 35], a false and misleading statement.

S082_24

There are multiple examples of this claim, in press releases [Figure 34] and in discussions with Kempsey Council (downstream Council).

More recently the current Chairman of the Waste Management Committee, Cr Whan claimed in The Armidale Express in May 2008 that Council was proposing a Class 2 landfill [Figure 5].

If there is such a proposal it is not supported by evidence and is totally misrepresenting Council's application.

"Their call not to increase waste charges and to abandon plans for a new landfill is irresponsible because the only alternative to a new class two landfill - which is what we are planning - is to ship your waste somewhere else"

- WHAN

[23] EA page 118

Figure 5 Whan Class 2

Some more examples of the public misrepresentation are highlighted below.

The former Mayor Brian Chetwynd claims a 'class 2' 'inert' landfill in a letter to Tony Windsor MP [Figure 35.]

Other Claims of an 'inert' landfill appeared both as a press release in the local newspaper and on Council's website titled 'New tip to be eco-friendly as Council seeks high-tech alternatives'. Six years further on and Council is still applying for 'solid waste – putresible' landfill. [Figure 34]

The definition of inert waste as extracted from the EPA's Environmental Guidelines: Solid waste Landfills p52

'Inert waste

Wastes which do not undergo environmentally significant physical, chemical or biological transformations and have no potentially hazardous content once landfilled. This waste from building and demolition includes bricks, concrete, glass, plastics, metal and timber. They must not be contaminated or mixed with any other material.'

It is clear that Council's application for a **putresible** landfill (Defn: Waste being food or animal matter (including dead animals or animal parts), or unstable or untreated biosolids.) is significantly different from the 'high-tech', eco-friendly inert landfill that Council has told the public they were proposing.

S082_24

In response to a letter on GVEPA's behalf to the Member for New England, Tony Windsor on the 14th Dec 2006

The new Mayor Peter Ducat stated;

'Unfortunately, our previous mayor had a tendency to use the term inert when what he was really meant was that the waste material would be processed such that it could be considered "stabilized" before placement in the landfill'.

This disgraceful attempt by Council to distance themselves from community promises has continued the deceitful tactics used to date by Council. We are sure that a member of the waste management committee, Staff member, Councillor or even a AECOM contractor may at some stage have tried to correct the Mayor on this issue. Unfortunately it never happened. In the same letter Mayor Ducat stated;

'We are not building an inert landfill and this has never been considered or proposed'

Unfortunately, although council may never have been proposing an 'inert landfill' it has been clearly shown that Council was telling the public and downstream Council's the opposite.

Kempsey Council was informed by GVEPA members of the proposed landfill.

An Article appeared in the Macleay Argus, 20th July 2004 again quoting the Armidale Mayor

S082_24

'But Cr Chetwynd said it was the council's aim to develop a landfill that would take only inert material and thus prevent contamination.

"And even though recommendations are to have a landfill in the area we're looking at a Class Two landfill that only takes inert materials."'

In April 2007 the Chairman of the Armidale Dumaresq Council waste Management Committee, Herman Beyersdorf resigned from the Committee.

One must ask the question if the Chairman of the WMC says there ' has been little attempt to inform and consult with councillors' what can be said for their consultation with the public ?

'The chairman of the Armidale Dumaresq Council's waste management committee, Herman Beyersdorf, has resigned from the committee.

He claims to have been kept in the dark over changes which could lead to a multi-million dollar blowout in the construction costs of Armidale's proposed new landfill.

Councillor Beyersdorf says he has not been properly informed of changes in the council's planned new landfill that he says could add up to $4 million to the final cost.

He says he was provided with a one-page briefing and little subsequent information on changes to government regulations which would lead to the blowout.

He says he has not been told of the new legislation involving construction of a buffer zone around the landfill.

He wants to know when the new laws were passed, and why council officers seemed not to have known about them earlier than last month.

He says there has been little attempt to inform and consult with councillors.'

After reading the PEA I noticed some irregularities and contacted the Aboriginal Elder, Rhonda Kitchener, who was involved in the writing of the indigenous report.

Rhonda told me that she had found Aboriginal artifacts and was told by a Council Officer with a Scottish accent not to tell the public or any neighbours of the find.

S082_25

She was surprised when I told her Council were still planning to proceed with the site as Council had told her that this was not to be the case.

I believe there may be more to this story.

Since 1998 Council has reported that the present landfill site has had only 18 months of available space. 12 years later it still has 18 months of available space.

S082_26

Council has continuously stated that 'there is no time' to look for another site. After hearing this for 10 years questions must be asked of Council in respect to their honesty and integrity.

4. Significant Environmental Impacts, including contamination of the Gara River and World Heritage listed Oxley Wild Rivers National Park.

a) Groundwater Contamination

Impact on Ecosystems

When the EPBC handed down their decision, ruling that Armidale Dumaresq Council's proposed landfill was 'likely to have significant impact on World Heritage Properties', Tania Rishniw stated the following as one of her reasons for declaring the proposal a ' controlled action' (Rishniw, 2007)

'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.'

The Federal Government found that the World Heritage Values were highly dependent on groundwater and surface water yet the proponent has found there are 'no groundwater dependent ecosystems.'

S082_27

'No groundwater dependent ecosystems have been identified in the study area or in the OxleyWild 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 in the study area or further downstream in Oxley Wild Rivers National Park.'[24]

Council basing their conclusion on their own inadequate investigations is not what a UNESCO body would expect under Australia's World Heritage Obligations.

[24] Flora and Fauna Assessment Page iii

Groundwater Presence

The proponent acknowledges the presence of significant groundwater.

> ***'The area of elevated topography at the southern part of the Project Site is expected to act as a local groundwater recharge location with infiltrating waters forming spatially and temporally transient perched groundwater at the shallower depths. Additionally, deeper percolation of groundwater is expected to recharge the deeper aquifers observed on site in the fractured mudstone. Review of regional bore data indicates that this is likely to be underlain at greater depths by a fractured granite formation which also acts as a regional groundwater body. The main expression of groundwater at the Project Site is anticipated to be both in the areas of higher permeability, that is, where sands and gravels have been identified, as well as at depths within the fractured mudstone of the Sandon Beds.'***[25]

Our registered 'Stock and Domestic' bore only 80m from the site is waterbearing at 7m. The standing water level is about 30m. The bore suggested pumping rate is 2700 litres/hr.

The required selection requirements for the site as detailed in the Regional Landfill Siting Study **Criterion 3 - Ground and Surface Water Environment** makes it clear that Council require a site with little or no potential for exploitation of groundwater.

> ***'Hydrology/Groundwater - Soils to have a low hydraulic conductivity, with little or no local potential for exploitation of connected groundwater;'***[26]

S082_28

It is clear that although Council claimed they were advocating a site with little groundwater potential they did not make themselves aware that 80 metres from the site a considerable aquifer exists which is licensed for domestic and stock water.

Monitoring may require a significant commitment by Council, but if future monitoring exposes a contamination issue it will be too late. Costly remediation measures are required in the DGR's, but are not included in the EA.

Acknowledgement of Contamination Possibility

Council acknowledge the potential for contamination to enter the groundwater aquifers.

A World Heritage area is at stake, along with Australia's obligations to preserve the area. The potential for contamination, 'albeit limited' should be enough reason under the 'precautionary principle' to reject the project.

[25] EA page 157
[26] Regional Landfill Siting Study Final Report Page 7

The proponent states;

> ***'There is potential, albeit limited, for defects to occur during the construction of the landfill liner, resulting in potential leaks to the groundwater. During operation, a well-designed and installed liner may be expected to experience some degradation or aging with time that would eventually lead to localised failure. Degradation mechanisms include swelling, ultraviolet degradation, temperature, environmental stress cracking and biological and oxidative degradation (refer Appendix I).'***[27]

The 'unknown life' of liner material must also be questioned. Obviously liner life has only been tested in a hypothetical environment, based on a 'modelling' system to speed the aging process.

S082_29

> ***'The available laboratory and field evidence, combined with modelling, indicates that primary Leachate Collection and Conveyance Systems in municipal solid waste landfills have a finite service life, which could range from less than 70 years to more than a century depending on the design, waste characteristics, material and exposure conditions and mode of operation. A typical HDPE liner should have an operational life of approximately 200 years if appropriately maintained.'***[28]

Acknowledged by the proponent is a finite service life which in fact could allow leachate contamination to occur possibly immediately, but for certain at some stage.

> ***'Potential impacts to underlying groundwaters may arise from leachate infiltration through a landfill's liner material, primarily where the liner has not been installed appropriately, or has since become compromised in some manner.'***[29]

Unknown Geology

It is apparent that Council really don't know the underlying geology of the site, otherwise we would not be relying on a series of 'concept designs' and commitments.

An example of this is the presence of a 'subsurface void' on the site. Could there be more of these, how would Council know? It appears beyond the realms of any possibility that with only a dozen or so holes drilled on site that the proponent can drill into the only 'subsurface void' on site.

It appears the proponent's sub-contractor Dr Paul Ashley (Ashley) has come to the same conclusion where he states that it is unlikely that he has been able to obtain a ' representative sampling of the steeply dipping sedimentary rocks of the proposed landfill site'.

[27] EA page 158
[28] EA Page 158
[29] EA Page 158

Possibly more concerning is his conclusion that the chances of intersecting 'major faulting' are minimised as the boreholes are also vertical. Alarmingly they managed to drill directly into a vertical 'sub-surface void' !!

'IMPLICATIONS

As the borehole was vertical, it is unlikely that it has been able to obtain a representative sampling of the steeply dipping sedimentary rocks of the proposed landfill site. Maybe this is of little consequence as it is likely that other rock types to be expected in the district (e.g. mudstone, chert, etc.) would not be greatly different in composition, structure or weathering effects than the greywacke type rocks that were sampled.

No wide zones of major faulting were recognised in the core, but again, the chances of intersecting such structures would be minimised because of the vertical borehole. Most geological faults in the region are near-vertical.'[30]

S082_30

This obviously has massive repercussions for Council's assertions relating to the length of time stated for contamination to reach the Gara River and then the World Heritage Area.

'The effect to groundwater of the presence of the fault/subsurface void cannot be established based on the amount of investigation undertaken to date. If further assessment of the fault/subsurface void is required, it is recommended that additional geotechnical and hydrogeological investigation be undertaken in the vicinity of the feature.'[31]

Water movement at various depths also appears at odds with Council assertions relating to the stated 700-800[32] years for contamination to reach the Gara River.

'While no standing groundwater was detected during the shallow soil drilling investigation, the soil profile had evidence of transient sub-surface flow within the shallower soils.'[33]

Unknown Groundwater Flow

[30] Vol4 page 150 Geo Investigation
[31] *Hydrogeological Investigation Page 15*
[32] Literature Review and Leachate Report\Leachate Report – Final Page 19
[33] EA Page 151

I cannot accept that my domestic water bore only 80m from the site will not be impacted by the proposed dump.[Figure 6 Registered Bores and Waterways]

If the standing water level in my bore is 30m and has also transient flows at 7m it appears obvious that it is further down the hydraulic gradient of the proposed site.

'it should be noted that all bores are located in different catchments to that of the proposed landfill facility. All of these bores are also separated from the site by waterways (rivers or streams). It is therefore expected that groundwater from the Project Site would not impact on nearby registered groundwater bores.'[34]

S082_31

Council claim that they do not expect impact on nearby bores because they are separated from the site by waterways. They are wrong, unless our property boundary fence is now a river. It is clearly established therefore that there may be impacts on our bore as it is only 80m from the site.

Considering the statement below it is again clear Council is ignorant of, or confused regarding what is happening under the surface of the site.

'It is considered likely that the water sampled from BH5 is representative of, or is being impacted by a separate aquifer to that of the majority of the site, flowing from the north back toward the low point of the Project Site in the vicinity of BH4. Based on the limited number of wells in this section of the Project Site, groundwater flow direction could not be accurately interpolated. However, the estimation of groundwater flow direction, based on the available data and the observed topography, is considered to give a valid representation of the flow direction in the northern section of the site.'[35]

Unknown Chemical Sources

Other 'unknowns' are listed below. They contribute to a quite comprehensive list.

The uncertainty of Council's assessment and analysis certainly does not fill me with any confidence in their ability to undertake and manage their commitments.

S082_32

- ***'Chloroform was detected in very low concentrations in wells BH9 and BH11. The wells are on opposite sides of the site and do not have the same geochemical characterisation. Despite the potential source of the chloroform being unknown, the chloroform detected is not considered significant given the low concentrations'***[36]

[34] EA Page 160
[35] EA Page 157
[36] EA Page 157

- ***'No likely source of phenols was observed in the vicinity of BH5. Contamination of the well due to drilling is not considered to be a likely source as the phenols were detected over several months and the bore has been subjected to repeated rigorous development.'***[37]

- ***'The Total Organic Carbon concentrations detected in all wells is considered relatively low except for BH5. The TOC concentration in BH5 has risen markedly (740%) since measured in October, 2006. No apparent reason for this rise was observed'***[38]

Figure 6 Registered Bores and Waterways

Council's previous consultants produced a 'risk analysis' for site 7 [Figure 7 Dep't Public Works Risk Analysis Site7]. The unflattering analysis highlights a number of risks.

[37] EA Page 157
[38] EA page 157

One of which is of serious concern is No. 15, Leachate Containment. The risk factor is 'leakage of leachate to surrounding groundwater' the consultant states the likelihood as 'high' and the impact 'critical'. S082_33

This highly critical report provoked Council's current consultants to produce a 'new' risk analysis.

No.	Category	Risk Factor	Potential Consequences	Likelihood	Impact	Containment Measure
9	**Impact on Environment**	Compatibility with surrounding land use.	Neighbour and/or general community outrage before approval or during operation	Medium	High	Choose different site before approval or mitigate impact by screening site, or traffic controls for trucks on approaching roads.
10	**Impact on Environment**	Unsuitability of topography to allow for visual and noise impact	Neighbour and/or general community outrage before approval or during operation.	Medium	Medium	Site selection, orientation, separation distance, and site management or choose different site before approval.
11	**Impact on Environment**	Unsuitability of topography to allow for stormwater control.	Expensive stormwater interception, diversion and storage system.	Low	Low	Select different site or allow for cost of stormwater control
12	**Impact on Environment**	Adverse environmental affects during construction and operation	Damage to environment. EPA prosecution, public outcry	Medium	High	EIA to include mitigation measures. These will form the basis of an environmental management plan for use during construction and operation of the landfill.
13	**Impact on Environment**	Odours escaping from the site.	Neighbour and/or general community outrage before approval or during operation.	High	Medium	Appropriate site selection, separation distances, orientation with respect to prevailing winds, screening, appropriate construction techniques, cover, venting of landfill gases and site management.
14	**Impact on Environment**	Archaeological, flora and fauna issues at site	Delay to program and additional costs.	Medium	Medium	Ensure adequate environmental impact assessment and consultation. Include contingency in budget.
15	**Leachate Containment**	Leakage of leachate to surrounding groundwater	Contamination of groundwater streams creeks and/or river. EPA prosecution, public outcry.	High	Critical	Provision of leachate containment barrier and leachate drainage and collection system. Cover material and compaction, and stormwater diversion. Monitoring and management.
16	**Leachate Containment**	Leakage potential of basement geology.	Contamination of groundwater streams creeks and/or river. EPA prosecution, public outcry.	Low	Critical	Sound assessment of local and regional geology. Adequate design and construction of leachate collection system Expensive remediation of groundwater, and reinstatement of liner and drainage system.

Figure 7 'Risk Analysis' DPWR 1

b) Surface water Contamination

The NSW National Parks & Wildlife Service (NPWS) has issued a Plan of Management covering Oxley Wild Rivers National Park, Cunnawarra National Park and Georges Creek Nature Reserve.

From the Plan of Management the NPWS express a concern about a vehicle accident posing a threat to water quality.

> ***'The 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. A vehicle accident involving a chemical or fuel spill would pose a major threat to water quality.'***

Vehicle accidents are unavoidable but the placement of a Regional Dump in the proposed location undoubtedly poses a far greater threat to the environment, and it is avoidable.

The below photo [Figure 8 Adjacent smaller Western Catchment 2007] shows the adjacent yet much smaller and less steep catchment after only 50 mm of heavy rain.

Figure 8 Adjacent smaller Western Catchment 2007

It is clear that the presence of dispersive soils, slopes up to 30% and undefined water management plans that downpours will not be contained.

This can result in 'overtopping' of the leachate pond and will cause increased and uncontrolled sediments to enter the Gara River.

S082_14
S082_16

This has not been addressed in the EA as the plans are only commitments at this stage.

Landfilling over designated watercourse (Prohibited) has been addressed in **section 2.**

Council claims in the below statement that;

> ***'The proposed on-site access roadway would traverse a number of creek crossings and drainage lines. Adequately sized culverts would be provided at all creek crossings and drainage lines which would be designed so as not to impede flows generated by a 1 in 100 year storm event.'***[39]

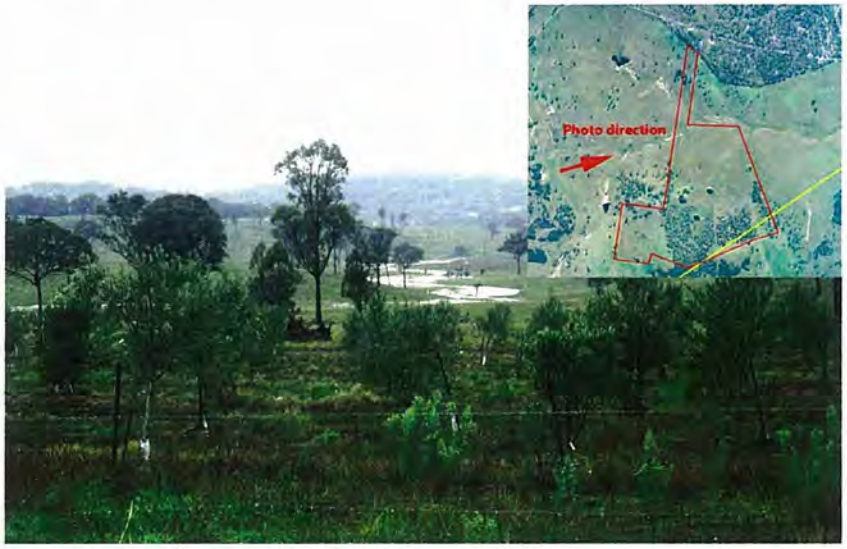

Figure 9 2nd Entrance Culvert from Quaife Property Deck

Unless 54mm of rain is a 1 in 100 year rainfall event it is clear that Council's proposed culverts must be bridges. There is no way that they have contemplated the vast quantities of water that will flow through the site.

The above picture would indicate a yearly event. A 1 in 100 year event would be 'impressive'.

The use of a calculation to estimate flooding levels is inappropriate at a site which has such high environmental significance.

S082_14

> ***'No flood studies have been conducted in this area, instead, calculations using Manning's equation were used to estimate the 100 year Average Recurrence Interval (ARI) flow and the 100 year flood level in these creeks. The results of these calculations indicate that the proposed landfill site is well outside the extent of the 100 year floodplain. The design for the landfill and stormwater ponds (dry basin) incorporates adequate freeboard to contain 100 year ARI flows on site.'***[40]

Of serious concern is an observation of the site by Armidale Dumaresq Council's own consultants:

[39] EA page 68
[40] EA page 144

'..the site is located mid-catchment, with potential for flooding and there is previous evidence of flooding at the site'. [41] S082_14

Flood prone locations are a prohibited location as listed under the Solid Waste Landfill EPA Guidelines.

Council have not satisfactorily addressed ground and surface water impacts.

c) Loss of Habitat

The *Department of Environment and Conservation* included the following statement (EA, Appendix H) page 2:

> ***'Nevertheless, 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***
>
> ***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 ROTAP species and one EEC. Hollow-bearing trees will be lost in the Box Gum Woodland in the TSR.'***

It is very concerning that with all the other negative aspects of the site that it also requires the removal of 1000's of trees.

[41] Regional Landfill Siting Study – Final Report – Page 67

Figure 6 Site viewed from the North showing trees to be cleared

The actual species that may be impacted by the loss of habitat are described in [Appendix 1 EPBC Report 5km Buffer].

It would be reasonable to presume that the destruction of 20 hectares of vegetation will result in significant impacts on flora and fauna species which reside or travel through the site that were not identified in the 'snapshot survey'.

> ***'The proposed development would entail clearing of approximately 20 hectares of vegetation, including'*** [42]

d) Threatened and Endangered Species

I am not sure why the proponent decided to choose a 20km buffer for its EPBC threatened species search but I would suspect it is an attempt to divert attention from the immediate site vicinity.

> ***'The EPBC Act Protected Matters Search Tool identified 14 fauna species listed as threatened under the EPBC Act that may occur within a 20 km radius of the study area (Appendix H).'*** S082_34

The Department of Environment and Heritage lists at least 21 threatened or endangered species or species habitat that is, or is likely to occur within the 5km buffer zone. It also lists 7 migratory bird species that are known to occur within the area *(see link below).*

[42] EA page 211

http://www.deh.gov.au/cgi-bin/erin/ert/epbc/epbc_report.pl (Report takes some time. Please be patient.)

Appendix 1 shows the same EPBC search at a 5km site buffer which is more in accordance with actual site environmental impacts as compared to the irrelevant 20km buffer chosen by the proponent.

S082_34

The result is that 14 fauna species are listed as threatened under the EPBC act with a 5km buffer, the same number as with the proponents 20km buffer. In fact a 4km buffer also produces the same number of threatened flora and fauna species.

The conclusion that can be drawn from this is the environmental significance that is in close proximity to the site is enormous. It clearly shows within close proximity to the site the habitat and species which are or are likely to exist.

e) Ecosystem destruction and alteration

The nature of putresible waste dumps ensure the attraction of undesirable wildlife including vermin, insects and aggressive predatory birds such as crows which are destructive of sheep production. Any artificially created food source will have detrimental impacts on the natural ecosystem of the area, with desirable native species being displaced by artificially large numbers of undesirable species.

The acknowledged destruction of habitat involving the clearing of 20 hectares of land cannot be offset by a mass plantation of seedlings.

> ***'Approximately 25% of the Stringybark Woodland within the subject land will be cleared for the landfill site'***[43]

It is also noted that

> ***'a high proportion of this grassland community meets the definition as the Box Gum Woodland EEC. The cleared grasslands do not have sufficient non-grass native understorey species to qualify for inclusion under the EPBC Act, but does qualify under the broader description of the TSC Act (Appendix J). The proposed development will require an access route through the grassland community that will occupy approximately 3.3 ha.'***[44]

S082_35

Removal of Box-Gum Woodland which carries CEEC status under the EPBC Act cannot be compensated for using the Habitat Offset strategy. This remains to be addressed by the proponent.

[43] Flora and Fauna Assessment Page 23
[44] Flora and Fauna Assessment Page 23

A list of the species found by the proponent in the 'snapshot' survey is still very impressive. Species which may be impacted are;

Birds-

> *'The assessment of the study area identified 80 bird species (1 exotic), as shown in Table D1, Appendix D. Two threatened bird species, Speckled Warbler Pyhrrolaemus (now Chthonicola) sagittata and Diamond Firetail Stagonopleura guttata (TSC Act - Vulnerable), were detected on the study area in both the TSR beside Waterfall Way and in the Stringybark Woodland'*[45]

Mammals –

> *'The fauna survey recorded 15 species of mammals of which 4 were exotic (Appendix D). Two threatened mammal species were detected on the study area: A single Koala (TSC Act – Vulnerable) was observed in the Box Gum Woodland in the TSR beside Waterfall Way in 2005.'*[46]

There are regular sightings of Koalas with 2 being killed recently on the Waterfall Way opposite the site, presumed hit by cars. The 'snapshot' survey as described below will be the reason for the unusually low sightings by the proponent.

Amphibians –

> *'Eight (8) species of frogs were recorded on the site (Appendix D). No threatened frogs were detected on the study area.'*[47]

I suggest that frogs will be impacted by the removal of the farm dams and the addition of a pond filled with toxic leachate.

S082_36

Reptiles –

> *'Ten (10) species of reptiles observed on the site (Appendix D). No threatened reptiles were detected on the study area'*

f) Inadequate flora and fauna 'snapshot' survey

The proponent admits the snapshot nature of the survey was only likely to have detected a proportion of the actual number of species on the site.

> ***'The main limitation of the survey was its 'snapshot' nature meaning that only a proportion of the full species diversity was likely to be detected.'***[48]

[45] Flora and Fauna Assessment Page 29
[46] Flora and Fauna Assessment Page 29
[47] Flora and Fauna Assessment Page 29

An illustration of the acknowledgment by the proponent of the 'snapshot' nature of the survey is the flora study undertaken on the site. This occurred for a day on the 3rd April 2005 , a day on the 15th October 2005 and a day 18th September 2006. Some of this data is now also 5 years old !

The study was inadequate but still managed to identify a number of threatened or endangered species in the very small survey area. If the proponent is correct and they have only identified a 'proportion' of the species that may be in the survey area then it can be concluded that the area is of high environmental and conservation value and maybe be better used as a nature reserve and scenic 'lookout'.

It is inconceivable that the proponent was not required to undertake investigations of species in and around the Gara River downstream of the proposed site.

g) Wildlife corridor severance

The below extract highlights the wildlife corridors that will be impacted by severance and impacted by artificial ecosystem modifications, such as the large increase in predatory birds such as crows and habitat destruction.

> ***'The study area is located 5.5 km east-north-east of the Imbota Nature Reserve, 4.2 km southeast of the Yina Nature Reserve, and 4 km north-north west of Oxley Wild Rivers National Park. The land between the study site and these nature reserves and the national park is largely cleared and used for grazing livestock, however there are scattered fragments and patches of woodland that, taken together, form a network of connectivity.'49***
>
> ***These isolated remnants of woodland provide potential habitat to enhance connectivity of wildlife populations and help some species to overcome the consequences of habitat fragmentation (Wilson & Lindenmayer 1995). Thus every patch of woodland in this area potentially plays an important role in facilitating dissemination of propagules and genetic material of native fauna and flora that helps to maintain viable populations within the local area. The study area is close to two major corridors (Figure 5) identified by the NPWS Key Habitat and Corridor mapping project (NPWS 2006). The "Gara Remnant Sub-regional Corridor" that links Gara River and Midas Gully passes 2.7 km to the east of the study area. The "Mt Killalee Regional Corridor" that links Booroolong Nature Reserve and Tilbuster Ponds passes 7.6 km to the north-west of the study area. The area of Box Gum Woodland in the TSR beside Waterfall Way is identified as "key habitat" by the NPWS Key Habitat and Corridor mapping project.***

[48] Flora and Fauna Assessment Page 23
[49] Flora and Fauna Assessment page 11

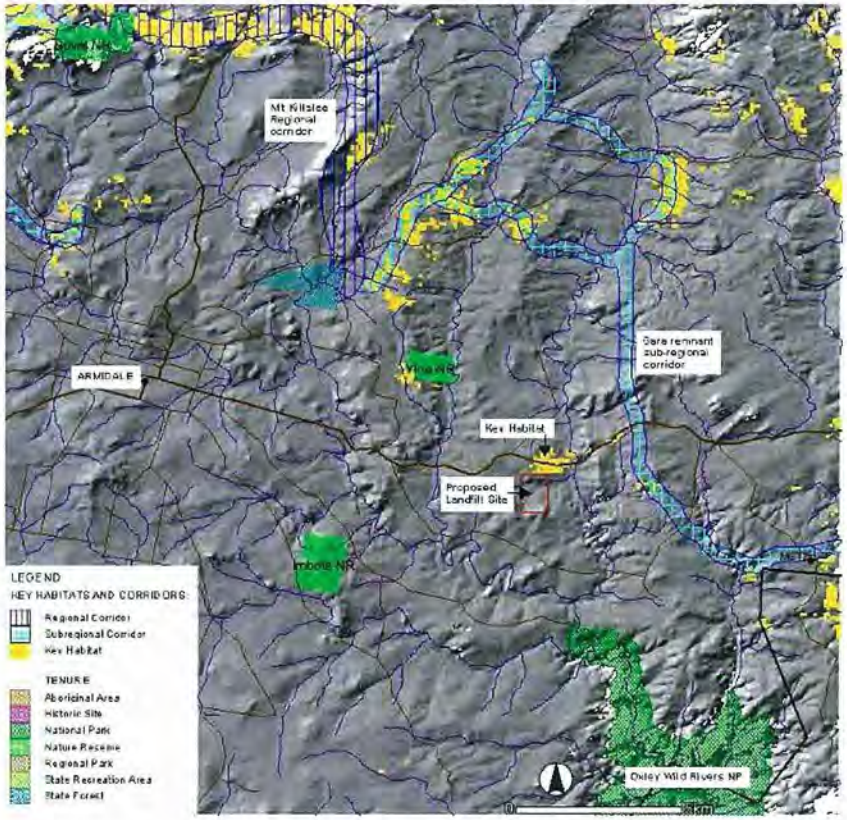

Figure 11 NPWS key habitats and corridors east of Armidale

There are very few areas classified by the NSW NPWS as 'key habitat' in the region yet inexplicably the proponent has decided to place a putresible landfill opposite the area. S082_35

5. Unacceptable and understated local Amenity impacts

a) Dust and Odour

The proponent's conclusion that 'off site' odour impacts from the landfill will be at 'acceptable levels' is not justified by the data so far submitted.

The proponent states;

' Odour impacts due to the landfill operations are predicted to be at acceptable levels'[50]

Dust and odour emissions are based on ideal management scenarios. Such as when assessing dust impacts the proponent assumes;

'These estimates assume that 75% control of dust is achievable due to the watering of haul roads. Regular watering on unsealed haul routes has been assumed for the purposes of the dust emission calculations.'[51]

When assessing odour emissions the proponent assumes

'The tipping face has been calculated as being an area of 32 square meters for daily tipping'[52]

The conclusion that has been drawn based on the ideal management practices relies on many assumptions on landfill operation and management that historically Council have failed to achieve. It also appears to ignore odour and gasses from other potential sources such as landfill gas leakage, — again it assumes perfect management.

One odour unit (OU) of a sample would prompt 3 out of a group of 6 panelists to reliably detect the presence of an odour when compared to clean air.

Extracted from the 'Assessment and management of odour from stationary sources' DEC (NSW, 2006)

'Offensive odour

In practice, 'offensive' odour can only be judged by public reaction to the odour, preferably under similar social and regional conditions. The nuisance level can be as low as 2 OU'

The proponents Figure 22 [Figure 12 OU of 50 in neighbouring property] has been modified below to magnify an inset of the 'off site' odour levels projected by the proponent. As can be clearly seen, neighbouring properties will be subjected to odour levels of 30-40 OU and 3 houses and the Waterfall Way Gara Reserve picnic area subjected to Odour Units (OU) of greater than 3. S082_37

If the nuisance level of odour can be as low as 2 OU, I believe that 50 OU level predicted in our adjoining property will be a disgusting stench.

[50] AIR QUALITY IMPACT ASSESSMENT – DRAFT PROPOSED ARMIDALE LANDFILL Conclusions P12

[51] Air Quality Impact Assessment 5.2 P8
[52] Air Quality Impact Assessment Page 7

The proposed 50m buffer from our property to the operational area of the landfill is inadequate and a disgraceful impost to have thrust upon us. It is clear the inappropriate buffer resulted from an awful error by the proponent as described in [Figure 26]

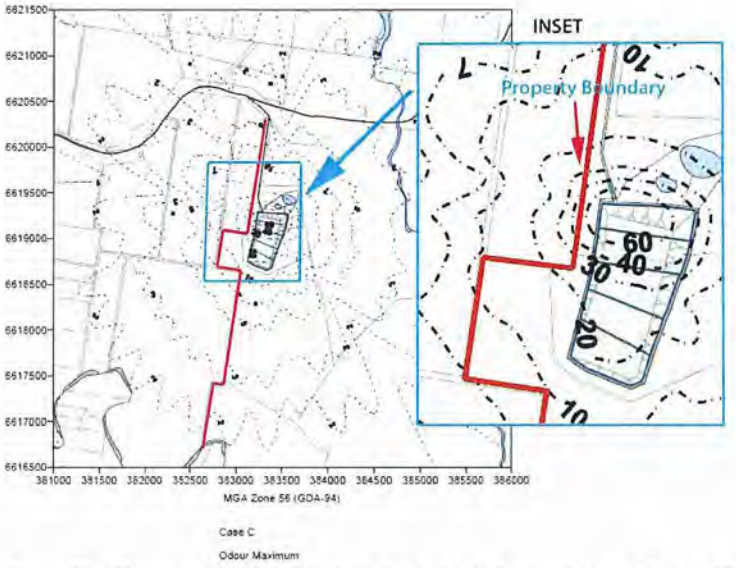

Figure 22 – Maximum odour levels (ou) due to landfill operations – Staging 40-50 Years

Figure 12 OU of 50 in neighbouring property

The rest and picnic area opposite the site on the Waterfall Way on which many hundreds of tourists stop to eat has not been accessed as a 'receiver'. Contradictory to the principle of Table 5 – Odour performance criteria for the assessment of odour. The population density should be significantly increased from the 'single residence' goal due to the number of persons that actually stop at this picnic area or travel along the scenic Waterfall Way. S082_38

Table 5 – Odour performance criteria for the assessment of odour	
Population of affected community	Odour performance criteria (nose response odour certainty units at the 99th percentile)
Single residence (< ~2)	7
~10	6
~ 30	5
~ 125	4
~ 500	3
Urban (~ 2000)	2

The 'off site' odour impacts with a magnitude of 40 times the perceivable level near the property boundary have been interpreted by the proponent as acceptable 'receiver impacts'. One would assume that 'off site' means off the site area owned by the proponent, not at a house that may be some distance from my property boundary. Our argument appears supported by the proponents own definition of 'offensive odour' which states that the odour may be described as 'offensive' when it interferes with the comfort of a person **'outside the premises from which it is emitted'.**

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Extracted from Council's proposed LEMP

'Offensive Odour

The definitions that pertain to NSW Protection of the Environment Operations Act 1997 define an

"offensive odour" as an odour:

(a) that, by reason of its strength, nature, duration, character or quality, or the time at which it is emitted, or any other circumstances:

(i) is harmful to (or is likely to be harmful to) a person who is outside the premises from which it is emitted, or

(ii) interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted, or

(b) that is of a strength, nature, duration, character or quality prescribed by the regulations or that is emitted at a time, or in other circumstances, prescribed by the regulations'[53]

Due to current and future developments on affected properties, a host of issues remain unassessed in relation to additional impacts of insects and changes to ecosystems due to odour issues. Issues appear to only have been assessed at 'receiver' level whilst significant 'on' property impacts are obvious and have not been addressed.

[53] Armidale Regional Landfill Facility - Draft Landfill Environmental Management Plan Page xiv

An example, our neighbouring 'Cellar Door' Olive and Feijoa sales and orchard tours which will be creating a sensory conflict on guests due to the documented landfill odour and noise impacts. This significant impact is not considered 'off site' for purposes of the EA evaluation as only houses are considered 'receivers'.

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Dust impacts on farming activities such as on pollination of fruit trees remains unassessed. As is the impact from insects and vermin which will be attracted to the odours.

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Due to the proximity to Armidale, availability of services such as town water, power and arterial road access, the area has significant and probable future subdivision potential. In light of the following statement by DEC NSW, the odour criteria applied by the proponent should be at the **'boundary of the facility'**, Otherwise future landuse potential will be compromised.

Technical framework: assessment and management of odour from stationary sources in NSW p9

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Department of Environment and Conservation NSW

'These criteria should not be exceeded at the nearest sensitive receptor (both existing and any likely future sensitive receptors). If a receptor is, or is likely to be, located near the boundary of a facility, then the criteria should be applied at and beyond the boundary of the premises'

Photo showing 300mm WaterMain (future subdivision potential)

Figure 13 Watermain (subdivision potential)

A number of small allotments exist opposite the proposed site already. It was only in Council's latest 2008 LEP that Council's Rural 1(b) (Rural Arterial) zoning was revoked. Future decisions by Council are unknown. This leads me to conclude that the areas high level of service and proximity to