

Workshop	Broome Community Information Session		
Project	Regional Resource Recovery Park Community Review 2021	Date	19/03/2021
Client	Shire of Broome	Author	Aha! & Talis Consultants

Introduction

The Shire of Broome (**The Shire**) is planning for the closure of the Buckley's Rd Waste Management Facility and the establishment of a new Regional Resource Recovery Park (**RRRP**).

This project includes a community engagement process designed to create awareness of the RRRP, present results of the site investigations conducted to date and to gather feedback from the community on the project and the proposed locations for the Community Recycling Centre (**CRC**) and Class III Landfill.

A three-hour workshop was held on Friday 5 March 2021, forming part of the community review. The session format was a question and answer forum that was facilitated by Aha! Consulting. The participants were provided the opportunity to raise any questions or queries they may have in relation to the RRRP at the start of the meeting. The presentation was then tailored to respond to topics of interest.

Responses

The following notes capture the questions asked and responses provided. In some instances, the Shire/Technical Consultants have added information or clarification to the questions raised. Some information discussed during the workshop is not captured within these notes. That information is available in the Information Pack and supporting reports on the project website www.rrrp.com.au.

Next Steps

Participants were encouraged to take away the information packs and fact sheets and were provided information about the additional engagement sessions being run by the Shire. Participants were also invited to provide a response to the online survey that is open until 27 March 2021.

RRRP SITE SELECTION INFORMATION SESSION | ENVIRONS KIMBERLEY

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Question	Response									
LOCATION										
1. 1. Can you confirm the location and the distance to the sites?	<ul style="list-style-type: none"> Site D2 - located 12km northeast of Broome's town centre along Cape Leveque Road. Site G1 - located 38km northeast of Broome's town centre along Great Northern Highway 									
2. What is the Shire's plan to further reduce waste to landfill going forward?	<table border="1"> <thead> <tr> <th>Type</th> <th>Site D2</th> <th>Site G1</th> </tr> </thead> <tbody> <tr> <td>Single isolated residence/dwelling</td> <td>3.8km west</td> <td>2.5km west</td> </tr> <tr> <td>Nearest Residence within a Rural or Residential Zone</td> <td>3.4Km south</td> <td>15.8km west</td> </tr> </tbody> </table>	Type	Site D2	Site G1	Single isolated residence/dwelling	3.8km west	2.5km west	Nearest Residence within a Rural or Residential Zone	3.4Km south	15.8km west
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Single isolated residence/dwelling	3.8km west	2.5km west								
Nearest Residence within a Rural or Residential Zone	3.4Km south	15.8km west								
3. Why is Site D2 being considered when Site D1 was discounted as viable?	<ul style="list-style-type: none"> Site D1 was recommended as a potential site through a desktop review process however was removed based on community concerns and the Shire not having sufficient detailed data at the time. Site D2 and G1 have now undergone extensive investigations and return favourable results for the development of the various RRRP elements. All these works are being shared with the community through this engagement to obtain feedback that will be provided to the Councillors to ensure there is a well-informed decision-making process. 									
4. What about other sites located further north along Cape Leveque Road?	<ul style="list-style-type: none"> A site selection process originally commenced in 2013 which assessed a variety of potential locations for the siting of the RRRP. These works have been ongoing particularly after potential site have been removed. Sites located further north along Cape Leveque Road were in Area A but these sites were excluded from further consideration as a Native Title Prescribed Body Corporate had not been established. 									
5. Irrespective of the landfill location, will the CRC be located at site D2?	<ul style="list-style-type: none"> Yes, the proposed location of the CRC is Site D2 with the site investigations deeming it a suitable location. This location is convenient to community and will help to encourage reuse and recycling. If the CRC were located further away i.e., at Site G1, the community would be less likely to use the facility due to the 76km return journey. 									
6. What other sites were investigated for the landfill?	<ul style="list-style-type: none"> There have been eight sites identified within a 60km radius of the Broome townsite. These sites were discounted for a range of matters including environmental, social, land ownership and timeframes. 									
7. If the airport is not developed in its proposed location can this land be used for the RRRP?	<ul style="list-style-type: none"> The proposed future airport location is already zoned for this purpose so the landfill cannot go on that location. Furthermore, in accordance with the best practice siting standards adopted for this study, landfills cannot be located within 3km of an airport which has been applied to the proposed landfill area. 									
8. What is the Water Corporation's view of the proposed use of Site D2?	<ul style="list-style-type: none"> The Water Corporation undertook a Groundwater Source Protection Assessment for a landfill located at Site D2 which determined that the proposed landfill is a low risk groundwater contamination source to the P1 Public Drinking Water Source Area The Water Corporation is supportive of the proposed use of Site D2 for both the CRC and Class III Landfill. 									

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WASTE ACCEPTANCE AND LIFESPAN

<p>9. Who can drop off waste at the CRC and landfill?</p>	<ul style="list-style-type: none"> The community will be able to drop off reusable items, recyclable materials and refuse (general waste) requiring disposal at the CRC. The landfill will only be accessed by the Shire and large commercial contractors.
<p>10. How will waste from mining companies be handled?</p>	<ul style="list-style-type: none"> There are strict regulations about what types of waste can be accepted into a Class III landfill. All waste accepted at the new landfill needs to meet these requirements which will be validated through laboratory testing. These test results will be supplied to the Shire and if the material does not comply with the Class III standard, these loads will not be accepted at the Site.
<p>11. What is the long-term plan for recyclables?</p>	<ul style="list-style-type: none"> The Master Plan for Site D2 has future expansion areas to allow for the acceptance a wider range of materials or new infrastructure as necessary. As the volume of recyclable waste is comparatively small to metropolitan areas, there is a need to stockpile these materials to be able to process these in a cost-effective manner. Recyclable materials such as green waste, C&D waste and scrap metal will be stockpiled until sufficient volumes of these materials are generated to make processing of these material viable by relevant recycling contractors. The CRC has been designed to ensure adequate space for the long-term storage of these materials if required. Part of improving the cost effectiveness and expanding the diversion of waste from landfill, the Shire and neighbouring local governments are continuously exploring opportunities to recycling across the region. The new landfill will only accept waste from within the Shire.
<p>12. What is the impact on existing recycling businesses?</p>	<ul style="list-style-type: none"> At this stage, the Shire does not anticipate that the CRC will have an impact on existing recycling companies. However, the Shire will continue to engage with these companies moving forward and seek opportunities that can be mutually beneficial to all parties.
<p>13. Where do we drop off hazardous household wastes such as paints etc</p>	<ul style="list-style-type: none"> The CRC has a Household Hazardous Waste (HHW) shed for the acceptance and safe storage of these waste types. HHW will then be collected from the CRC by a contractor for recycling and/or treatment. This will ensure that these hazardous materials do not get landfilled at either Site D2 or G1.
<p>14. How do you dispose of waste without compacting the initial “fluffy” layer. What is the process for the machinery</p>	<ul style="list-style-type: none"> The first layer of waste (to a 1m depth) to be deposited in the waste cell uses selective, fluffy materials including soils, mulch and soft waste only. No bulky or sharp waste will be deposited in this initial layer. This layer is left uncompacted and is then covered by soil material, 300mm thick to minimise any potential damage to basal liner. The second layer of waste is then applied, compacted and covered as per normal practice
<p>15. What is the projected lifespan of the two sites?</p>	<ul style="list-style-type: none"> The current design was based on waste volume projections for the Shire’s waste only along with population projections. Based on these future estimates, approximately 70 years of landfill void space has been designed at both sites. A variety of factors can alter the lifespan as new technologies are developed, legislation changes, population numbers alter, and waste volumes fluctuate.

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GROUNDWATER

16. If there was no lining system included in the landfill design what would be the rate of groundwater flow?

- The lining system is designed to contain and stop leachate infiltration into the underlying soils. In the event the integrity of the lining system was comprised, i.e., a puncture/hole occurred, the first (bottom) layer of Geosynthetic Clay Liner (CGL) will swell when hydrated and block the hole within the High Density Polyethylene (HDPE) layer above. This will stop the leachate from seeping into the underlying soils. It is also important to note that leachate is actively extracted from the landfill across its operational and rehabilitation life and treated.
- Without a lining system, leachate would not be prevented from seeping directly into the underlying soils and eventually into the groundwater.
- Buckley's Road landfill is not lined like all regional landfills across the state established prior to the recent best practice guidelines.
- Regardless of the presence of the lining system, the flow rate (speed/velocity) of the groundwater remains the same.

17. Can the parameters of an aquifer change?

- Yes, groundwater aquifer parameters can change if significant volumes of groundwater are abstracted. The RRRP will require minimal (approximately 2-5 mega litres per annum for dust suppression and fire water) which will have very little impact on the Broome Sandstone aquifer.

SURFACE WATER

18. Does the site prevent surface water run-off to the surrounding environment cyclonic and heavy rainfall events?

- A surface water management system will be developed on site to ensure all clean surface water on the site is captured and directed to surface water ponds.
- The final design and capacity of the surface water system will be designed during the detailed design stage however, it is anticipated it will be to a 1 in 100 or 1 in 200 year events.
- The system will allow for overtopping and discharge into the regional drainage flow path of the clean surface water if the adopted storm event is exceeded. This is a standard design requirement from the various approval authorities and ensure that the waste facility is not flooded.

19. Why is there no levee bund to the west of Site D2?

- Regional flood modelling indicates that regional surface water flows from north east to the south west across Site D2.
- The modelling to date has not indicated the requirement from a levee along the western boundary however the final levee design will be determined during the detailed design phase of the project.
- The levee bund has been designed to direct surface water flows along the eastern boundary to the south west and to re-join the predevelopment regional surface water flows therefore minimising interruption to local surface water flows

LEACHATE MANAGEMENT

20. What contaminants are in leachate?

- Leachate constituents vary depending on the waste types accepted. The landfill will be limited to only accepting Class III waste materials as specified by the Department of Water and Environment Regulation.
- Class III leachate may contain metals (i.e. cadmium, nickel, silver etc) and metalloids (i.e. arsenic), other inorganic species (i.e. fluoride), non-chlorinated organics (i.e. Benzene and styrene), and chlorinated organics (polychlorinated biphenyls).
- The leachate will be continuously extracted from the base of the landfill and treated through evaporation on site.

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<p>21. Once leachate is evaporated, how is the residue dealt with?</p>	<ul style="list-style-type: none"> Leachate is collected from the landfill through the leachate collection system and transferred into High Density Polyethylene (HDPE) lined ponds for evaporation. Evaporation is normal process for leachate management. Typically, there is no sediment remaining from the evaporation process.
<p>22. What happens if the leachate ponds overflow/flood due to cyclonic events</p>	<ul style="list-style-type: none"> The final design and capacity of the leachate management system will be determined during the detailed design stage however, it is anticipated that it will be designed to a 1 in 100 or 1 in 200 year events. During flood events that exceed the adopted rainfall event, the leachate pumps can be turned off to leave the leachate within the landfill cell or if required, leachate can be transferred back into the cell(s) to prevent over topping of the leachate ponds. The leachate ponds will also have a freeboard of 0.5m to mitigate over topping. The leachate management system will be regularly inspected to ensure it is operating effectively. Inspections include checking the leachate level in the pond, the leachate collection sump and leachate flow meter/pumping records. Weather will be monitored daily to check for heavy rainfall events and cyclonic activity.
<p>23. What if there was a tsunami, would it wash the leachate ponds away?</p>	<ul style="list-style-type: none"> In the unlikely event of a tsunami, the leachate ponds would probably be a very low priority for the Shire compared the safety of the community. If there was sufficient warning, leachate from the ponds could be pumped back into the landfill. It is also important to note that both Sites are located on higher ground and approximately 5.5km and 20km from the coastline at Site D2 and G1 respectively.
<p>LANDFILL LINING SYSTEM</p>	
<p>24. Are the landfill liner materials stable in the long term?</p>	<ul style="list-style-type: none"> The stability or lifespan of the lining materials is highly dependent on material properties (e.g. physical, mechanical, durability, and performance), other materials it is used with and the environment in which it is installed. A variety of factors such as temperature, the types of chemicals substances it comes into contact with, exposure to air and ultraviolet light can alter the lifespan. Geofabrics is a provider of HDPE in Australia who source their material from Solmax. Solmax suggest that its HDPE has a lifespan of 69 years up to 446 years based on the properties of the material alone. https://www.solmax.com/en/blog/the-expected-operational-life-of-solmax-geomembrane-liners. It is important to note, that as part of the approval process the Shire will be required to assess the potential impact if there was a breach of the lining system and ensure that there is not a significant impact on downstream receptors. This works have been completed by the Shire's consultancy team and have return favourable results.

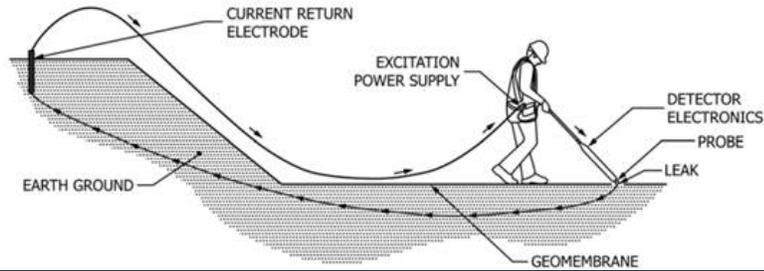
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25. What happens during a leak detection test?

- Leak detection testing will be undertaken by a qualified third-party consultant at the completion of the installation of the lining system to detect the presence of any holes.
- The testing method introduces a high voltage between a leak detection test probe and the conductive medium underneath the liner. Where a hole is present, the current to pass through, resulting in the completion of the circuit and the detection of a hole.
- If a hole is detected it is repaired and re-tested.
- Once complete, the landfill construction compliance report is signed off by the Department of Water and Environmental Regulation.



ILLEGAL DUMPING

26. How do we handle illegal dumping of waste?

- This is an ongoing issue that the Shire is investigating and will be dealt with regardless of the location of the landfill.

TRAFFIC

27. Are the plans to do road works to Cape Leveque road to improve traffic flow

- A Traffic Impact Assessment and Management Plan will be developed during the detailed design stage of the project and will be submitted to the relevant approval authorities
- The Shire's engineering department are currently assessing the potential improvements required for Cape Leveque Road including turning pockets in both direction which is common for these types of facilities.

ENVIRONMENTAL MANAGEMENT AND ACCESS TO INFORMATION

28. What monitoring will be put in place and will these results be available to the community?

- An extensive monitoring program will be required for the Site in accordance with the DWER Licence to operate the facility. This will include groundwater monitoring wells surrounding the landfill cells and also up and down stream of the facility to assess any potential impact to groundwater. These reports will be provided to the DWER on a quarterly basis (or as specified with the various licence conditions). The Shire can make these report publicly available. In addition, all the current technical information including the Site Investigation Report and the Site Comparison report is available at www.rrrp.com.au.

APPROVALS

29. What is the minimum timeframe for the approval process?

- The Shire will look to refer the RRRP project to the Environmental Protection Authority for Environmental Impact Assessment. The EPA will then decide if a formal assessment process is required.
- A Works Approval is required for the construction of the RRRP and a Licence to operate the facility from the DWER.
- Applications for these approvals include all environmental, social, design and operational aspects of the project.
- Assessment timeframes can vary for these applications and may take approximately 18 to 24 months collectively.
- No construction works can commence on the project until the various approvals are obtained from the relevant approval authorities.

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30. Will there be a public Environmental Review process?	<ul style="list-style-type: none">• The Shire will referral the RRRP project to EPA for Environmental Impact Assessment.• While all EPA approvals require community consultation, the EPA decides on the level of consultation required.• The highest level of consultation is called a Public Environmental Review which includes a formal public review process of all the information for generally for a 6-8 weeks community consultation phase.• As part of the Shire's submission to the EPA, it can recommend or request the level of assessment. At this stage, it is anticipated that the Shire will request a formal assessment including a Public Review process.
COST	
31. What is the cost to the community for both sites?	<ul style="list-style-type: none">• The costs of the project over 40 and 70 years are provided within Section 7 of the Site Comparison Report. There is a cost difference of \$62M over 40 years increasing to \$154M over 70 years for developing the landfill component of the RRRP at Site G1 as opposed to Site D2.• However it is important to note that the logistics costs included within this financial model only covers the Shire kerbside collection as waste dropped off at the CRC. It therefore does include the additional cost to commercial operators to transport waste to Site G1.
BUCKLEY'S ROAD	
32. What is the plan for Buckley's Road? Why can't a waste transfer station be located there?	<ul style="list-style-type: none">• Buckley's Road is running out of void space and has approximately 3 years lifespan remaining.• The development of the new CRC is required urgently so that the current drop off area at Buckley's Road can be utilised for landfilling activities.• There is insufficient room at Buckley's Road to develop a waste transfer station or CRC.
33. What will happen to the Buckley's Road site in the long term/post closure?	<ul style="list-style-type: none">• The site will be capped, revegetated and rehabilitated. There will also be on going monitoring at the site for approximately 30 years post closure.

END OF DOCUMENT