

SPORTS, ARTS, CULTURE & COMMUNITY SERVICES COMMITTEE 12 MAY 2010	9
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SUGARWORLD WATERPARK OPTIONS REPORT – LATE AGENDA ITEM

Tim Dendle TJD: 10/2/1-23: #2560251

RECOMMENDATION:

That Council, in relation to the Sugarworld Waterpark:

- a) **considers an allocation of \$700,000 in the 2010/11 Capital Works budget to pursue the refurbishment of the ‘Banana Bender’ and ‘Flying Fox’ slides, subject to the completion of more detailed materials analysis and specialist consultation to confirm the assertion in the ‘Peer Review Assessment’ that certification can feasibly be obtained for these slides on completion of the refurbishments;**
- b) **notes that the current assessment indicates that the lesser two slides (The ‘Cyclone’ and ‘Sugar Glider’) are not capable of being remediated in the same manner and requests an urgent report back to Council on proposed actions in relation to these two slides; and**
- c) **Delegates authority to the Mayor and Chief Executive Officer pursuant to section 472 of the Local Government Act 1993 to approve and finalise any and all matters relating to the refurbishment of the ‘Banana Bender’ and ‘Flying Fox’ slides.**

INTRODUCTION:

The iconic Sugarworld Waterpark has been closed in the interests of public safety due to an investigation into the structural integrity of the waterslides. The purpose of this report is to bring to light the critical considerations necessary to make a decision that balances the immediate community service obligations of Council with the long term economic and social sustainability of this much loved facility.

BACKGROUND:

The Sugarworld Waterpark is a Council-owned facility leased to a private operator. The facility comprises a variety of functional aspects that provide leisure and recreational opportunities to residents within the region and beyond. The infrastructure associated with the waterslides was first built and located in Cairns City in 1975. In 1989 these slides were dismantled and relocated to their current location in Edmonton. After relocation of the slides, access pathways were constructed as well as appropriate landscaping to compliment the tubes and associated supports. The actual slides are approximately 35 years old and have been in their current location for over 20 years.

In 2006, Council engaged PDR Engineering Consultants to assess the condition of the water slides. As a consequence of this exercise, significant renewal works were recommended which led to \$60,000 being allocated in the 2009/10 Capital Works Budget and an additional \$75,000 sourced from the Federal Government through the Regional & Local Community Infrastructure Program (RLCIP). Further to these provisions, \$60,000 was also directed from Capital Works Renewal for essential upgrades to the plantroom electrical infrastructure.

Prior to expending any of these funds, it was deemed prudent to have a second report commissioned to provide an up to date assessment of the waterslides. PDR Engineers were again engaged to complete this project. Accordingly an updated report was supplied along with supporting documentation from Davis Langdon Quantity Surveyors who presented some preliminary estimates for replacement/renewal of the slides. The following reports have been attached for Council's consideration:

- Revised Report for Sugarworld Waterslides – PDR Engineers: #2549117v1 (Attachment 1).
- Preliminary Estimates for Renewal/Replacement of Sugarworld Waterslides – Davis Langdon Quantity Surveyors: #2549116v1 (Attachment 2).

The updated assessment by PDR Engineers found that replacement or remedial works need to be undertaken as a matter of urgency and that there exists a significant risk of injury to the public if the work is not carried out.

Promptly Council at its Ordinary Meeting of 28 April 2010 resolved to *“give in principle support to the reopening of Sugarworld Waterslides and as a matter of urgency be provided with a detailed report to be brought back to Council in a workshop format.”*

The following commentary presents the options and critical considerations to Council at this juncture with respect to the feasibility of continued operation of the waterslides.

COMMENT:

Prior to considering any of the options relating to the future of the Sugarworld Waterpark, it is important to first summarise the technical information that has been reported from the professional investigations into the structural integrity of the slides.

PDR Report (Attachment 1).

The report received from PDR Engineers on the Sugarworld Waterslides included the following summarised options from Davis Langdon Quantity Surveyors:

1. Full replacement of tubes and support steelwork.
2. Refurbishment only of tubes and support steelwork.
3. Replacement of tubes only and refurbishment of support steelwork.
4. Purchase of second slides and close existing. Note: the existing location would not be appropriate for these slides as they are a totally different configuration.

OPTION	1	2	3	4
Price (excl GST)	\$3,440,000	\$2,912,000	\$3,153,000	\$2,321,000

Note: The above estimates do not include allowance for professional project management services – a key requirement of delivering the project successfully. In this respect, a further provision of approximately 20% should be applied to each option.

Assessment of Options:

- Option 4 has been discounted as not being viable or practical for this facility due to the reliability and uncertainty associated with used amusement devices as well as the problems associated with ‘retro fitting’ these to the existing site;
- The cost of Option 3, when compared with Option 1, does not provide a comparable product for relatively little difference in overall price;
- Option 2 was not originally recommended due to advice that engineer’s certification would NOT likely be secured upon completion of the refurbishment works; and
- Option 1 was recommended, providing a new installation for the facility.

Peer Review Assessment

As Option 1 represented significant Capital expenditure, a ‘Peer Review’ of the report was undertaken by Infrastructure Services (IS) in conjunction with the engineering consultants to determine the validity of the report and to quantify pricing by the Quantity Surveyors.

The Review concentrated on the condition of the waterslides and supporting structural steelwork. Associated plant, pools, infrastructure and landscaping were considered only as peripheral items. The Review inspected the waterslide in the best condition – The Banana Bender.

The Review concluded that it was feasible to undertake limited renewal works on the Banana Bender and the adjacent slide also in comparatively reasonable condition – the Flying Fox. The works were discussed at length with the engineering consultants, external service providers and internal Infrastructure Services officers.

The consulting engineers agreed, in principal, that certification could feasibly be obtained for the refurbished slides if the correct process for an engineered solution was diligently adhered to. The expectation is that the refurbished slides would have an extended life of 5-10 years.

Further Considerations Required:

- A primary consideration for the successful renovation of the slides in question, is determining the condition of the fibreglass in the tubes. Investigation will be required to determine design life, through Stress Testing of sections of material and comparing with known figures for new glass used in similar applications; and
- A specialist in the field of fibre glassing water slide installations in accordance with Australian Standard 3533 should also be consulted to provide definitive costings for works. When on-site, the specialist can also validate the assessment that the lesser two slides (The ‘Cyclone’ and ‘Sugar Glider’) are not capable of being remediated in the same fashion.

Options

In the context of the information presently at hand and the abovementioned diligence, the following options are now available to the Council:

Table 1 – Option 1

<p>Option:</p>	<p>That Council, in relation to the Sugarworld Waterpark:</p> <ul style="list-style-type: none"> a) Considers an allocation of \$700,000 in the 2010/11 Capital Works budget to pursue the refurbishment of the 'Banana Bender' and 'Flying Fox' slides, subject to undertaking more detailed materials analysis and specialist consultation to confirm the assertion in the 'Peer Review Assessment' that certification can feasibly be obtained for these slides on completion of the refurbishments; b) Notes that the current assessment indicates that the lesser two slides (The 'Cyclone' and 'Sugar Glider') are not capable of being remediated in the same manner and requests an urgent report back to Council on proposed actions in relation to these two slides; and c) Delegates authority to the Mayor and Chief Executive Officer pursuant to section 472 of the Local Government Act 1993 to approve and finalise any and all matters relating to the refurbishment of the 'Banana Bender' and 'Flying Fox' slides.
<p>Cost:</p>	<ul style="list-style-type: none"> ➤ The cost of refurbishment as outlined in Attachment 3, for one slide; 'The Banana Bender' has been estimated at \$360,000. ➤ The slide adjacent to the 'Banana Bender', the 'Flying Fox', is in similar condition and could realistically be refurbished for an equal amount. ➤ Considering economies of scale for consultancy fees, design etc. a reasonable figure for budgetary purposes could be estimated at \$700,000 ➤ It is important to understand that accurate figures can only be determined after scientific analysis of the fibreglass itself and upon receipt of a detailed quotation from a fibreglass expert specialising in repair of similar installations to Australian Standard 3533.
<p>Estimated Delivery Time:</p>	<ul style="list-style-type: none"> ➤ Estimates from engineers within Council's Infrastructure Services department indicate that the time required to complete the remaining due diligence, develop, advertise and award an appropriate contract as well as to undertake the required works would be six (6) months.
<p>Outcome:</p>	<ul style="list-style-type: none"> ➤ It is anticipated that this option will increase the useful life of the Banana Bender and Flying Fox slides by 5-10 years.

Considerations	<p>This is the recommended option for Council for the following reasons:</p> <ul style="list-style-type: none"> ➤ It provides the most cost effective and timely opportunity to restore some levels of service to the community whilst further investigations can be undertaken with respect to the two slides that , at this time, have been deemed unserviceable; ➤ Allows for a staged rectification; ➤ There exists an opportunity for the Council to explore innovative and creative solutions that will revitalise the aging facility and position it as a strong player in an emerging competitive leisure market well into the future; ➤ In this respect, Council should first validate the assessment that the lesser two slides (The 'Cyclone' and 'Sugar Glider') are not capable of being remediated in the same manner and decide upon an appropriate course of action relating to levels of service at the facility after consideration of a detailed feasibility study; and ➤ Funds should be allocated to this task as a matter of priority.
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Table 2 – Option 2

Option	That Council approve funds in the upcoming 2010/11 Capital Works Budget to undertake full replacement of the waterslide tubes and associated steel work at the Sugarworld Waterpark.
Cost:	\$4,128,000 (\$3,440,000 as detailed in the QS PLUS 20% allowance for Professional Project Management Services)
Estimated Delivery Time:	<ul style="list-style-type: none"> ➤ Estimates from engineers within Council's Infrastructure Services department indicate that the time required to decommission, dismantle and remove the existing structures, develop, advertise and award an appropriate contract, as well as to undertake the required works would be 12 months as a minimum. ➤ It is recommended that Council allocate funding to undertake a feasibility study of the facility in accordance with its intentions to consult the community on the nature, scope and shape of future opportunities.
Outcome:	New installation to comparable existing specifications with a projected useful life of 30 years .

Considerations	<p>At this time, this option is not recommended due to the following reasons:</p> <ul style="list-style-type: none"> ➤ The significant capital expenditure required by Council; ➤ The possibility that certification could feasibly be obtained for the 'Banana Bender' and the 'Flying Fox' extending their useful life for 5-10 years <u>if</u> correct processes for an engineered solution are diligently adhered to; ➤ The Sugarworld Waterpark, in its existing format, potentially being a very small player in the region's leisure market in 5-10 years time (see Sustainability section of this report); ➤ The opportunity costs associated with such capital expenditure (see Sustainability section of this report); ➤ Consideration to other proposals that have been before Council, namely The Adventure Waters Water Park (see Attachment 4).
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Table 3 – Option 3

Option:	That Council resolve to decommission the waterslide component of the Sugarworld Waterpark and rehabilitate the site to provide some level of service to the community leveraging the remaining aquatic leisure aspects of the facility.
Cost:	<ul style="list-style-type: none"> ➤ Estimates from engineers within Council's Infrastructure Services department indicate that the costs associated with decommissioning and dismantling the existing structures would be in the vicinity of \$80,000 to \$100,000. ➤ Further costs that should be considered as part of this option include the allocation of funds to 'rehabilitate' the site and its existing aquatic aspects to a practical standard so that recreational and leisure opportunities remain for the community ➤ It is recommended that Council allocate funding to undertake a feasibility study of the facility in accordance with its intentions to consult the community on the nature, scope and shape of future opportunities. ➤ Costs associated with the management of the current lessee of the facility whose final option is due to expire on 6 August 2014.
Estimated Delivery Time:	Estimates from engineers within Council's Infrastructure Services department indicate that the time required to decommission, dismantle and remove the existing structures, develop, advertise and award an appropriate contract, as well as undertake the required works would be 6 months .
Outcome:	A reconfigured site offering different levels of service to the community.

Considerations	<p>At this time, this option is not recommended due to the following reasons:</p> <ul style="list-style-type: none"> ➤ Opportunities to explore further options with respect to the ongoing operation of the facility now and into the future. ➤ The significant community support currently observed for the facility ➤ The costs associated with decommissioning the facility are disproportionate to the costs involved with implementing the recommendation and still present significant expenditure on the part of the Council for very little return. ➤ Offering quality leisure and recreational pursuits to the community are important considerations for Council and the Sugarworld precinct is a strategic site in achieving this ideal.
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CONSIDERATIONS:

Corporate and Operational Plans:

The recommendation supports Council's Corporate Plan 2009-2014 with particular reference to:

Goal 2 "To build more creative, innovative and self reliant communities where participation in community life is enabled and encouraged."

- 2.2 – Improve the quality and opportunities for public space across the region
- 2.4 – Provide enhanced arts and cultural activities that add value to the life of residents and visitors alike.

Goal 3 "To take an integrated planning approach to development that creates a sustainable region reflective of our uniqueness and tropical lifestyle."

- 3.4 – Protect and manage the heritage and culture of the region.

Goal 4 "To plan, deliver and maintain the region's infrastructure, to meet the current and future needs of the community."

- 4.4 – Deliver effective long-term maintenance and renewal of existing infrastructure and community assets.

Goal 5 "To increase the regions capacity for long term economic growth by supporting opportunities for local business and local employment."

- 5.3 – Plan and make financial and capital decisions with the state of the local economy in mind.

Goal 6 "To ensure that Council is open, accountable, ethical and financially responsible. Recognise that Council plays a leadership role for our immediate communities and for the wider region and will strive to represent our communities needs an expectations."

- 6.3. Collect, interpret, manage and capture data and information to inform good decision making.
- 6.7 Consistently perform better, deliver on our objectives and operate sustainably.

Statutory:

Nil

Policy:

Nil

Financial and Risk:

The current operating cost (excluding annual renewal expenditure) to Council with respect to the running of the Sugarworld Waterpark is provided below:

Table 4 – Excerpt from Operating Budget, function 2767 Sugarworld Waterslides

Natural Account	2011-12 BUD Amount Adj
3916 - Corporate Overheads Charges	21,738
1269 - Rental & Leases - Sugarworld	-51,967
3904 - Imputed Land Tax Charge	504
3571 - Depreciation - Swimming Pools	35,308
3510 - Depreciation - Other Structures	376
3800 - Internal Charges - Job Charging	17,364
3511 - Depreciation - Buildings	5,276
2304 - R & M Material-General	2,004
2515 - Garbage Collection Services	744
2532 - Repairs and Maintenance Services	264
3500 - Depreciation - Land Improvements	0
Total	\$31,612 pa

Note: The tubes and steel supports component of the waterslide infrastructure have been fully depreciated and hence do not presently incur a depreciation charge. A decision to replace or refurbish the existing slides would result in higher depreciation costs in the operating budget. For the purposes of this report, using the straight line method and based on estimated replacement costs of \$4m, a useful life of 30 years and a salvage value of \$0 Council could incur further depreciation costs of approximately \$133,332 per annum.

According to the information at hand, the cost to Council of implementing each option is summarised below:

Table 5 – Estimated costs of implementing each option

Option 1	\$700,000 (subject to detailed materials analysis and specialist tradesperson consultation) PLUS future costs associated with the lesser two slides and Council's overall intentions for the facility.
Option 2	\$4,128,000 (\$3,440,000 as detailed in the QS PLUS 20% allowance for Professional Project Management Services)
Option 3	Estimated \$80,000 to \$100,000 to remove and decommission the waterslide infrastructure PLUS costs associated with rehabilitating the site inline with a detailed feasibility study.

Note: Should Council determine that refurbishment or replacement of the slides is to proceed as outlined, there will be other peripheral works which should be considered as part of the project. These works can be funded by existing allocations as outlined below in Table 6 and 7. However the difference between these allocations and the total costs will have implications for the composition of the 2010-11 Capital Works Budget.

Table 6: Peripheral Works:

Task	Description	Allocation
Pumps	Renewal and Upgrade	RLCIP
Slide Pool (singular)	Renewal	RLCIP
Plantroom Electrical Switchboard	New board with VSD's for pumps	Capex
Essential WH&S	Repair and renewal as required to ensure compliance and functionality	Capex

Table 7: Available Funding:

Funding Source	Description	\$'s
CRC Capex '09/'10	PCP09047 – Sugarworld Waterslides	60,000
CRC Capex '09/'10	PCC10116 - Sugarworld Plantroom Upgrade	60,000
RLCIP '10/'11	Refurbish an replace support structures	75,000

Sustainability:

The Sugarworld Waterpark has been operating in its existing format since 1989 and as such has offered a unique and unrivalled option for the local and visiting leisure seeker. Council is now confronted with a difficult decision with a number of options expected to increase the useful life of the waterslide infrastructure by as much as 30 years.

In the context of this possibility and with reference to the following assertions in Council's corporate plan:

- 5.3 – Plan and make financial and capital decisions with the state of the local economy in mind; and
- 6.7 Consistently perform better, deliver on our objectives and operate sustainably.

Council should consider how the facility will be positioned in what is expected to be a strong and competitive future leisure market. More specifically, strong consideration should be given to how the Sugarworld Waterpark will compete for public participation as the commercial and private leisure sector catches up.

There have been many proposals before the Council that if implemented would ultimately compete for community participation with The Sugarworld Waterpark. Attachment 4 depicts the proposed layout of The Adventure Waters Water Park which is currently mooted for Smithfield. In this respect, the possible reality should not be discounted that The Sugarworld Waterpark, in its existing format, may be a very small player in the region's leisure market in 5-10 years time.

Should Council decide to commit funding for the installation of new facilities, due attention should be given to investing in infrastructure that will adequately diversify and differentiate the facility in the leisure market. Recently other local Council's have installed innovative and original pieces of infrastructure that 'improve the quality of opportunities for use of public space' (Goal 2.2 of CRC's Corporate Plan). Attachment 5 provides images of the recently opened Darwin Wave Pool which offers residents and tourists the chance to swim and surf safely without any of the localised risks associated with crocodiles or box jellyfish.

In spite of these considerations, The Sugarworld Waterpark in its existing format is a genuine regional tourism attraction, an affordable, family friendly destination that draws people of all ages, abilities and backgrounds. Locally, it services the leisure appetite of the rapidly growing population in the southern corridor and in the present economic climate, it is important to have quality recreational facilities that are affordable and within reach for families.

The facility's contribution to the regional economy in a fiscal sense, as an employer and as a destination contributes to the building of social capital, should not be understated. Furthermore its credentials such as an established history and iconic status are a major consideration for the Council in making its decision.

The following information offers a snapshot of the Waterpark's performance in recent times as well as some important factors that should be considered when deciding the facilities position the market and its overall sustainability:

Usage

Opening Hours:

- 10am-4.30pm Weekends, Public Holidays and State School Holidays
- Available on request for School and Club Parties, Group Bookings and Night slides

Entry Costs:

- Children (5-14 years:) \$10
- Adults: \$12
- Family Rate (2 Adults & 2 Children): \$38
- Children aged 4 and under: \$4 (use of the wading pool)

Participation:

Monthly reporting to Council over the past 2 years has indicated steady growth in participation at the Sugarworld Waterpark:

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total July-March	Monthly Ave July-March
Sugarworld 09/10	2398	690	11270	7631	4553	10135	13291	3681	2478	NA	NA	NA	56127	6236
Sugarworld 08/09	1367	0	9371	7315	7039	7639	12955	2524	4696	7106	1978	1581	52906	5878

Management:

The Sugarworld Waterslides are currently leased to Water & Leisure Pty Ltd (ACN 114 921 685) who exercised their final two year option in 2009. As this option is due to expire on 6 August 2014, any decision made with respect to the future of this facility should also consider this party.

CONSULTATION:

Extensive consultation in the formulation of this recommendation has taken place with the following internal Council departments:

- Infrastructure Services;
 - Business Support/Asset Accounting
 - Technical Support Services/Facilities Maintenance
 - Infrastructure (Works) Asset Management
- Executive;
 - Asset Management Development Program
- Community Sport and Cultural Services;
 - Sport Recreation and Community Development

Council has informed and engaged the community through a coordinated community engagement regime utilising the following medium:

- Radio and Print Advertising;
- Onsite facility signage; and
- Officer interviews with various television news networks.

The facility lessee has been proactively engaged and consulted where appropriate in all developments associated with this matter and the construction of this report.

OPTIONS:**Option 1:**

That Council in relation to the Sugarworld Waterpark:

- a) Considers an allocation of \$700,000 in the 2010/11 Capital Works budget to pursue the refurbishment of the 'Banana Bender' and 'Flying Fox' slides, subject to undertaking more detailed materials analysis and specialist consultation to confirm the assertion in the 'Peer Review Assessment' that certification can feasibly be obtained for these slides on completion of the refurbishments;
- b) Notes that the current assessment indicates that the lesser two slides (The 'Cyclone' and 'Sugar Glider') are not capable of being remediated in the same manner and requests an urgent report back to Council on proposed actions in relation to these two slides; and
- c) Delegates authority to the Mayor and Chief Executive Officer pursuant to section 472 of the Local Government Act 1993 to approve and finalise any and all matters relating to the refurbishment of the 'Banana Bender' and 'Flying Fox' slides.

Option 2:

That Council approve funds in the upcoming 2010/11 Capital Works Budget to undertake full replacement of the waterslide tubes and associated steel work at the Sugarworld Waterpark.

Option 3:

That Council resolve to decommission the waterslide component of the Sugarworld Waterpark and rehabilitate the site to provide some levels of service to the community leveraging the remaining aquatic leisure aspects of the facility.

CONCLUSION:

The Sugarworld Waterpark is an iconic and much loved facility in the region's recreational landscape. The facility has been operating in its existing format since 1989 and as such has offered a unique and unrivalled option for the local and visiting leisure seeker. Council is now confronted with a difficult decision with a number of options expected to increase the useful life of the waterslide infrastructure by as much as 30 years.

Council must take a balanced view in making a decision concerning the renewal of the waterslide infrastructure with particular consideration to its long term economic and social sustainability. In this respect it is recommended that Council:

- a) Considers an allocation of \$700,000 in the 2010/11 Capital Works budget to pursue the refurbishment of the 'Banana Bender' and 'Flying Fox' slides, subject to undertaking more detailed materials analysis and specialist consultation to confirm the assertion in the 'Peer Review Assessment' that certification can feasibly be obtained for these slides on completion of the refurbishments;
- b) Notes that the current assessment indicates that the lesser two slides (The 'Cyclone' and 'Sugar Glider') are not capable of being remediated in the same manner and requests an urgent report back to Council on proposed actions in relation to these two slides; and

- c) Delegates authority to the Mayor and Chief Executive Officer pursuant to section 472 of the Local Government Act 1993 to approve and finalise any and all matters relating to the refurbishment of the 'Banana Bender' and 'Flying Fox' slides.

ATTACHMENTS:

- Attachment 1: Revised Report for Sugarworld Waterslides – PDR Engineers
Attachment 2: Preliminary Estimates for Renewal/Replacement of Sugarworld Waterslides – Davis Langdon Quantity Surveyors;
Attachment 3: Letter of clarification from PDR Engineers and indicative revised costs of refurbishment ('Banana Bender' and 'Flying Fox') following 'Peer Review Assessment'
Attachment 4: Schematics, The Adventure Waters Water Park (proposed)
Attachment 5: Images from recently opened Darwin Wave Pool

Tim Dendle
Acting Team Leader Leisure Venues

Tanya Rutherford
Acting Manager Sport Recreation and Community Development

Ian Lowth
General Manager Community Sport and Cultural Services

Attachment 1

This attachment has been circulated for Council's consideration at the Councillor Workshop held concerning this report on Tuesday 11 May, 2010 and is available on Council's website.

Attachment 2Davis Langdon 

SUGARWORLD SLIDES PROJECT	
Indicative Cost Estimates April 2010	
Item	Amount
<u>OPTIONS SUMMARY</u>	
OPTION 1: FULL REPLACEMENT OF SLIDES AND SUPPORT STEELWORK WITH SIMILAR SLIDES	\$ 3,440,000
OPTION 2: REFURBISHMENT ONLY OF EXISTING SLIDES AND SUPPORT STEELWORK	\$ 2,192,000
OPTION 3: REPLACEMENT OF SLIDES AND REFURBISHMENT/ALTERATIONS OF EXISTING SUPPORT STEELWORK	\$ 3,153,000
OPTION 4: PURCHASE OF 2ND HAND SLIDES AND SUPPORT STEEL	\$ 2,231,000

Attachment 3

Cairns Regional Council
Via email : A.Macsuibhne@cairns.qld.gov.au

29 April 2010
L29_04_2010.Docx

Attention: Mr Anton Mac Suibhne

Dear Sir

Sugarworld Water Tube Slides

Further to our report no 10485_1 Rev B and additional inspection held on 27 April 2010, I can advise that our report provided an option for Council to totally refurbish the facility at an approximate cost of \$2.2M. The inspection on the 27 April 2010 provided further support that it is possible to achieve this option for a lesser amount than that compiled by the Quantity Surveyor. I note that several peripheral items were included in the QS's estimate such as pump refurbishment, landscaping and paths etc. These are actually not necessarily required immediately to put the slides back in operation, but may be staged over a number of years. I understand that Mr Stan Perkowicz of Cairns Regional Council will be preparing a revised estimate addressing all the items discussed on site and in our report. I would caution providing a definitive estimate lower than that provided by the QS as with all refurbishment works there may be unforeseen issues which may result in higher costs than budgeted for.

Prior to a final decision being made on proceeding with the refurbishment option, it would be prudent for Council to seek an inspection and comment on the feasibility of fibreglass refurbishment from an expert fibre glasser experienced in the area of water slide tube manufacture. Our expectation as the structural engineers required to provide sign off, would be that the repairs can be guaranteed and fit for purpose in accordance with AS3533 and the relevant fibre glassing standards.

I note the particular requirements of AS3533 are as follows:

Clause 5.2.2 (b) Water Slides – The construction, dimensions and mechanical attachment of the slide components shall be such that the sliding surfaces of the sections are aligned and smooth for the entire length

There are a significant number of tube joints which do not comply with the above and need to be re-fibre glassed to achieve compliance.

Clause 5.2.2 (c) Water Slides – Wall thickness of slides shall be designed so that the continuous and combined action of hydrostatic, dynamic and static loads and normal environmental deterioration do not weaken the strength of the original structure or cause failures that could result in injury to patrons or continually require patchwork.

Obviously any repairs/refurbishment to the fibreglass needs to be assured so that they do not delaminate and become a hazard and or require continual patchwork.

Correspondence PO Box 2551 Cairns 4870
Ph: (07) 4051 5599
Fax: (07) 4051 5455
Email: deroma@pdrengineers.com.au



In addition, it is recommended that Council make contact with Workplace, Health and Safety with regard to the registration of the facility. I understand that the facility is registered and there may be some compliance issues required by the department as well. Certainly they will require details of any modifications proposed for the facility.

Providing the above aspects can be assured and works are carried out as per our instruction, the refurbishment option will extend the life of the facility in the order of 5 to 10 years. Please note that regular inspections and maintenance will need to be undertaken diligently to achieve this and ensure public safety is not compromised.

I trust the above is acceptable and should you have any queries please contact the undersigned.

Yours faithfully

A handwritten signature in black ink, appearing to read 'P. De Roma'.

Peter De Roma
Principal Engineer

Review Sugarworld – Banana Bender Water Slide – Sugarworld
April 2010 Estimate for On Site Repairs

1	Clean up & prepare site	Notes	8000
2	Bed tubes on ground (stabilised bedding sand)	Notes	5000
3	Supply Install & Remove scaffolding (work by scaffolders)	Notes	35000
4	Needle gun / sand blast / water blast rusty sections; cut out rust / replace with new steel + paint steel with high build epoxy (Amercoat)	Allow	25000
5	Place hoop supports including Materials	Notes & Sketch	30000
6	Allow for fiberglass repairs	From QS	25000
7	Reseat entry to tube on timber chocks (nylon / rubber)		5000
8	Remove some roof sections for ventilation then replace Sand off 1.5m wide slide path = invert inside Banana Bender tube then clean, then spray Flowcoat (note confined space operation – extra man, safety lanyard etc)	Notes	20000
9	Realign tubes clamp with new bolts where tubes are out of alignment	Notes & Sketch	20000
10	Replace nuts and bolts (break / grind nut cracker) ... QS allows \$5k	2xQS	10000
11	Adjust heights of tubes on cradles to ensure alignment along the invert and matching of tube flanges (3 men x 5 days) = instead of flange clamps get good alignment		15000
12	Reseal inverts of tubes where these are realigned Reseal inverts of tubes throughout	From QS	15000
13	Spray paint exterior of tubes on completion	Allow	10000
14	Tube materials analysis (ref. PDR comment) and detailed work costings (external service providers/specialised trades). Design of Tube Supports.	Allow	25000
	Sub Total		248,000
	Allow 15% contingency		37,200
	Allow 10% external consultant services		24,800
	Allow 20% Council process/diligence, Cost of Governance, Public Consultation, Internal Service Providers in project delivery etc.		49,600
	TOTAL		359,600

Attachment 4 - The Adventure Waters Water Park (proposed)



Attachment 5 - Recently opened Darwin Wave Pool

