



## **TRU-Park Workshop 9b: Specialist studies**

*see presentations*

*see attendance register*

*apologies: Lungelo Nokwaza, Liezel Benjafield*

*10 November 2016*

*18h00 – 20h00*

*at Methodist Church Hall in 1 Union Ave, Pinelands*

Agenda:

- Introduction and programme – Michael Krause
- Heritage Baseline Study: Process, informants and indicators – Melanie Attwell
- Green Corridor Landscape Concept – Tarna Klitzner
- Transport: assumptions, modelling and findings – Rory Williams
- Engineering Services: Informants, model and findings – Jan Theron and Beukes Kotze.

To access the WCG TRU-park Repository, please follow the link below:

<https://www.westerncape.gov.za/general-publication/two-rivers-urban-park-%E2%80%93-towards-sustainable-integrated-urban-development>

## Introduction and programme by Michael Krause

**Michael Krause:**

- intro/agenda
- The next meeting will be the TRU-park Co-design Workshop on the 18<sup>th</sup> February 2017

NAME	QUESTION/STATEMENT	RESPONSE	COMMENT S/ACTIONS
Riad Davids	Are they only based on the city's proposal?	No, these are specialist studies – they are informants to the proposal.	

**Melanie Attwell - heritage consultant:**

- A heritage assessment is required by law. The heritage baseline study has two functions:
  - [1] To provide high level informants to Draft Development Framework analysis
  - [2] To fulfil statutory requirements in terms of S 38(3) and 38(8) National Heritage Resources Act
- A notification of intent to develop has been submitted, which is also a requirement for the national heritage act. There are 4 requirements:
  - High level study in line with a staged “package of plans approach”.
  - Mapping and assessment of heritage resources
  - Development of heritage related design informants
  - Consultation with registered heritage conservation groups
- The TRU-Park is highly significant site in terms of memory and identity, relating many facets of history. It is significant in the pre- and early colonial history of the country. It was a frontier. Brown shaded area on the map indicates the contact point between the indigenous people and the colonials.
- The heritage mapping gives an indication of where first socio-spatial barriers were and where the first early farmsteads were as the first privatised land became available.
- In terms of section 34 of the act is that anything older than 60 years may be regarded as heritage.
- Heritage assets under formal protections are protected by law and are non-demolish able. Within the TRU-Park site there are only 3 provincial heritage sites.
- There is a Heritage Protection Overlay Zone [previously called the old conservation areas] which are managed by the city. The demolition or alteration of buildings in these areas would require the city's consent. Extending the HPOZ over the TRU-Park site is under consideration.
- Observatory Hill has recently been declared as national heritage
- Different references for buildings that are required by law:
  - Grade 1 sites: Sites of National heritage Significance • Grade 11 sites: Sites of Provincial Heritage Significance
  - Grade 111 sites: Sites of local heritage significance
  - Grade 111A. Sites and structures of outstanding local heritage significance
  - Grade 111B. Sites and structures of considerable local heritage significance
  - Grade 111C. Sites and structures of contextual heritage significance.
  - Notes all sites have been graded within the TRUP and
- The CoCT is in the process of regrading the heritage resources. They have undertaken a grading exercise and the scope of the work is to identify significant sites, how they relate to each other in order to achieve consistency in terms of the grading. The findings are proposed gradings and the city has not made a final decision on them yet.
- Oude Molen and the Alexandra Institute building are Grade II – provincial heritage significance and they are not Grade I national significance.
- River club is a Grade IIIC – has some significance
- The assessment has taken into consideration the heritage assets within the context, how the buildings relate to each other: river corridor, axes, trans-human crossing.
- Have also examined notions of tangible and intangible heritage in relation to memory and identity and looked at the notion of potential areas of commemoration for example the Ndabeni site, the Oude Molen site, etc.

## Heritage Baseline Study: Process, informants and indicators – Melanie Attwell

- Findings about the TRU-Park site:
  - TRUP is an area of high cultural significance (tangible and intangible heritage)
  - Levels of heritage protection within and on periphery of the TRUP site.
  - Levels of heritage significance within the site vary from Grade 1 to Grade 111C. Design and planning responses need to be considered within these varying levels of significance.
  - Heritage constitutes a design and planning informant of high significance i.e. the sites present significant heritage constraints (and opportunities).
  - The cultural significance and heritage related design informants will be unpacked at a more detailed level in the precinct planning phase (in line with the Package of Plans approach).
  - Public consultation will be ongoing at the precinct level assessment.

NAME	QUESTION/STATEMENT	RESPONSE	COMMENT S/ACTIONS
John Holmes	You didn't mention Oude Molen as a heritage site. There are buildings there that are over 300 years old.	Melanie Attwell: Oude Molen is not formally declared in terms of formal protections as in what the law protects whereas the buildings refer to grading.	
Marc Turok	You talk about grading of buildings, but heritage is also about grading of nature resources – what about the trees, the river, etc.?	Melanie Attwell: We refer specifically to heritage related design informants. Landscape and context have been taken into account.	
Marc Turok	<p>The significance of arriving in this area and the confluence of the rivers - there is a huge celebratory attachment to this area and I feel very strongly about preserving what happened in this place, its origins, early settlers, etc. Will this be preserved?</p> <p>The heritage of the site will be disturbed by the extension of Berkeley Road extension, this is of great concern to me.</p> <p>You mentioned the proposal to declare the TRU-Park site as an overlay protection zone?</p> <p>What about if someone wanted to develop on the SA Astronomical Observatory?</p>	<p>Melanie Attwell: I agree with you completely. The symbolic nature of the landscape enhances the sense of place and the landscape should be seen as an artefact. If as much of the landscape can be preserved the better.</p> <p>The celebrated needs to be identified and explained to people through mechanisms of interpretation such as storyboards, celebration spaces, etc.</p> <p>There is a whole range of protections and how they all fit together. It is under the city's consideration but no decision has been made yet.</p> <p>Observatory and the River Club are working with separate heritage consultants.</p>	
	I am questioning the authenticity of the landscape. The river did not look like that, there was an estuary.	Melanie Attwell: Modifications of the landscape are ongoing all the time, this is what Tarna studied – open space pastoralism and movement, there was one large wetland all over Paarden Eiland and we cannot expect the landscape to return to that.	

**Heritage Baseline Study: Process, informants and indicators – Melanie Attwell**

Lynette Munro	There are areas being re-graded – can you clarify?	Melanie Attwell: Over a period of time, the CoCT undertook a series of heritage studies and developed a grading criteria. The criteria changed over 20 years as well as the buildings. The city has been concerned with the notion of consistency. A process of patchy grading that took place over a period of time. They are aiming to reach certain level of consistency, but the old grading is not that much different from the new grading. The most important part of the grading is how it relates to conservation and management.	
Lynette Munro	We are in transition and I am concerned that to suit our interest, we will lower the grading?	Melanie Attwell: We cannot change some of the grading. It is quite unlikely that they are going to change drastically because there are precedences for all the grading. The report will go to the HWC and they will decide if the grading changes or not.	
Michael Krause	Are there certain timelines that they will respond to the re-grading?	Melanie Attwell: The heritage baseline study has been submitted and released for comment.  Jody Paterson: There is a 30 day commentary period and this period should extend over Christmas.	Heritage baseline study available on the WCG repository by 14/11
Marc Turok	Who is liable to respond in the commentary period?	Melanie Attwell: The registered heritage bodies who are registered with the Western Cape. The HIA baseline will be available on the repository.	
John Holmes	How do the 100 year buildings fit in with heritage? Some buildings that are 100 years are missing.	Melanie Attwell: There are 60 year old buildings.  Michael Krause: Please read through report and submit comments to Melanie as the report is more accurate.	

### Tarna Klitzner:

- What is the green corridor zone (focus area): provincial and council site outside the private development area
- Have been tasked to set principles & proposals for the green corridor and to determine the relation between the site and its surrounding.
- Informants: stakeholder engagement, specialist studies, status quo analysis, desktop studies, information gathered in discussion and the 2003 CF review.
- Methodology: co-design approach [tools: manifesto, stakeholders' mapping, scenarios] and interpretative mapping [status quo analysis, concept proposals, draft landscape plan]
- The 3 proposed scenarios were taken into consideration during the design process.
- Contextual analysis: need to understand the riverine system at the catchment scale as it has a huge impact on the TRU-Park site.
- Starting from the site analysis, the design informant maps combines different elements, looking at critical relations.
- Design informants - key issues:
  - River systems that have been altered over time, protected wetland zones, remnant zones, concrete canals and the stormwater from the adjacent settlements that run straight into the river systems.
  - The condition of the Black River water is critical but the Liesbeek River is not as bad.
  - Biodiversity: High and medium botanical and faunal sensitivity. Nick Holmes highlighted the importance of the East-West connection across the banks, as well as the North-South connection. The movement continuity is crucial.
  - Freshwater sensitivity: in medium sensitivity areas it is possible to modulate and it is important to keep high sensitivity areas as conservation areas.
  - Open space and accessibility: there is very little accessibility to the park
  - Issues raised by stakeholders during the Public Participation Process - Stakeholders' mapping

## Green Corridor Landscape Concept – Tarna Klitzner

- The TRU-Park site has the potential to become an ecological thriving landscape and provide opportunities to readdress the socio-spatial legacy of apartheid.
- 3 Guiding design principles resulting from the interpretative mapping and the TRU-Park manifesto are: CONSERVE, CONNECT/ACCESS, ACTIVATE
  - Hydrology:
    - Ameliorate the water running from the adjacent suburbs with a SUDS system
    - Ameliorate the flooding with the wetlands
    - Access to water at the docking stations
  - Biodiversity:
    - Covering the freeway to strengthen connectivity - the idea of covering the freeway is a dream and is not something that is going to happen immediately but these ideas need to be put on the table so that they can be discussed and not forgotten.
    - North-South biodiversity link
    - Green bridge connecting the suburbs
  - Active and passive open spaces: Socially active edges at key points such as gateway points as you enter the park, there could be institutions and activities that become destination points along the edge of the park. Socially passive spaces, dedicated to nature.
  - Docking station
  - Accessibility: NMT network, boardwalks, ecological bridges to trigger biological and social connectivity
  - Edges along the park to provide passive surveillance

## Green Corridor Landscape Concept – Tarna Klitzner

- Draft landscape proposal/concept plan - zoom in square highlighting the main elements for further investigation
  - Square 1: Liesbeek River North of Station Road
    - proposed development within the edges of the sport fields
    - Swales from Observatory to ameliorate the stormwater
    - Maintaining the River Club as open as possible and maintaining the key views
    - Extra canal to allow circular movement around the river club
  - Square 2: Liesbeek River North of Station Road
    - proposed development within the edges of the sport fields
    - subtle pedestrian bridges over the river, softer edge, orchard are not allowed in CBA
  - Square 3: Alexander Hospital area
    - partial covering of the M5 freeway
    - Extension of Station Road
    - First Nation celebratory intervention
    - pathway between the Rapenperg wetland and the Black River
  - Square 4: Maitland Garden Village
    - nodal development and potential flood alleviation pond below MGV
  - Square 5: Oude Molen
    - berms to visually cover the M5 freeway
    - flood storage area below OM
  - Further investigation: audit of the wildlife with the river corridor. King Fisher prefers the vertical hard embankments so some of the hard edges would need to be maintained for this particular species.
  - Water quality is a primary constrain

NAME	QUESTION/STATEMENT	RESPONSE	COMMENT S/ACTIONS
Louise Badenhorst	Thank you Tarna for taking into account our concerns, I felt heard.		
	Can you define biodiversity area?	Tarna Klitzner: Cape Nature has an agreement with the City council regarding the Biodiversity conservation areas. No development is allowed within these area.	



## Transport: assumptions, modelling and findings – Rory Williams

### Rory Williams:

- Setting up a framework
- A transport impact assessment will follow and a finer level of detail will come at a later stage
- The NMT routes mentioned by Tarna is just as important as transport
- Bigger picture:
  - There is congestion all around the TRU-Park site, it is getting worse and there is uncertainty around public transport.
  - Transport Oriented Development TOD - The policy is changing, but how do you get the city to make a positive policy become a reality?
  - How do we accommodate everyone when only 30% of people have a car and a job.
- The mandate for the TRU-Park site is to have a significant level of development and my job is to look at how to make it possible to work with the development.
- What is acceptable? You should say what type of environment/area you want and it is my job to make it work in terms of transport and see what is an acceptable transport system.
- What do we measure? Guiding indicators: density, activity in the public realm, level of safety, parking demands, etc.
- Picking assumptions: what do we want to change?
- Behaviour management: individual's decision sequence, what makes change difficult?
- There could be parts of TRUP where there is a market for live, work, play but there is no specific area in Cape Town where people live in these conditions. There is no specific model to reference and so the question is: do we want to create that – an intentional community?
- Model: we cannot eliminate congestion, we need to move toward more sustainable systems and “critical mass” is crucial to support public transport.
- What is planned?
  - Berkeley road extension – the model shows that the extension will give some relief to the traffic on Liesbeek Parkway.
  - rail: infrastructure and rolling stock upgrades
  - Improving connectivity: IRT MyCiti planned routes - TRUP is a void but can be serviced through the east-west link
  - North-south pedestrian NMT route
- Concepts: Berkeley road for general traffic, Station road for public transport and NMT, remote parking, “convertible” parking, flexible transport modes, vehicle sharing, bicycle rental, NMT routes, shared and active spaces

NAME	QUESTION/STATEMENT	RESPONSE	COMMENT S/ACTIONS
John Holmes	You are assuming that the congestion will get worse – why do you think it will?	Rory Williams: Even if there is a huge shift to public transport, we are still going to get traffic and we are still going to get congestion.	
Carol Thomson	Is the connection going through Strubens Road?	Rory Williams: It could be, we are not at that particular level of detail yet.	

**Water and Sewerage Infrastructure / Jan Theron:**

- Engineering Services Model (ESM) tests the conceptual mixed use development against infrastructure requirements: where is the gap between what is existing and what is required by the proposed scenario.
- Potable water supply solutions: sustainable solutions and efficient water usage e.g. rainwater harvesting
- Sewerage/wastewater solutions: recycling and re-use, on-site treatment
- Solutions developed in line with City of Cape Town standards
- ESM is developed towards a functional use but the model is adaptable
- Basic concept development: After taking into account all the other studies, looked at what is the maximum development possible and compare to what is existing for the bulk services

**WATER SUPPLY**

- Water saving measures considered
  - Water management devices, awareness campaigns, pre-paid water meters, sliding scale rates (incl. penalties & incentives)
  - Water pressure management
  - Grey & roof water flushing systems
  - Efficient water use devices
  - Irrigation using treated effluent and/or rain water harvesting/river water
  - On-site bulk water storage (and treatment)
- Estimated impact of water saving measures could lower development water demand from 421 l/s to 214 l/s, thus still leaving a shortfall on existing system = 48 l/s (approx. 20-25% shortfall)
- Limiting development to suit existing water supply can service 10 952 residential units, 8 schools, 117 679 m<sup>2</sup> institutional & 165 232 m<sup>2</sup> commercial development.
- Alternative supplementary water supply on site will require approval from CoCT and is currently not preferred.

**SEWERAGE**

- On-site treatment of sewerage not deemed to be cost efficient and not allowed by CoCT due to risks & accompanying responsibilities.
- On-site wastewater treatment works could also impose a 500m radius development barrier and/or costly measures to eliminate odours & health risks and visual impacts.
- In turn this eliminates the options for effluent re-use & waste-to-energy generate (from wastewater)
- Proposed that all effluent from development be pumped to the existing Athlone WWTW
- Water saving measure will positively impact and limit requirement for upgrades

Conclusions up to date: water and sewerage

- Existing bulk water supply infrastructure can accommodate approx. 40% of the current proposed development concept
- Water use efficiency and water saving measure could increase this to 80% of the proposed development footprint
- On-site potable water storage and treatment not currently seen as an option due to associated risks
- Sewerage conveyance will require upgrade to existing bulk infrastructure for treatment at Athlone WWTW
- On-site wastewater treatment not currently seen as an option due to associated risks
- Water & Sewerage Services Model developed to be adaptable to suit development needs whilst being fully integrated with City of Cape Town existing capacity, planning and standards.
- Current findings & conclusions are conceptual and provides a guideline towards ultimate development of the site

**Electrical / Beukes Kotze:**

- Power [MVA] vs Energy [KWh]: balance between the two
- Electrical bulk infrastructure: estimated shortfall of 88MVA – how can this be addressed?
- Energy management:
  - energy conservation – changing people’s behavior is a no cost option
  - energy efficiency – occupancy sensors, efficient fittings and lighting systems, etc. - increasing cost option
  - energy substitution - renewable energy sources - increasing cost option
  - regeneration / own cost: High cost option
- Green priorities:
  - Passive Solar Architectur/ Energy efficiency: orientation - SANS 204, roof assembly, fenestration, roof top
  - Solar Water Heating [distributed]
  - Photovoltaic [distributed]
  - Biogas/waste energy [districi level]
  -

NAME	QUESTION/STATEMENT	RESPONSE	COMMENT S/ACTIONS
Mark Turok	Can you explain the map please?	Jan Theron: The map shows the possible buildable areas.	
Carol Thomson	Can anyone see these drawings or is it only me?		

**Engineering Services: Informants, model and findings – Jan Theron and Beukes Kotze.**

	<p>There is no clear distinction on the map as to what is proposed to be developed and what is to be retained. We are now talking about water supply but we are not being shown a map that does not clearly distinguish what is up for grabs and what is not.</p>	<p>Michael Krause: If you have gone through the process with us, you would have seen and discussed the 3 possible scenarios. During the co-design workshop on the 18<sup>th</sup> February, the preferred scenario will be consolidated. Last week we looked at what are the possible developable areas and Jan is referring to those developable envelopes.</p> <p>Jody Paterson: This is a model, it is a high level concept.</p>	
Mark Turok	<p>Solar water heating and solar space heating is generally more efficient in larger systems – heating the hot water reduces the amount of electricity used. It has been developed substantially in the Northern hemisphere but we have more sun, so we should look into those alternatives</p>	<p>Beukes Kotze: This will reduce the consumption of electricity. We are in the planning stage at the moment and you have to plan for the network first.</p>	
John Holmes	<p>You didn't mention wind turbines.</p> <p>You also didn't mention underground. We have a lot of underground springs and no one has looked at these as it could increase pump storage.</p>	<p>Beukes Kotze: The aesthetics of the large windmills with 3 blades is a big challenge. Having no blades is an opportunity but still needs to be investigated.</p> <p>You cannot have more than 15% of underground storage.</p> <p>Rory Williams: Maybe in KZN.</p>	
Lynette Munro	<p>I got the impression from the transport presentation that nothing has been decided and we can still think and dream a bit.</p> <p>With the electrical and water it just seemed like it was business as usual. The 2003 CF looked at sustainable and alternative technologies. Are you pushing for innovation or is this business as usual? Are we pushed back to business as usual?</p>	<p>Beukes Kotze: We start with business as usual and all the extra it would be looking at alternative. In terms of showing the limitations and exploring what we can do, the TRUP development is currently not seen as feasible in terms of a sustainable energy model and where we get the shortfall from.</p>	

Engineering Services: Informants, model and findings – Jan Theron and Beukes Kotze.

<p>Lynette Munro</p>	<p>Did your ToR require alternative technologies?</p> <p>Is it a top-down approach? Is the city having the final say?</p>	<p>Gerhard Gerbert: Yes, we set up a sustainable model, but ultimately it has to comply with the city requirements. We are exploring what is possible and if it complies with the city. Identifying where the limitations come from is part of the exercise. For instance, we wanted on-site treatment or waste energy and then the City said 'no'. There is a number of things which require city approval.</p> <p>The idea is to push back, saying this is the vision. If to a large extent we cannot do things differently, then there are huge limitations, everything must work and things cannot be pulled off. To activate the space, everything must work.</p> <p>Beukes Kotze: Even if we have on-site treatment, it does not cover the requirement then we don't have any benefit.</p>	
<p>Mark Turok</p>	<p>I would suggest we look at a mixed model, giving support to other areas on the TRU-Park site like Ndabeni or Oude Molen who already have cutting edge development model. With regard to water and sewerage, should we not looking at a model which gets replicated elsewhere?</p> <p>No. 3 in the manifesto indicates a sustainable environmental approach, if this is not achievable... well at least, we can remember we were aiming for that.</p>	<p>Michael Krause: The city said who comes first go first in terms of water capacity. Should we not look a combination of different models.</p> <p>Jan Theron: It is an option to have a combination of resources.</p>	
<p>John Holmes</p>	<p>What about biogas digester?</p>		
<p>Mark Turok</p>	<p>I would like to suggest tat we have more around the table discussions. We should not rely on what has been done. We should look at built form, character of the area, avoiding to jeopardise what we are looking for. We should not give up on innovation!</p> <p>It is also a case for the design model. For instance crossing the park is looking at how to solve a problem on the outside, rather than focusing on the inside. It has to do with conditions! We should look at how we can solve the problem at all scales inside and outside.</p>	<p>Rory Williams: Pushing the boundaries is good, but we need to bear in mind that there are policies in place, and procedure to follow. If you as stakeholders could give me an ammunition saying: there is a group of stakeholders who are willing to set up a pull car system, or a bicycle route...supporting my assumptions for a shift to public transport.</p>	

**Engineering Services: Informants, model and findings – Jan Theron and Beukes Kotze.**

Louise Badenhorst	What happened to the idea of linking all the 6 stations with a route?	Rory Williams: Is there a need to link them? Linking certain stations makes sense for different railway routes i.e. the large number of people going to the southern and northern suburbs via Salt River station - the link we look at is to reduce the travelling.  I have recently discovered the joy of using myCiti from CT station to V&A waterfront, because I have to wait only 6 mins. In terms of TUP, if we don't have a big development should support public transport, it is not going to work.	
Marc Turok	The railway system can be changed going from the southern line to Khayelitsha, but this will require negotiation with PRASA to adjust the rail system.	Rory Williams: We have to assume that the railways have to be upgraded otherwise we are in trouble, but when is the question.	
John Holmes	What about a park and ride around the whole TRU-Park site? What about air cars?	Rory Williams: What are the alternative mode? 'Regulations' are making it difficult to implement such idea.  Michael Krause: Should we not have some focused conversations, where interested people come.  Rory Williams: Yes, we could do that, but I would request that people should send their comment via email first, to make sure that we have something to discuss.	
Hazel Bowen	Please do not scratch ideas/ things that may be discounted by the city in the report so that we can work with that, promote it, make an assessment if we can support that. Have you ever been to Struben Road in Observatory? Garbage collectors have problems moving along that road	Rory Williams: Yes, I have been in Struben Road.	
Carol Clark	How does the critical mass get determined? What is the figure?	Rory Williams: Railway doesn't need critical mass. Public Transport needs high density, approx 25 du/ha as required by TCT [TOD].	

We would like to reconvene for the next session, on **Saturday the 18<sup>th</sup> of February 2017**, between 6.00pm and 8.00pm. (tbc.)