



KAROO WABI SABI: THE TRANSFIGURATION OF THE COMMONPLACE

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Oct 2012



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SQUARE KILOMETRE ARRAY (SKA): HARNESSING THE UNTHINKABLE (SOME RESEARCH QUESTIONS)



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WHAT IS “WABI SABI”?



- A Japanese visual, *feeling* aesthetic of the “weathered” and taken-for-granted (**not** the ‘antique’ or marketable i.e. no “cash value”)
- *“Wabi sabi ... seeks beauty in the imperfections found as all things, in a constant state of flux, evolve from nothing and devolve back to nothing. Within this perpetual movement nature leaves arbitrary tracks for us to contemplate, and it is these random flaws and irregularities that offer a model for the modest and humble wabi sabi expression of beauty” – Juniper (2003)*



- *“Wabi sabi is about the minor and the hidden, the tentative and the ephemeral: things so subtle and evanescent they are invisible to vulgar eyes... The closer things get to nonexistence, the more exquisite and evocative they become” – Koren (2008)*

KAROO WABI SABI



- Poignancy
- The serene melancholy of transience made manifest
- Values quietly decaying
rusticity
- Symbolic of
impermanence and
ongoing flux
- Nothing to do with the
slick, the polished, the
gorgeous, the saleable





ABANDONED HALF OF A GRINDSTONE WHEEL



INTRODUCTION TO SKA

- R20-bn+ (phase 1?) radio telescope project to probe formation and evolution of magnetic fields, stars and galaxies; nature of 'dark matter' which comprises 95% of the Universe; validity of Einstein's theory of relativity; extra-terrestrial life.
- The square kilometre is *not* the size of the site – it is the surface area of all the dishes added together.
- Two phases – Phase 1 construction will begin in 2016. Phase 2 should be complete by 2024.
- MeerKAT – R2.5bn local precursor of SKA is a 64-dish installation
- SKA central computer (not built yet) will perform 10^{18} calculations per second = number of stars in 3-million Milky Way (300-billion stars in MW).
- Data collected in one day would take 2-million years to play back on an iPod
- Sensitive enough to detect radar signal on planet 50 light years away
- Capable of collecting radio waves from objects “billions of light years away”
- 85% of Africa's 70% share will be located in N. Cape
- 13 countries and 100 organisations already involved.
- Major “Human Capital Development” programme – 400 bursaries awarded so far.
- Biggest threat - financing

IGNORING THE ASTRONOMY GEOGRAPHIC ADVANTAGE (AGA) ACT

- *Business Day* Opinion & Analysis (31 May 2012): “*Fracking and SKA: State has a choice to make*” – ‘collegial’ reaction



- Juta Legalbrief June 2012
- DA calls for parliamentary debate on the matter (Sep 2012)



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Fracking or the SKA - quandary for state

Published in: Legalbrief Africa
Date: Tue 05 June 2012
Category: South Africa
Issue No: 481

The awarding of an effective 70% of the Square Kilometre Array (SKA) bid to SA has resurrected the anomaly: the apparent mismatch between the provisions of the Astronomy Geographic Advantage Act and the 'precincts' provisionally allocated by Petroleum Agency SA to Shell International for shale gas exploration using hydraulic fracturing, or fracking.

In an analysis in *Business Day*, Mark Ingle, of the Centre for Development Support at the University of the Free State, notes the Act was formulated to establish the SA government's bona fides regarding the SKA bid. It serves to ensure 'site integrity' by designating 'the entire Northern Cape province, excluding Sol Plaatje municipality (Kimberley) ... an Astronomy Advantage Area' so as to 'prohibit or regulate declared activities that pose a potential detrimental impact' for astronomy. Ingle points out that Shell's proposed area of operations in the Karoo is divided into three precincts: the western, central and eastern. Almost all of the western precinct falls within the Northern Cape. The northern half of Shell's central precinct also falls within the Northern Cape. Noting that the suggestion that the state might repeal the Act was made before the SKA announcement was made, Ingle warns: 'What is required is an unequivocal assurance that the provisions of the Act will be adhered to, most especially by those departments involved in the fracking issue.'

Full analysis in Business Day

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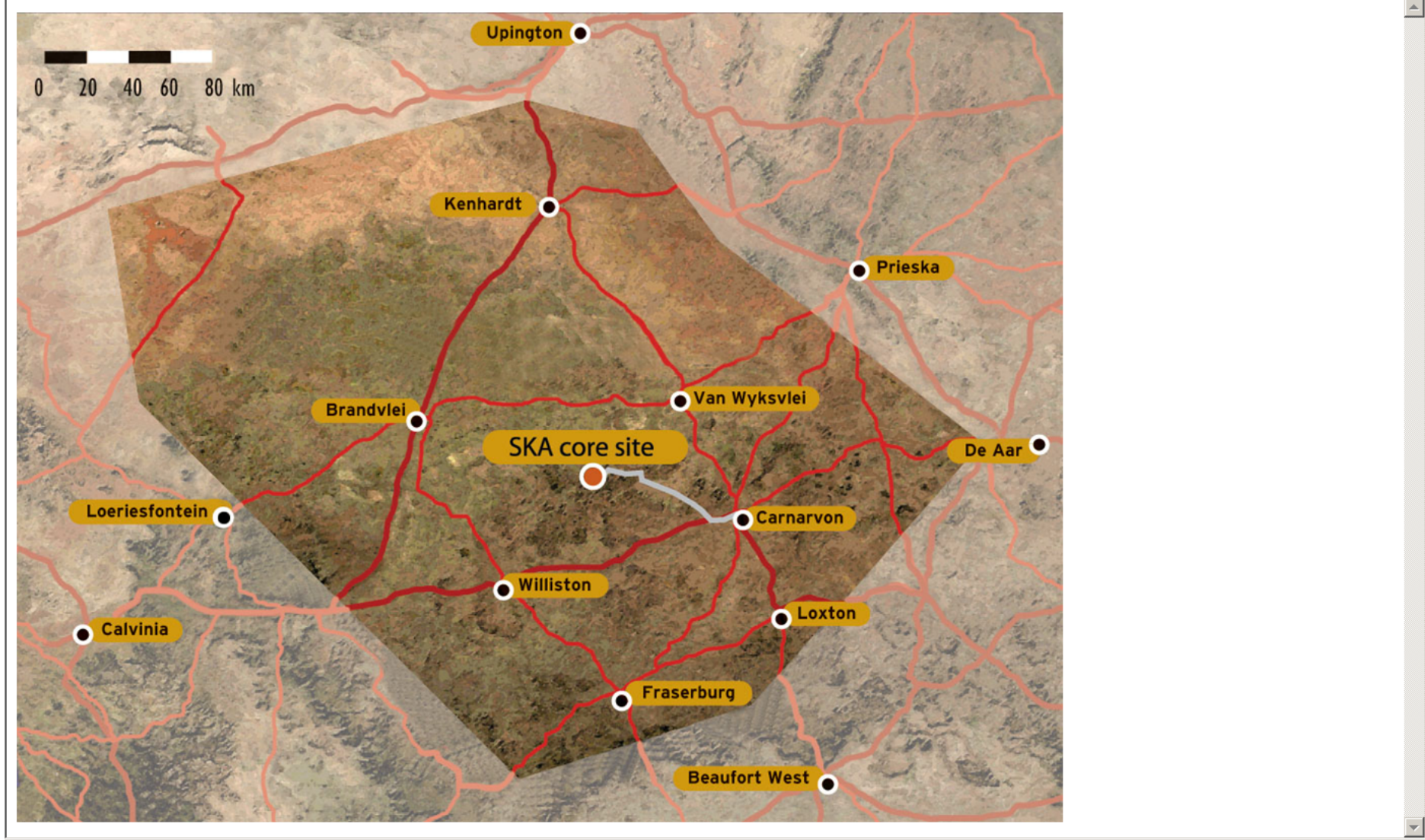
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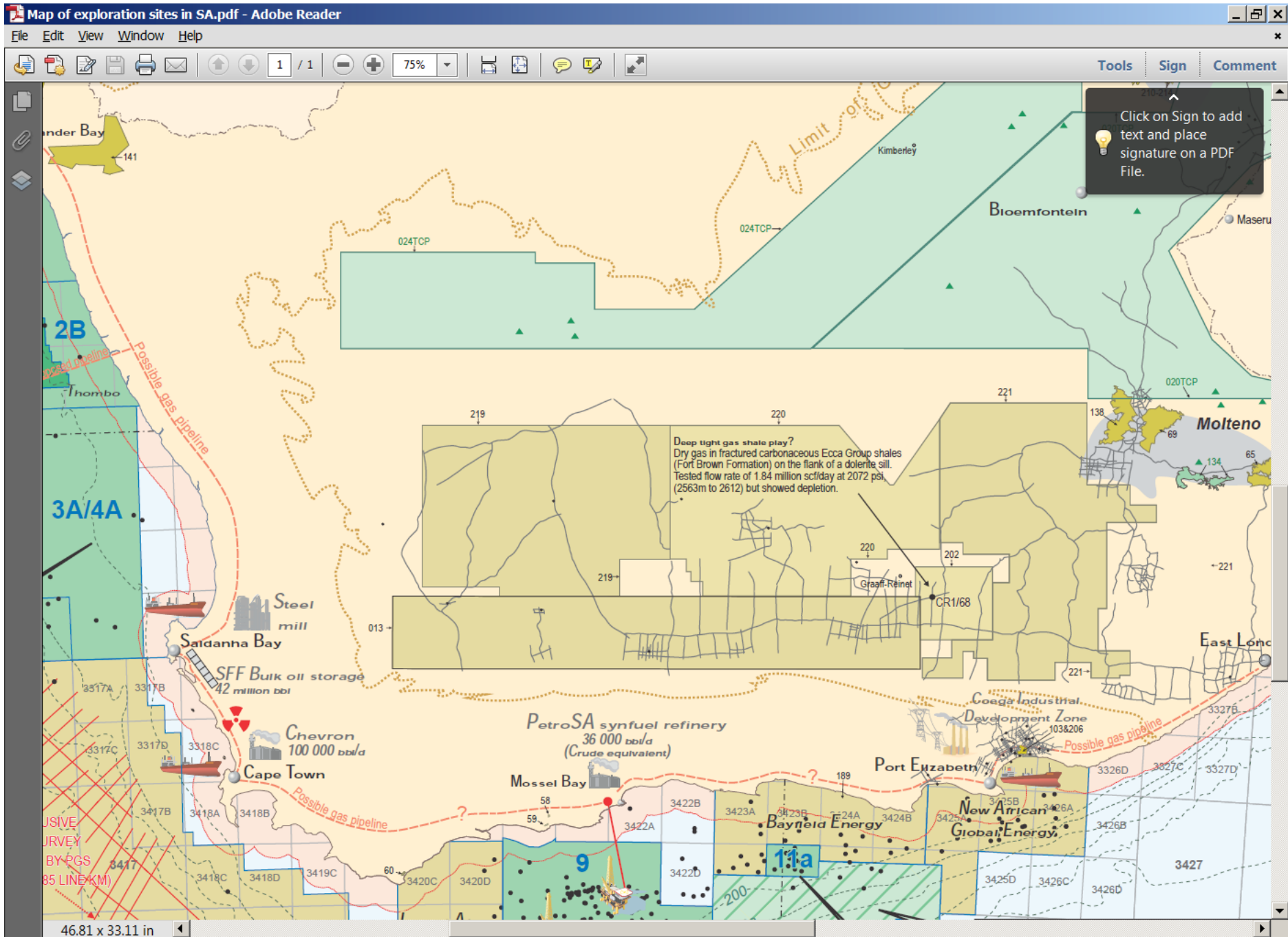


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SKA INSTITUTIONAL ENVIRONMENT

- An analysis of the Inter-Governmental Relations (IGR) stand-off which has arisen between the Departments of Science and Technology, Mineral Affairs, Energy, Water, Environmental Affairs, and Tourism. This is partly on account of the fact that half of the exploration 'precinct' granted to Shell for Karoo shale gas is protected by the **Astronomy Geographical Advantage (AGA) Act** which was passed in order to demonstrate South Africa's *bona fides* vis-a-vis the SKA bid.
- **THIS IS A MATTER OF LAW - NOT POLICY.**





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OUR MISSION

The aim of Spaceport Sweden is to become Europe's first and most obvious place for personal suborbital spaceflights. **We are open for all operators!**

Spaceport Sweden is based in

NEWS

6/20/2008
Spaceport Sweden at the Symposium for Private Human Access to Space in Arcachon 2008
 Take part of our presentation "Spaceport Sweden - Open for business" and read more

FIRST FLIGHT

2012 we will give ordinary people the opportunity to become non-professional astronauts by taking off from Spaceport Sweden. We will do this together with Virgin Galactic, the world's first commercial space line, as they have

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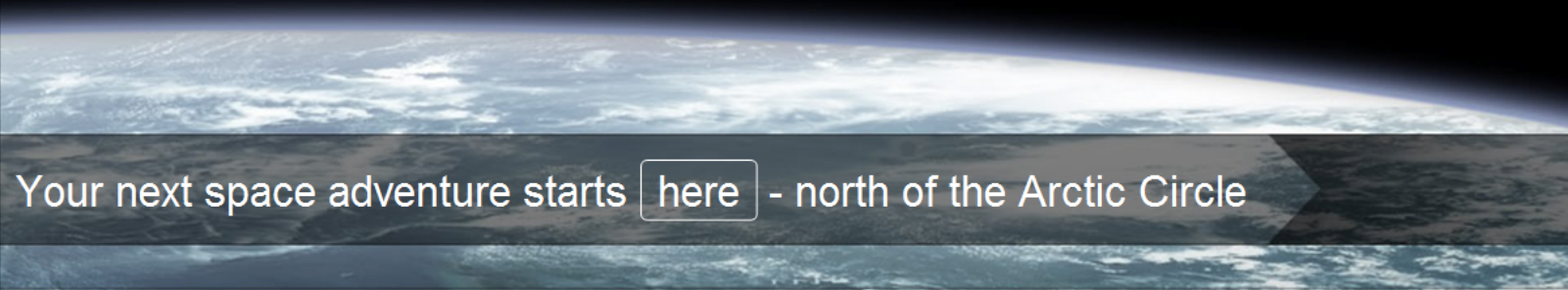
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SVENSKA
TURISTGALAN 2012


October 04 2012 Karin Nilsson


Spaceport Sweden in the final at the Swedish Tourism Awards

On October 18 its time for the annual Swedish Tourism Awards (TRIP Awards). Established in 2005, the TRIP Award has grown to become Europe's largest industry event where talented entrepreneurs and outstanding experiences are awarded.

Innovation is the theme of this year permeating the entire program and is also the focus of the new award category where Spaceport Sweden is one of three finalists for the "innovation award".

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SpaceportSweden A proud day for the team as we are in the final in the category "innovation of the year" at the Swedish Travel Awards!
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SpaceportSweden Presenting and discussing #spaceport Sweden and #space as a catalyst for #innovation for the #tourism industry at Finnish tourism parliament
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SpaceportSweden @Tillväxtverket discussing x-industry innovation w/in #tourism & #creative industries using

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SKA TOURISM SPIN-OFFS

- An investigation of the implications of SKA for the further development of the Karoo's burgeoning astro-tourism niche-market
- A revisiting of the spaceport concept in the light of SKA. This will be informed by a study-visit to Spaceport Sweden in 2013 (funded by the Erasmus Mundus programme).



SCIENCE INDUCING PARADIGM SHIFTS

- 1969 moon landing
- 'Earth Rise' as Seen from Lunar Surface

Image ushered in the Environmental Movement

- Copernicus
- Darwin
- Freud
- Einstein



SKA AS 'CUTTING EDGE' CATALYST

- SKA is predicated on the pursuit of knowledge for its own sake – as an *intrinsic* good – albeit that this knowledge will almost certainly prove to have *instrumental* value in ways which we cannot currently imagine.
- SKA (as a “stretching exercise”) holds out possibilities for the *re-enchantment* (Weber) of the world.
- SKA seeks, inter alia, to penetrate to the mysterious core of physical reality (*‘dark matter/energy’*). Such exercises typically trigger radical reassessments (*‘paradigm shifts’*) in humankind’s self-understanding.
- Leading-edge science always has philosophical implications.

THE BIG QUESTION IN THE SKA FOR THE KAROO

*What does it mean to be in at
'ground zero' of this pioneering
endeavour?*



- *finis* -