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Greenroads™ SOUTH AFRICA

Status report on Greenroads South Africa

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Scope of presentation

- 23rd RPF at Fern Hill Greenroads workshop – May 2012
- Confirmation of interim board members
- Subcommittees of interim board
- Meetings held with industry and other role players
- Other green industry initiatives
- Alternative rating tools
- Adaption of Greenroads Manual
- Some industry concerns
- Focus of workshop on 8th May 2013

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The Greenroads SA "Interim Board"

WHO'S ON FIRST?

"Big Enough to Matter but Small Enough to Move Quickly"

WHO IS ON THE *INTERIM* BOARD?
And Why?

- CSIR
- CIDB
- SARF
- SABITA
- CESA
- SAFCEC
- ETHEKWINI MUNIC.
- CITY OF CAPE TOWN
- NDOT
- SANRAL
-KZN DOT
- DBSA
- ***C&CI***
- Greenroads (USA)

"Concept is only as good as those who support it"

These are KEY STAKE-HOLDERS from

- - Research
- - Organisation Bodies
- - Roads Authorities
- - Muni's and Metros
- - Funding Agencies
- - Consultants
- - Materials Suppliers

- *Similar to the GBCSA Key Stakeholders / Board*

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Subcommittees

- Marketing and communication
- Structure and finance
- Technical development

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Since May 2012 the following interventions and meetings have taken place:-

- 5 meetings of interim board held at CSIR – held approximately 2 monthly.
- Presentation to COTO – Roads Coordinating Body (RCB) in Sept 2012 – Benoit Verhaeghe and Jonah Ptak
- Met with DBSA – Sept 2012
- Met with Green Building Council of SA.
- Numerous local meetings of region based members
- Presentations to industry peers and training sessions

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Other green industry initiatives

- Green Building Council of SA – already established
- Proposed Green Infrastructure Council with Greenroads being one aspect of this council – promoted by DBSA

Alternative rating tools for the construction industry

- AGIC – Australian Green Infrastructure Council
- CEEQUAL – United Kingdom

Neither of these rating tools were considered as they are not road specific. They were developed to be able to accommodate all types of infrastructure construction and maintenance.

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Adaption of Greenroads USA Manual

A lot of good work has been done in preparing an initial document for use in the S A roads industry context.

A multi-step approach has been adopted to:-

- Identify any loopholes
- Develop a “beta” version
- Identify experienced section leaders for each section / credit
- Distribute a draft terms of reference
- Draft an SA version for presentation to next RPF

It is proposed to make use of local/regional expertise to assist in this adaption process – such as Gauteng or KZN or Western Cape

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Greenroads rating system

- Project requirements – PR1 to PR 11 – mandatory for all projects
- Environment and water – EW1 to EW 8 – maximum 21 points
- Access and equity – AE1 to AE 9 – maximum 30 points
- Construction activities – CA1 to CA 8 – maximum 14 points
- Materials and resources – MR1 to MR 6 – maximum 23 points
- Pavement technologies – PT1 to PT 6 – maximum 20 points
- Custom credits – CC 1, etc available for all projects based on context an innovation – voluntary credits can be design to be project specific.

GREENROADS RATING SYSTEM

LIST OF CREDITS (v1.5)

No.	Title	Pts.	Description
Project Requirements (PR) – Mandatory for all projects			
PR-1	Environmental Review Process	Req	Complete a comprehensive environmental review
PR-2	Lifecycle Cost Analysis (LCCA)	Req	Perform LCCA for pavement section
PR-3	Lifecycle Inventory (LCI)	Req	Perform LCI of pavement section
PR-4	Quality Control Plan	Req	Have a formal contractor quality control plan
PR-5	Noise Mitigation Plan	Req	Have a construction noise mitigation plan
PR-6	Waste Management Plan	Req	Have a plan to divert C&D waste from landfill
PR-7	Pollution Prevention Plan	Req	Have a TESC/SWPPP
PR-8	Low Impact Development (LID)	Req	Complete a LID feasibility study
PR-9	Pavement Management System	Req	Have a pavement management system
PR-10	Site Maintenance Plan	Req	Have a roadside maintenance plan
PR-11	Educational Outreach	Req	Publicize sustainability information for project
Environment & Water (EW) – Up to 21 Points			
EW-1	Environmental Management System	2	ISO 14001 certification for general contractor
EW-2	Runff Flow Control	1-3	Reduce runoff quantity
EW-3	Runoff Quality	1-3	Treat stormwater to a higher level of quality
EW-4	Stormwater Cost Analysis	1	Conduct an LCCA for stormwater elements
EW-5	Site Vegetation	1-3	Use native low/no water vegetation
EW-6	Habitat Restoration	3	Restore habitat beyond what is required
EW-7	Ecological Connectivity	1-3	Connect habitat across roadways
EW-8	Light Pollution	3	Discourage light pollution
Access & Equity (AE) – Up to 30 Points			
AE-1	Safety Audit	1-2	Perform roadway safety audit
AE-2	Intelligent Transportation Systems (ITS)	2-5	Implement ITS solutions
AE-3	Context Sensitive Solutions	5	Plan for context sensitive solutions
AE-4	Traffic Emissions Reduction	5	Reduce emissions with quantifiable methods
AE-5	Pedestrian Access	1-2	Provide/improve pedestrian accessibility
AE-6	Bicycle Access	1-2	Provide/improve bicycle accessibility
AE-7	Transit Access	1-5	Provide/improve transit accessibility
AE-8	Scenic Views	1-2	Provide views of scenery or vistas
AE-9	Cultural Outreach	1-2	Promote art/culture/community values
Construction Activities (CA) – Up to 14 Points			
CA-1	Quality Management System	2	ISO 9001 certification for general contractor
CA-2	Environmental Training	1	Provide environmental training
CA-3	Site Recycling Plan	1	Have a plan to divert waste from landfill
CA-4	Fossil Fuel Reduction	1-2	Use alternative fuels in construction equipment
CA-5	Equipment Emissions Reduction	1-2	Meet EPA Tier 4 standards for non-road equip.
CA-6	Paving Emissions Reduction	1	Use pavers that meet NIOSH requirements
CA-7	Water Tracking	2	Develop data on water use in construction
CA-8	Contractor Warranty	3	Warranty on the constructed pavement
Materials & Resources (MR) – Up to 23 Points			
MR-1	Life Cycle Assessment (LCA)	2	Conduct a detailed LCA of the entire project
MR-2	Pavement Reuse	1-5	Reuse existing pavement sections
MR-3	Earthwork Balance	1	Use native soil rather than import fill
MR-4	Recycled Materials	1-5	Use recycled materials for new pavement
MR-5	Regional Materials	1-5	Use regional materials to reduce transportation
MR-6	Energy Efficiency	1-5	Improve energy efficiency of operational systems
Pavement Technologies (PT) – Up to 20 Points			
PT-1	Long-Life Pavement	5	Design pavements for long-life
PT-2	Permeable Pavement	3	Use permeable pavement as a LID technique
PT-3	Warm Mix Asphalt (WMA)	3	Use WMA in place of HMA
PT-4	Cool Pavement	5	Contribute less to urban heat island effect (UHI)
PT-5	Quiet Pavement	2-3	Use a quiet pavement to reduce noise
PT-6	Pavement Performance Tracking	1	Relate construction to performance data
Custom Credits (CC) – Available for all projects based on context and innovation, subject to approval			
CC-1	Custom Credit 1	1-5	Design a new voluntary credit
CC-2	Custom Credit 2	1-5	Design a new voluntary credit
	Greenroads Total Points:	**118**	

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Other aspects to consider in the development and rollout of Greenroads

Sponsorship proposals

- Founder
- Platinum
- Gold
- Silver

Application has been made to DBSA for funding from its recently established Green Fund. This will assist in developing the rating tool.

Achievement and certification levels

- Certified
- Silver
- Gold
- Green

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Some industry concerns

- Additional design costs
- Compliance and certification inputs
- Increased time to deliver on projects
- Value for money

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Thank you.