



GREEN BUILDING COUNCIL SOUTH AFRICA  
GREEN STAR



## INNOVATIONS REGISTER Existing Building Performance v1

Date of Issue: 5 April 2019

### IMPORTANT NOTE TO REGISTERED PROJECTS REGARDING THIS REGISTER:

This innovation register of innovation points awarded has been drawn up by the Green Building Council South Africa (GBCSA) and is intended for use by project teams, contractors and interested parties for innovation purposes only. Please note that the initiatives listed below have been awarded for innovation points based on specific circumstances on each project, as well as the manner that these circumstances have been presented to the GBCSA for assessment. The GBCSA in no way guarantees that where initiatives have been awarded in the past, these will be awarded again for future projects. Each innovation submission is reviewed in the context of the specific project and documentation submitted. Any single initiative under INN-1 will only be awarded to ten projects under the same rating tool before no longer being available for innovation points under the Green Star rating tool for buildings of that type-i.e. where on the table below you see under the column 'number of times awarded' that it is the 10th time that it has been awarded for a building of that type, the same type of initiative will not be able to achieve points in the same building type. Where the number for a type of building has not yet reached 10, this initiative may still be targeted for innovation points under that same building type.

### PLEASE NOTE THE FOLLOWING:

'number' of times per Innovation:

#### INN-1: First or Early Adopters:

projects can be the 'first' or 'early adopter' for the first 10 (ten) projects per Tool (Office v1, Retail v1, PEB v1, MUR v1, Office v1.1 & Interiors v1 & EBP v1).

#### INN-2: Exceeding Green Star Benchmarks:

There is no limit on the number of times different projects, within each tool, can submit the same innovation under INN-2 (e.g. zero potable water usage under WAT-1).

#### INN-3: Environmental Initiatives:

There is no limit on the number of times different projects, within each tool, can submit the same innovation under INN-3 (e.g. Stairs for Office submission)."

The Innovation Register may **ONLY** be used for reference purposes. This document may **NOT** be used as evidence within a submission.

1. EBP - INN-1 Innovation Strategies and Technologies						
Initiative	Innovation credit	Points available	Points awarded	Outcome	Number of times awarded	Summary of the GBCSA's ruling
<b>Energy Generation &amp; Carbon Emissions Reduction</b>						
<b>Solar Photovoltaic System:</b> The project proposes building solar panels on all rooftops within the precinct. The system will generate 1.9 gigawatt (1.9 million kilowatt) hours per year or enough energy to power 1000 average sized houses average savings of 1725 tons of carbon dioxide per year	INN-1	2	1	Awarded	1	<b>Awarded INN-1:</b> The GBCSA notes that this initiative is a first or early adopter in South Africa (one point); the project has provided adequate documented evidence and demonstrated and quantified the environmental impact. The project is commended for their incredible leadership and commitment to local energy security.
<b>First non IPP grid supply project in SA:</b> Consent by the Director of Electricity – City of Cape Town, for installation of the embedded generation system. Periods of high energy production and low energy consumption the electricity that is not used by the building itself will be fed into the electricity grid. During periods of higher electricity consumption than production, electricity will be drawn from the grid	INN-1	2	1	Awarded	2	<b>Awarded INN-1:</b> The GBCSA notes that this initiative is a first or early adopter in South Africa (one point); the project has provided adequate documented evidence and demonstrated and quantified the environmental impact. The GBCSA note that the project may be eligible for another point for being the 'First non-IPP Non grid supply project in country' as stated in the submission.
<b>Regenerative Elevators:</b> All the elevators in the building have regenerative braking technology which allows them to recover energy on their "light" cycles. If the lift goes up empty the counterweight is heavier than the carriage and the regenerative drive produces electricity for the building. Conversely if the lift goes down with 6.5 or more people inside it is heavier than the counter weight and it will produce electricity for the building.	INN-1	2	1	Awarded	1	<b>Awarded INN-1:</b> The GBCSA notes that this initiative is a first or early adopter in South Africa (one point); the project has provided adequate documented evidence and demonstrated and quantified the environmental impact. The GBCSA commend the project team on this initiative.
<b>Landfill Waste Reduction Initiatives</b>						
<b>Recyclable Trolley</b> the project is rewarded for implementing a strategy of only purchasing trolleys manufactured of recycled content to replace their obsolete trolleys. This initiative is considered an "early adopter" in the South African market for improving environmental performance technology.	INN-1	2	1	Awarded	1	<b>Awarded INN-1:</b> The GBCSA notes that this initiative contributes significantly towards market transformation in the South African property and construction industry (one point); the project has provided adequate documented evidence and demonstrated and quantified the environmental impact. The GBCSA commend the project team on this initiative.
<b>Tenant waste tariff structure</b> is an innovative building management process strategy that will contribute to the broader market transformation towards sustainable development in South Africa, by reducing the amount of waste going to landfill. The main environmental benefit of this initiative is the direct savings in the amount of waste being sent to landfill.	INN-1	2	2	Awarded	1	<b>Awarded INN-1:</b> The GBCSA notes that this initiative contributes significantly towards market transformation in the South African property and construction industry (one point); the project has provided adequate documented evidence and demonstrated and quantified the environmental impact. The GBCSA commend the project team on this initiative.
<b>Transport Carbon Reduction Initiatives</b>						
<b>Car Pooling:</b> The project team initiated <b>Carpooling</b> as a means to increase the average occupation of vehicles and reducing carbon emissions directly linked to transport. The Carpool Club portal allows potential users to match their journeys to others who are travelling in the same direction, to allow them to share the journey and the costs.	INN-1	2	1	Awarded	1	<b>Awarded INN-1:</b> The GBCSA notes that this initiative is a first or early adopter in South Africa (one point); the project has provided adequate documented evidence and demonstrated and quantified the environmental impact. The GBCSA commend the project team on this initiative.
<b>Food Gardening</b>						
<b>Urban Food Garden</b> consists of vegetable and herb garden on their premises in order to supplement the fresh produce served in their restaurant to guests as well as staff.	INN-1	2	1	Awarded	1	<b>Awarded INN-1:</b> The GBCSA notes that this initiative is a first or early adopter in South Africa (one point); the project has provided adequate documented evidence and demonstrated and quantified the environmental impact. The GBCSA commend the project team on this initiative.
<b>Geothermal Ground Loop</b>						
<b>The Geothermal loop field</b> is a closed system and is coupled to four heat pumps that do the active heating and cooling. Because heat pumps run on a refrigeration cycle they both cool on one side and heat on the other.	INN-1	2	1	Awarded	1	<b>Awarded INN-1:</b> The GBCSA notes that this initiative is a first or early adopter in South Africa (one point); the project has provided adequate documented evidence and demonstrated and quantified the environmental impact. The GBCSA commend the project team on this initiative.

<b>Property Portfolio Application</b>		INN-1		1			
Property App for vital information on each building in property portfolio.	INN-1	2	1	Awarded	5	<b>Awarded INN-1:</b> The GBCSA notes that this initiative is a first or early adopter in South Africa (one point); the project has provided adequate documented evidence and demonstrated and quantified the environmental impact. The GBCSA commend the project team on this initiative.	
<b>Waste minimisation and diversion</b>							
Introduced a revised waste tariff structure whereby tenants are penalised for waste going to landfill.	INN-1	2	1	Awarded	2	<b>Awarded INN-1:</b> The GBCSA notes that this initiative is a first or early adopter in South Africa (one point); the project has provided adequate documented evidence and demonstrated and quantified the environmental impact. The GBCSA commend the project team on this initiative.	

2. EBP - INN-2 Exceeding Green Star Benchmarks						
Initiative	Innovation credit	Points available	Points awarded	Outcome	Number of times awarded	Summary of the GBCSA's ruling
<b>Exceeding the benchmarks in getting correspondence for IEQ-4 and TRA-1 survey results</b>						
<b>Establish environmentally sustainable initiatives</b> implemented in the existing building currently outside the scope of the Green Star SA EBP Rating Tool. Major objectives of the Initiative- To specify materials/ systems/ fittings requirements, To minimize demolition and construction waste negative impacts, To track performance measurements.	INN-2	1	1	awarded	1	<b>Awarded INN-2:</b> 1 point is awarded for exceeding the benchmarks in getting correspondence for IEQ-4 and TRA-1 survey results in particular not the entire credit criteria
<b>ECO-2 Grounds Keeping Practices</b>						
<b>Invasive Alien Vegetation Removal</b> Alien Vegetation threaten the unique biodiversity by displacing indigenous plants, altering the habitat for wildlife and impacting negatively on ecosystems. Removing these species on the site will reverse these effects locally and also prevent the spread of the species further.	INN-2	1	1	Awarded	1	<b>Awarded INN-2:</b> The GBCSA notes that this initiative achieves the threshold required to eliminate/neutralise the environmental impact (one point); the project has provided adequate documented evidence and demonstrated and quantified the environmental impact.
<b>Upliftment of Entire Precinct</b> The management team took it upon themselves to rent the land from the municipality and restore and beautify it. Natural vegetation was planted and nurtured and the area is now far more aesthetically appealing. They also installation of a bicycle path along the adjacent street, install a bus stop and also plant indigenous vegetation along the side of the street.	INN-2	2	1	awarded	1	<b>Awarded INN-2:</b> The GBCSA notes that this initiative achieves the threshold required to eliminate/neutralise the environmental impact (one point); the project has provided adequate documented evidence and demonstrated and quantified the environmental impact. The GBCSA commend the project team on this initiative.
<b>MAT-2 Solid Waste Management</b>						
<b>Waste procurement policy:</b> The building is committed to reducing their waste to <b>landfill 'contribution' to virtually zero</b> . This policy around procurement not only avoids the materials and their packaging that result in waste from entering the premises but also capitalises on the inevitable engagements with suppliers to address a host of other environmental procurement matters.	INN-2	2	1	Awarded	2	<b>Awarded INN-2:</b> The GBCSA notes that this initiative achieves the threshold required to eliminate/neutralise the environmental impact (one point); the project has provided adequate documented evidence and demonstrated and quantified the environmental impact. The GBCSA commend the project team on this initiative.
<b>Waste to Landfill</b> The project has a goal of "Zero Waste to Landfill" and is constantly striving to minimise the waste that it is sending to landfill.	INN-2	2	1	Awarded	2	<b>Awarded INN-2:</b> The GBCSA commend the project team on this initiative.
<b>On-site recycled garden waste:</b> Mulch- The Park recycles all garden waste to create Mulch. The garden waste is thus reduced by this amount and also saves the Park from having to purchase Mulch in summer months. Adding mulch to our gardens improves the health of the soil and beautifies the appearance of the landscaping.	INN-2	2	2	Awarded	1	<b>Awarded INN-2:</b> The GBCSA notes that this initiative achieves the threshold required to have a restorative environmental impact of at least 5% (two points); the project has provided adequate documented evidence and demonstrated and quantified the environmental impact.
<b>MAN-1 Accredited Professionals</b>						
Exceeded MAN-1 benchmarks by having full building management team certified as accredited professionals EBP.	INN-2	2	1	Awarded	1	<b>Awarded INN-2:</b> The GBCSA notes that this initiative achieves the threshold required to eliminate/neutralise the environmental impact (one point); the project has provided adequate documented evidence and demonstrated and quantified the
<b>IEQ-2 Lighting Comfort</b>						
The project team exceeded IEQ-2 benchmarks by the fact that 100% of all regularly occupied spaces within the project's office building have maximum maintained illuminance levels of no more than 80% of the levels prescribed in SANS 10114-1:2005.	INN-2	2	1	Awarded	1	<b>Awarded INN-2:</b> The GBCSA notes that this initiative achieves the threshold required to eliminate/neutralise the environmental impact (one point); the project has provided adequate documented evidence and demonstrated and quantified the environmental impact.
<b>IEQ-3 Thermal Comfort</b>						
Exceeding Green Star SA Benchmarks for EB-IEQ-3 Thermal Comfort, where full points under EB-IEQ-3 Thermal Comfort must be achieved.	INN-2	1	1	Awarded	1	<b>Awarded INN-2:</b> The GBCSA notes that this initiative achieves the threshold required to eliminate/neutralise the environmental impact (one point); the project has provided adequate documented evidence and demonstrated and quantified the environmental impact.

<b>ECO-1 Ground Keeping</b>						
<b>The project team exceeded ECO-1 benchmarks</b> by having a formal process in place to manage and significantly improve the ecological value of a neighbouring site as part of the project, that is atleast 50% the size (m2) of the site on which the project is located.	INN-2	2	2	Awarded	1	<b>Awarded INN-2:</b> The GBCSA notes that this initiative achieves the threshold required to have a restorative environmental impact of at least 5% (two points); the project has provided adequate documented evidence and demonstrated and quantified the environmental impact.
<b>IEQ-6 Daylight &amp; Views</b>						
Provided 30% of workstation areas with quality external views.	INN-2	2	1	Awarded	1	<b>Awarded INN-2:</b> The GBCSA notes that this initiative achieves the threshold required to eliminate/neutralise the environmental impact (one point); the project has provided adequate documented evidence and demonstrated and quantified the environmental impact.

3. EBP - INN-3 Environmental Initiatives						
Initiative	Innovation credit	Points available	Points awarded	Outcome	Number of times awarded	Summary of the GBCSA's ruling
<b>Helpdesk System</b>						
<b>The building users helpdesk system</b> is a strategy for ensuring effective management of the site by means of ongoing feedback and rapid response to issues of any nature raised by building occupants. To encourage and recognise operational practices that include a system for instantaneous live feedback on any building or site issues.	INN-3	1	1	Awarded	3	<b>Awarded INN-3:</b> The innovation point has been awarded by the GBCSA based on the innovative design of the system to allow rapid feedback for building occupants. The GBCSA understands the importance of the quality of the mechanisms in place to aid the flow of information between building occupants and building management, and this particular system is successful in making such a process effective and efficient.
<b>Community Initiatives: Gardening</b>						
<b>Organic Vegetable Garden Benchmark ECO-2</b> , Provide local and organic produce grown in a self-sufficient way, provide fresh organically grown herbs and vegetables for the operational staff who work at the precinct and Help develop valuable garden skills for the operational staff members.	INN-3	1	2	Awarded	1	<b>Awarded INN-3:</b> The GBCSA notes that this initiative addresses a valid environmental concern outside the current scope of this Green Star SA tool; the project has provided adequate documented evidence and demonstrated and quantified the environmental impact.
<b>Learning &amp; Educational Resources Initiatives</b>						
<b>Interactive learning Resources-Large display screen:</b> Screen displays up to date energy/solar data that has been sourced from the solar metering systems in the building, shows instant online monitoring of how much energy the building is pulling from the grid.	INN-3	2	1	Awarded	1	<b>Awarded INN-3:</b> Existing Building Performance PILOT Tool does not award projects who have shown initiative to raise awareness and actively communicate the buildings performance to building occupants and visitors. This was changed and now incorporated into Version 1.
<b>Teaching and Behaviour Change:</b> The project team sees their building as an effective teaching and behaviour tool towards more responsible business and living practices as well as educating guests, visitors, suppliers, collaborators, interested parties and staff on matters regarding sustainability the principles of green building design and general	INN-3	1	1	Awarded	1	<b>Awarded INN-3:</b> The GBCSA notes that this initiative addresses a valid environmental concern outside the current scope of this Green Star SA tool; the project has provided adequate documented evidence and demonstrated and quantified the environmental impact.
<b>Environmental Initiatives</b>						
<b>Environmental days: The project</b> is publicly and actively making a statement for responsible tourism, resource conservation and overall holistic approach to sustainability in the hospitality sector. In addition to that, the management and staff add their voice to the awareness around	INN-3	1	1	Awarded	1	<b>Awarded INN-3:</b> The GBCSA notes that this initiative addresses a valid environmental concern outside the current scope of this Green Star SA tool; the project has provided adequate documented evidence and demonstrated and quantified the environmental impact.
<b>Stairs</b>						
Encourage and recognise designs that promotes the wellbeing of occupants by encouraging the use of stairs as an alternative to vertical transportation by lift.	INN-3	1	1	Awarded	1	<b>Awarded INN-3:</b> The GBCSA notes that this initiative addresses a valid environmental concern outside the current scope of this Green Star SA tool; the project has provided adequate documented evidence and demonstrated and quantified the environmental impact.
<b>Socio Economic Retailing</b>						
Reward retail centres that have a positive impact on local socio-economic development by putting processes in place that encourage local and ethical sourcing in a retail environment.	INN-3	1	1	Awarded	1	<b>Awarded INN-3:</b> The GBCSA notes that this initiative addresses a valid environmental concern outside the current scope of this Green Star SA tool; the project has provided adequate documented evidence and demonstrated and quantified the environmental impact.
<b>Precinct Water Leak Detection System</b>						
Process or initiative is put in place to minimise water losses through underground supply pipework in precincts.	INN-3	1	1	Awarded	1	<b>Awarded INN-3:</b> The GBCSA notes that this initiative addresses a valid environmental concern outside the current scope of this Green Star SA tool; the project has provided adequate documented evidence and demonstrated and quantified the environmental impact.
<b>Zero-Energy Thermal Comfort Initiatives</b>						
Encourage and recognise innovative solutions in existing buildings that improve thermal comfort without increasing energy consumption for heating / cooling.	INN-3	1	1	Awarded	1	<b>Awarded INN-3:</b> The GBCSA notes that this initiative addresses a valid environmental concern outside the current scope of this Green Star SA tool; the project has provided adequate documented evidence and demonstrated and quantified the environmental impact.

<b>TRA-2: Local Connectivity</b>						
Meeting/Exceeding the TRA-2 Criteria under the Interiors Tool	INN-3	1	1	Awarded	2	<b>Awarded INN-3:</b> The GBCSA notes that this initiative addresses a valid environmental concern outside the current scope of this Green Star SA tool; the project has provided adequate documented evidence and demonstrated and quantified the environmental impact.
<b>Socio-Economic My Schools</b>						
<b>My Schools</b> The project team is rewarded for an environmental design initiatives which support local schools and communities. The intentions of this innovation are met by the projects effort of donating a percentage of their customers' purchase value to predetermined schools or up to three	INN-3	1	1	Awarded	1	<b>Awarded INN-3:</b> The GBCSA commend the project team on this initiative.
<b>Carbon Offsetting</b>						
<b>A carbon offset</b> ensures that a metric ton of carbon dioxide, or its equivalent in other greenhouse gases (GHGs), is removed from the atmosphere or prevented from entering it altogether. The project should only be eligible for the credit if they demonstrate a significant reduction in their carbon footprint through reduced energy, water and fuel use.	INN-3	1	1	Awarded	1	<b>Awarded INN-3:</b> The GBCSA commend the project team on this initiative.