

Green Building Council of South Africa
Green Star SA Retail Centre - PILOT TOOL FEEDBACK & RESPONSES
April, 2010



Background:

The Green Building Council of South Africa (GBCSA) publically released the Green Star SA - Retail Centre PILOT rating tool on 22 October, 2009. A public feedback period was held until 19 February, 2010, during which anyone could submit feedback comments and recommendations concerning the rating tool. In addition, during this time, the GBCSA held two focused information sessions targeted to developers and large tenants, one each in Johannesburg and Cape Town.

All comments were considered in discussion of changes to be made to the tool in preparation for the release of Green Star SA – Retail Centre version 1 in April, 2010. All comments have been responded to below.

Submitted by	Credit Category	Credit No.	Credit Name	Issue Summary	Comments	GBCSA Response
MANAGEMENT						
GBCSA staff 1	MAN	7		Waste quantification	Suggest allowing calculation either in mass or volume to make it easier for project teams and eliminate potentially large inaccuracies through required conversion rates.	This suggestion has been incorporated into the Technical Manual.
Project Manager 1	MAN	9	Waste & Recycling Management Plan	Waste quantification	Credit criteria refer to decreasing waste by weight - why not volume as well? Surely a compactor is a good thing as it reduces volume, space and transport.	While decreasing the volume of waste does have benefits, the aim of the credit is to reduce the absolute quantity of waste generated in the centre, not simply to compact it.
Project Manager 1	MAN	9	Waste & Recycling Management Plan	Tenant use of waste facilities.	Not all tenants use the building's waste systems. I believe that they should be encouraged to do so and that the landlord should ensure that all waste is managed through their system. There is an economy of scale and less waste.	The Waste & Recycling Management Plan requirements do encourage common, communal storage areas, though the intent is to allow projects to develop the best plans for their centres by not requiring one overall building waste system. In addition, the Materials credit 1 Recycling Waste Storage does reward central storage facilities.
Product Representative / Supplier 1	MAN	10	Building Management System	Automatic control of HVAC facilities	The Green Building Council should consider awarding a credit to a retail centre that integrates accurate visitor occupancy or vehicle occupancy data with the BMS to automatically control HVAC facilities. This could be achieved by integrating visitor occupancy and vehicle occupancy information at the retail centre to the BMS. The credit should require quantitative measurements as supporting evidence. The evidence could include proof of an automatic integration between BMS and visitor occupancy and vehicle occupancy data providers.	The GBCSA appreciates the input concerning integration of additional data monitoring and control. The Building Management System credit with its requirements for the BMS is viewed as a good first step toward better building management and may go further in its requirements in future tool versions. Buildings could certainly include integration of additional data as you suggest, and the benefits could possibly be realised in the Ene-1 credit as well.

Submitted by	Credit Category	Credit No.	Credit Name	Issue Summary	Comments	GBCSA Response
IEQ						
Product Representative / Supplier 2	IEQ	2	Air Change Effectiveness	Indoor Air Quality	We propose the use of ultra-violet technology to deliver indoor sterile air on a continuous 24/7 basis. The technology can be used for centralised as well as non centralised air conditioned buildings/rooms to reduce the spread of all bacteria, including TB, Swine Flu etc. The technology has the added benefit of reducing the mould build up in centralised air conditioning systems over time thereby reducing the electricity required to air condition a building. The savings in the electricity are between 15-30%. There are a number of examples of the effectiveness of UV on the internet. We have attached one article and a copy of our brochure which includes a number of websites illustrating the effectiveness of UV in indoor sterile air generation. The use of UV technology has in recent years enjoyed a resurgence in popularity due to the environmental benefits as the technology is chemical free. The category is symbolised by the adage "An old technology with a new life" due to the chemical free environmental benefits.	<p>The IEQ-2 Air Change Effectiveness credit deals with how well fresh air is distributed throughout indoor spaces, not the quality of the air. The comments would be more appropriate to the IEQ credit 15 Mould Prevention credit, though ultra-violet systems are specifically excluded from this credit as they can reduce the risk of mould growth but not eliminate the risk. This credit only rewards the control of humidity levels, as controlling humidity and moisture problems is the most effective way to prevent unhealthy mould growth and build up.</p> <p>The technology may also be relevant to the Emissions credit 8 Legionella. However, this credit rewards elements of the water system design to prevent Legionella, and again disinfection systems, such as ultraviolet light, chlorination, heat or other methods, are specifically not deemed an equivalent method for meeting the Credit Criteria. In general, the Green Star SA credits do not target technologies, but rather design attributes.</p>
GBCSA staff 1	IEQ	13	VOCs	Lead free criterion	It looks as though the "lead free" criteria added to the paint point in the Retail Centre tool are going to be way too stringent, as no other countries have 0% requirements – the US appearing to be among the world's lowest at 90 ppm. Perhaps use the proposed SA regulation of 600 ppm? Or if the SA level is now regulation, perhaps don't need to address at all? Of if regulation is not good enough by world standards, use a lower level.	The final credit wording is "must not contain any added lead in the form of driers or pigments." You are correct that zero lead is too stringent of a requirement, as there may always be trace elements of lead occurring naturally in the ingredients. There is no current legal requirement for paint manufacturers to declare lead content in paint. The declaration required by the GBCSA that no lead has been added to the paint intends to be more stringent than the proposed South African legislation which limits lead to a maximum of 600ppm.
ENERGY						
Mechanical Engineer 1	Ene	6	Thermal Energy sub-metering	Landlord areas	Credit criteria "tenancies of 100m2 or greater" - Wording may imply that substantive landlord areas are excluded e.g. lobbies, circulation space, atriums etc. I do not believe this is the intention. Include 'landlord spaces' in the wording.	Thank you. The credit now requires inclusion of all substantial thermal energy uses which must include all tenancies that have a 10kW peak cooling requirement or greater and all landlord spaces where thermal energy is provided (these can be grouped into one meter if practically possible, but can also be in the form of multiple meters).

Submitted by	Credit Category	Credit No.	Credit Name	Issue Summary	Comments	GBCSA Response
Mechanical Engineer 1	Ene	6	Thermal Energy sub-metering	Sub-metering thresholds	<p>Credit criteria "tenancies of 100m2 or greater" - On reflection I'm not convinced that the sub-metering threshold is right.</p> <p>In my mind, the following criteria should determine the need/appropriateness for sub-metering provision to a space:</p> <ol style="list-style-type: none"> 1. Space consumes landlord supplied thermal energy in form of hot or chilled water. 2. Consumption of thermal energy cannot be determined via calculated process of deduction after considering all other supplied and metered areas – m&v strategy will determine this. 3. Quantity of thermal energy consumed by a space results in a high enough mass flow rate/velocity/temperature differential between flow and return, which is within the operating limits of available meters. E.g. a flow velocity below Xm/s may simply not be measurable on any available devices. Therefore there is not point installing a meter. <p>In some cases there may be little correlation between thermal energy demand of space and size of space. E.g. a 5m x 5m server room may have a very high cooling load. E.g. indirect generation of domestic hot water (see comment 3 below).</p> <p>Suggest: GBCSA review threshold for spaces considered.</p> <p>Change credit/additional guidance wording to reflect conclusion or add additional guidance which clarifies approach to dealing with these cases. Or 'Park' this issue for now and re-visit after trial period.</p>	Please see response directly above.
Mechanical Engineer 1	Ene	6	Thermal Energy sub-metering	Domestic hot water inclusion	<p>Credit wording categorically refers to 'space heating' and not 'domestic hot water' supply. The additional guidance should touch on this to clarify that DHW is excluded and reasoning. Domestic hot water supply to spaces would be an example of whereby a space smaller than 100m2 could consume substantive thermal heat energy.</p> <p>Direct consumption of DHW is not easily measurable as we are aware. However, indirect consumption of thermal energy to generate DHW is readily measurable i.e. whereby heat is transferred via a calorifier.</p> <p>I feel we may have missed an important scenario here.</p> <p>Suggest: GBCSA review scenario whereby thermal energy is consumed to indirectly generate Domestic Hot Water within or serving a space <100m2. Change credit/additional guidance wording to include this scenario or add additional guidance which clarifies DHW excluded and reasoning behind decision.</p>	Domestic hot water of tenancies is specifically excluded from this credit due to the South African retail centre scenario in which tenants typically provide electrical power to their own domestic hot water supply from their own electrical distribution board which will already be metered via the tenant's electrical meter.

TRANSPORT

GBCSA staff 1	TRA	1	Provision of car parking	Maximum allowable parking.	Need to add back in criteria for reductions from maximum allowable parking, since municipalities may at some point create maximums and we need to be prepared. Apparently Johannesburg may have already implemented some maximums.	Criteria for maximum allowable parking has been added back to the credit.
---------------	-----	---	--------------------------	----------------------------	--	---

Submitted by	Credit Category	Credit No.	Credit Name	Issue Summary	Comments	GBCSA Response
Product Representative / Supplier 1	TRA	1	Provision of car parking	Efficiently optimize the existing and available parking space	<p>This credit offers two points if the number of parking spaces is at least 25% less than the minimum local planning allowances. This credit should allow the retail centre to demonstrate that the existing parking space is efficiently managed and that no traffic congestion occurs. The credit should require quantitative measurements as supporting evidence. The measurement tools could include:</p> <ul style="list-style-type: none"> - Vehicle traffic congestion reports - Vehicle occupancy reports - Parking utilisation reports - Average drive time reports <p>The quantitative data should be within an acceptable accuracy range.</p>	<p>The Provision of Car Parking credit deals with decreasing the amount of parking to encourage people to take alternative forms of transport to the site.</p> <p>The feedback comment is more appropriate to the Transport credit 7 Vehicle Operating Emissions. The Technical Working Group who developed the rating tool did discuss the impact of time it takes to find a parking space within the retail centre development, but it was felt that the larger impact is from the traffic congestion around the centre, which the credit does address.</p> <p>To the suggestion of analysing quantitative measurements, the Retail Centre tool certifies the design and construction attributes of the base building development at design and/or construction completion and does not examine operational data. The tool deals with what the developer has control over and how the development can be designed to enable good performance during the operational phase. However, operational data would be examined in a separate, future operational rating tool.</p>
GBCSA staff 1	TRA	4	Commuting Mass Transport	Peak hours	Make sure that the peak commute hours make sense for retail centres.	The peak commute hours are deemed appropriate for retail centres and are actually viewed as a proxy measure for availability of public transport in general. As long as all projects use the same hour range, they are all compared on an equal basis, whether or not their employees and visitors arrive and depart at slightly different peak times.
GBCSA staff 1	TRA	6	Trip Reduction Mixed Use	Calculator categories	What is "commercial/warehouse" category in the calculator for? Need to define "commercial."	The term is meant to refer to commercial office space and has been clarified in the calculator.
Product Representative / Supplier 1	TRA	6	Trip Reduction Mixed Use	Reduce the trip time for vehicles arriving at the retail centre when locating a parking space	<p>This credit should be extended to include the vehicle traffic flow into a retail centre's parking environment. The credit should aim to reduce trip time of a vehicle arriving at the retail centre to the time it takes to locate a parking space. The Green Building Council should set target trip times for vehicles to locate a parking space from arrival at the retail centre. The positive effect of this credit should see a reduction in traffic congestion and CO2 PPM levels for a range of different retail parking environments. The credit should require quantitative measurements as supporting evidence. Trip reduction measurement tools could include:</p> <ul style="list-style-type: none"> - Vehicle traffic congestion reports - Average drive time reports <p>CO2 PPM measurement tools could include:</p> <ul style="list-style-type: none"> - Stain indicator tubes - Electronic devices - Electrochemical devices <p>Providing evidence of the trip reduction and CO2 PPM readings should be within an acceptable accuracy range.</p>	<p>The Trip Reduction - Mixed Use credit deals with reduction of car trips as a result of developments with other uses being within walking distance of the retail centre development. It looks at avoided car trips rather than length of time in the car.</p> <p>The feedback comment is more appropriate to the Transport credit 7 Vehicle Operating Emissions. The Technical Working Group who developed the rating tool did discuss the impact of time it takes to find a parking space within the retail centre development, but it was felt that the larger impact is from the traffic congestion around the centre, which the credit does address. In addition, it is in the interest of the retail centre developer to address congestion issues within the parking areas, while congestion in the surrounding road network may not normally be addressed to the same extent.</p> <p>To the suggestion of analysing quantitative measurements, the Retail Centre tool certifies the design and construction attributes of the base building development at design and/or construction completion and does not examine operational data. The tool deals</p>

Submitted by	Credit Category	Credit No.	Credit Name	Issue Summary	Comments	GBCSA Response
Product Representative / Supplier 1	TRA	7	Vehicle operating emissions	Set target CO2 PPM (Parts Per Million) levels	<p>This credit should set target CO2 PPM (Parts Per Million) levels for a range of different retail parking environments. The credit should require quantitative measurements as supporting evidence. The Green Building Council should set target PPM levels for the different sized retail parking establishments. CO2 PPM measurement tools could include:</p> <ul style="list-style-type: none"> - Stain indicator tubes - Electronic devices - Electrochemical devices <p>Providing evidence of the CO2 PPM readings should be within an acceptable accuracy range.</p>	Please see the response immediately above regarding the Transport credit 7 Vehicle Operating Emissions and the use of operational data.

WATER

GBCSA staff 1	WAT	3	Landscape Irrigation	Interior landscaping	Need to revise the NA clauses and language to make it clear that interior landscaped area must be included.	Language has been added in the Technical Manual.
---------------	-----	---	----------------------	----------------------	---	--

MATERIALS

GBCSA staff 1	Mat	3	Reused & Recycled Materials	Exclude large items	Exclude mechanical, electrical, equipment as in Mat-11? Suggest making both credits same criteria.	These items have been excluded as recommended, to maintain consistency with Mat-11 Local Sourcing. These materials are excluded from both credits because the results will be highly skewed by sourcing only one or two pieces of large equipment and due to the complexity of each of these items making itemisation of recycled or local content very difficult.
GBCSA staff 1	Mat	3	Reused & Recycled Materials	Percent of contract value	The 5% and 10% of contract value for recycled content seem way to high, given that wood, steel and concrete may not be used.	These values were in error in the Pilot tool and have been revised to 1% and 2% of contract value.
GBCSA staff 1	Mat	3	Reused & Recycled Materials	Percent of contract value	Suggest revising to percentage of material cost, as LEED does it, which seems more logical than percentage of total contract value since we are concerned with materials and the contract value may be swayed by labour and equipment costs for two projects with the same material cost.	Though a good suggestion, the methodology of using total contract value has been kept, to maintain consistency with the Office tool and the Australian Green Star tools. This topic will be revisited for later versions of the tools.

Submitted by	Credit Category	Credit No.	Credit Name	Issue Summary	Comments	GBCSA Response
--------------	-----------------	------------	-------------	---------------	----------	----------------

LAND USE & ECOLOGY (None)

EMISSIONS

Acoustic Consultant 1	EMI	(None)	Noise Pollution	Omission of Noise pollution	I propose the inclusion of "Noise pollution" as a credit under "emission". Noise (especially from external HVAC and Generators) is one of the most over looked pollutant today, as it is one of the least understood subjects in a modern society. The health and psychological impact caused by noise pollution is well documented. Noise complaints is rated one of the top common problems received by City Councils and Municipalities around the world. If the building is rated 4 stars upwards, from a layman perspective, when a building pollutes unacceptable level of mechanical noise to the surround environment, the effect will be easily perceivable and may place the creditability of "Green Building" rating into question. This should also be added to the OFFICE TOOL as well.	The GBCSA appreciates the feedback and credit suggestion. The issue was discussed by the Technical Working Group who developed the tool, and it was decided to leave this issue to later revisions of all the Green Star SA tools for possible inclusion at that point. In the mean time, though their effectiveness can be debated, there are noise regulations in place.
-----------------------	-----	--------	-----------------	-----------------------------	--	--

INNOVATION

Product Representative / Supplier 1	INN	1	Innovative strategies and technologies	Install a visitor measurement system to reduce the carbon footprint of a retail centre	The Green Building Council should consider awarding a credit to a retail centre that integrates accurate visitor measurement data with the BMS to automatically control HVAC, lighting and water facilities. This could allow the retail centre to automatically adjust HVAC and other energy consumption facilities as the visitor occupancy levels increase and decrease throughout the day.	Submissions for Innovation points are reviewed on their merits within Green Star SA submissions. If the submission is deemed to comply with the credit criteria of one or more Innovation credits, then points will be awarded at that time. The GBCSA can not "pre-approve" Innovation points.
Product Representative / Supplier 1	INN	1	Innovative strategies and technologies	Install a vehicle measurement system to reduce the carbon footprint of a retail centre	The Green Building Council should consider awarding a credit to a retail centre that integrates accurate vehicle occupancy with the BMS to automatically control HVAC, electricity and water facilities. This could allow the retail centre to automatically adjust HVAC and facilities such as extractor fans as the vehicle occupancy levels increase and decrease throughout the day.	Submissions for Innovation points are reviewed on their merits within Green Star SA submissions. If the submission is deemed to comply with the credit criteria of one or more Innovation credits, then points will be awarded at that time. The GBCSA can not "pre-approve" Innovation points.