Green Star SA Multi Unit Residential Tool Development

Request for Proposals

June 2010

Introduction

The Green Building Council of SA (GBCSA) was established in September 2007, with the mission of promote, encourage and facilitate green building in the South African property and construction industry through market-based solutions. To this end, the GBCSA develops a suite of voluntary, market-based environmental rating tools for buildings, known as Green Star SA. Adapted from the Green Star rating system in Australia, the Green Star SA tools evaluate buildings across eight environmental categories, including energy, water and ecology. The GBCSA customises Green Star for the South African context, taking into account existing building codes and regulation as well as local climate, market and environmental conditions.

The next rating tool to be developed is the Green Star SA – Multi Unit Residential rating tool, which will evaluate the environmental performance potential of Multi Unit Residential base buildings at both the Design and As-built phases. The tool will operate very similarly to the Green Star SA – Office v1 and Green Star SA – Retail Centre v1 rating tools, evaluating the design and construction of the base building that the developer has control over, excluding tenant installed items and operational issues. Similar again to the Office and Retail Centre tools, the Multi Unit Residential one will be based upon the Australian Green Star version and customised for South Africa.

The GBCSA is soliciting proposals from qualified consultants to collaborate in the technical development of the Green Star SA – Multi Unit Residential rating tool, as described in the scope of work below.

Once the tool is complete, the GBCSA will offer new and refurbished Multi Unit Residential buildings the opportunity to become Green Star SA – Multi Unit Residential certified, as an endorsement of the project's environmental design.

Green Star SA is a points-based system, with points awarded for various initiatives, known as credits, within each category. Projects will submit the required documentation for each of the relevant credits for review by the GBCSA's independent Assessors.

An overall score is determined, out of a 100-point scale. Projects will be awarded a Green Star SA certification based on the following ratings:

- 4 Star = 45-59 points (Best Practice)
- 5 Star = 60-74 points (South African Excellence)
- 6 Star = 75-100 points (World Leadership)

Projects will be eligible to submit for certification under this tool and receive either a Green Star SA – Multi Unit Residential Design or Green Star SA – Multi Unit Residential As-built rating, as appropriate.

Tool Development Process

The development of the Green Star SA – Multi Unit Residential tool (MURT) will be a collaborative process between the GBCSA Technical Working Group, GBCSA staff and the selected consulting firm (hereafter referred to as "the Consultant"). The MURT development process will run very similarly to that of the Retail Centre tool in 2009, and should require significantly less research than required for the Office v1 tool, as much of the content of the Office and Retail Centre tools can be reused. However, it should be noted that the MURT tool will be addressing new areas specific to multi unit residential buildings, and will address more fitout items.

The GBCSA Technical Working Group (TWG) will be made up of members of the GCBSA staff, as well as volunteer industry representatives and environmental experts. The Technical Working Group brings market and environmental knowledge as well as a strategic understanding of the long-term goals of the organisation and will direct the final outcome of the tool. A preliminary TWG meeting schedule is laid out below, and the Consultant is expected to have adequate representation at every Technical Working Group meeting to present and discuss the items on the agenda.

GBCSA staff (or its nominated representative/s) will manage the process, ensuring that it stays on track, that the research and benchmarking process have been thorough and that the final tool can be realistically and successfully implemented. The GBCSA will nominate a Chair to run and manage all Technical Working Group tool development meetings.

The role of the Consultant will be to perform the necessary research and benchmarking, convene and manage any committee subgroups and deliver the Green Star SA – Multi Unit Residential tool and Technical Manual.

The primary technical development will take approximately four months, starting mid-July 2010. Once the GBCSA Board of Directors approves the tool, it will be launched as a Pilot tool for public use and comment for a period of approximately 4 months. The GBCSA will encourage the use of the Pilot tool by projects in order to gain detailed feedback.

Once the public comment period has closed, the Consultant in collaboration with the GBCSA staff will review and finalise the rating tool based on feedback from projects and the public.

Scope of Work

There are four major components of the Consultant's work:

1. Tool development including research and performance benchmarking

2. Creation of the calculators and associated methodologies and calculator guides (this could include revisions to all calculators and guides, but not complete redesigns).
3. Writing the Technical Manual
4. Delivery of the final tool after the Pilot process

1 Tool development

The GBCSA expects that the majority of the MURT credits (so-called 'core credits') will be adopted from the Green Star SA - Office v1 and Retail Centre v1 rating tools, with significant input from the MURT tool developed by the Green Building Council of Australia.

The Consultant will develop the final wording of all credits under guidance of the GBCSA and the Technical Working Group.

A significant portion of this component will consist of research in identifying the appropriate performance benchmarks and standards for each of the credits. This will require the Consultant to have an in-depth knowledge of both South African and international best practice standards for the design and construction of sustainable buildings and in particular, multi unit residential construction. The GBCSA also expects the Consultant to seek out and confer with industry leaders and the Technical Working Group so as to ensure the relevance and applicability of all credits.

All of the Green Star SA tools will have the same structure and will include the following categories:

- Management,
- Indoor Environment Quality,
- Energy,
- Transport,
- Water,
- Materials,
- Land Use and Ecology,
- Emissions, and
- Innovation

There are six calculators within the existing Green Star SA – Office v1 and Retail Centre v1 rating tools that will be adapted for use in the Green Star SA – Multi Unit Residential rating tool:

- Energy & Lighting Energy Calculators;
- Transport Calculator;
- Trip Reduction Calculator;
- Potable Water Calculator;
- Change in Ecology Calculator;
- Sewage Calculator.

All calculators included in the tool must be consistent in use and appearance.

The credit criteria and calculators will be identical for projects at both Design and As Built phases. However, there will be separate sets of Documentation Requirements as the types of documentation required will vary depending on the building stage. The Consultant will develop the specific Documentation Requirements for both Design and As-Built phases for very credit.

The Consultant will produce the final tool in an Excel format including all macros and formulae, with all calculators embedded into the tool and linked to the appropriate credits. The final graphic application and hiding/securing of cells will be done by the GBCSA.

Please see the Green Star SA – Office v1 and Retail Centre v1 rating tools on the GBCSA's website, www.gbcsa.org.za and the Green Star tools available on the Green Building Council of Australia's website, www.gbca.org.au for examples of the rating tools.

2 Energy Calculator

A key element of the rating tool will be the Energy Calculator, with its associated Lighting Energy calculator, which rewards the reduction of energy consumption and greenhouse gas emissions against a benchmark. Projects must be modelled according to the Green Star SA methodology and the modelling outputs used in the Energy Calculator, to produce a score.

The Energy Calculator must:

- Be adaptable in order to fairly rate buildings of different sizes and space types;
- Rate only base building attributes and not occupancy or operational impacts;
- Not put an undue burden on the design team in terms of modelling or documentation requirements; and
- Provide transparent calculations.

The Green Star SA – Office v1 and Retail Centre v1 tools offer a methodology for energy modelling. The Consultant must review this methodology for ease of use, robustness and relevance to South African Multi Unit Residential building requirements, and then revise as necessary for use in the MURT rating tool. The Consultant may need to perform a study to determine the appropriate performance benchmarks and points scale for the tool. The Energy Calculator will be embedded in the Green Star SA – Multi Unit Residential tool, and the modelling methodology will be incorporated into the Technical Manual as well as be available as a separate document on the GBCSA website. It will be important for the Consultant to test the modelling protocol on a modelled building example to get a preliminary sense of the robustness of the protocol.

Similar exercises will need to be performed for the other calculators in the tool, though it is anticipated that the other calculators will require far less work.

3 Technical Manual

The Consultant will develop an accompanying Technical Manual for the rating tool. The manual will include all Aims of Credits, Credit Criteria, Documentation Requirements for both phases (Design and As Built), any additional information required for clarification of submission requirements as well as relevant references.

The Technical Manual will be the reference guide for both the applicants in the preparation of Green Star SA certification submissions and for the GBCSA's independent Assessors in the review of these submissions. It will be essential that the manual is written clearly and that the Documentation Requirements have been thoroughly and thoughtfully communicated. The Consultant will be able to base the manual on the current Green Star SA – Office v1 and Retail Centre v1 manuals, and it is recommended that potential Consultants review these documents in preparing their proposals. Electronic versions of the Green Star SA – Office v1 and Retail Centre v1 manuals as well as a pdf copy of the Australian Green Star – Multi Unit Residential manual will be provided to the Consultant. All changes to the base document must be tracked using 'track changes' format in Microsoft Word.

An internal peer review must be undertaken by the Consultant team before the Technical Manual is issued in draft format to the GBCSA and TWG for comment. After feedback is received from the GBCSA and the TWG, the Consultant must prepare the final version of the Technical Manual in a publication-ready Word format.

4 Final Tool Delivery

During the Pilot process and final tool development period, the Consultant may be asked by the GBCSA to answer pertinent technical queries posed by Pilot projects or GBCSA stakeholders.

All suggested tool revisions, based on feedback from the public and any Pilot projects, will be compiled into a single document by GBCSA staff. Once approved by the TWG and GBCSA, the Consultant will make the appropriate changes to the rating tool and Technical Manual.

Meetings

Two separate types of meetings will take place. The entire Technical Working Group (TWG) will meet approximately every two weeks, in Johannesburg and Cape Town (final locations based on the mix of TWG members), in person and possibly via video conference. The Consultant is also expected to organise and manage any separate technical meetings on specific topics such as energy and building materials with subgroups made up of relevant TWG members. The technical consultant must prepare the agenda and any additional information that the TWG needs to review at least two days prior to the TWG and subgroup meetings.

Technical Working Group Meetings

The Consultant is expected to have adequate representation at every Technical Working Group (TWG) tool development meeting to present and discuss the items on the agenda; the GBCSA anticipates a minimum of 8 tool development meetings, roughly every 2 weeks. All TWG meeting invites, agenda and minutes are issued by the GBCSA. The TWG meetings will be chaired by the GBCSA, but discussion will mostly be lead by the technical consultant's category leaders depending on the agenda of the meeting.

Subgroup Meetings

Subgroup meetings will take place via teleconference, and each category subgroup is anticipated to meet once between each TWG meeting, as needed. It is anticipated that there will be 7 subgroups, roughly based on Green Star SA categories, with Emissions credits spread across the other category groups. All sub-group meeting invites, agenda and minutes are issued by the technical consultant's project co-ordinator. The technical consultant must have minutes taken by one of their team at all sub-group meetings, which must be issued to the sub-groups and TWG (via the GBCSA) no later than 3 days after the meeting. Sub-group meetings must be chaired by the technical consultant's category leader.

In addition, the technical consultant's project manager will meet with the GCBSA as required to expedite the development and delivery of the rating tool, including at least one meeting with the entire nominated consultant team at the commencement of the tool development process.

Schedule

The first project meeting between the GBCSA and the Consultant will be during the week of 19 July.

Proposed TWG meetings are given below. Locations are subject to change based on Consultant selected and composition of Technical Working Group. In addition, the GBCSA will explore the possibility of video conference meetings.

Preliminary TWG Meeting Schedule:

Date	Time	Meeting type	Topic	Location
19 July week	Morning	Consultant	Kick-off	Consultant Office
30 July	Morning	TWG	Green Star SA Intro & TWG Kick-off	Jhb
13 August	Morning	TWG	Categories and Credits	Cpt
27 August	Morning	TWG	Categories and Credits	Cpt
10 September	Morning	TWG	Categories and Credits	Jhb
1 October	Morning	TWG	Categories and Credits	Jhb
15 October	Morning	TWG	Categories and Credits	Cpt
29 October	All day	TWG	Case study workshop	Cpt
12 November	Morning	TWG	Finalise Pilot tool	Jhb
10 December			Pilot tool launched	
11 March 2011			Pilot feedback period ends	
1 April 2011	Morning	TWG	Pilot feedback review	Jhb
29 April 2011			Version 1 tool launched	

The Pilot tool must be completed by mid-December. Although the Technical Manual will not be finalised until the release of the final version of the tool, a draft version of the manual, complete with Documentation Requirements for each credit at both the Design and As-built phases must be submitted by mid-January for TWG and GBCSA review early in 2011. Final changes will be made after the Pilot period.

The final versions of the Green Star SA – Multi Unit Residential rating tool and the Technical Manual will be released in late April 2011.

Detailed draft delivery programme:

29 October:	draft pilot tool and draft calculator guides/protocols
12 November:	final pilot tool and final pilot calculator guides/protocols
14 January:	draft technical manual (already peer reviewed)
11 March:	Pilot tool review period complete
30 March:	Pilot tool public review feedback from Consultant
15 April:	final tool, technical manual and all additional documents

Proposal Requirements

Proposals must include:

- Description of resources to be allocated to perform this scope of work;
- Project manager and project co-ordinator (provide CVs demonstrating relevant experience in these roles, including meeting chair role)
- List of category leaders (based on Green Star SA categories)
- Strategy to acquire the required data to develop the credits within each category;
- Strategy to ensure that the calculators and modelling methodology are technically robust and appropriate to South Africa;
- Description of how expertise in all credit categories will be provided;
- Description of the use of any external experts;
- Demonstrated understanding of the brief; and
- budget break down.

Proposals must include a proposed lump sum fee to perform this work, including travel and expenses.

The proposal must include a description of the Consultant's experience with:

- The issues covered by each category;
- The design and development of multi unit residential buildings, including experience with mechanical engineering and energy modelling;
- Technical writing;
- Benchmarking studies; and
- Environmental rating tools.

Each proposal must include the Consultant's nominated list of team members and their CV's. Proposals must highlight which team members would be category leaders.

Submission Details and Selection Process

All proposals must be submitted in an electronic format by close of business Friday 25 June, to Jason Buch, Technical Manager GBCSA, at Jason.buch@gbcsa.org.za.

Once the GBCSA has reviewed all of the proposals, it will contact all candidates with competitive and conforming submissions to discuss details of their proposals. The final selection will be made by Monday, 5 July.

The Consultants will be expected to sign the GBCSA's standard consultancy agreement and acknowledge that all tools and associated material are the exclusive property of the GBCSA.