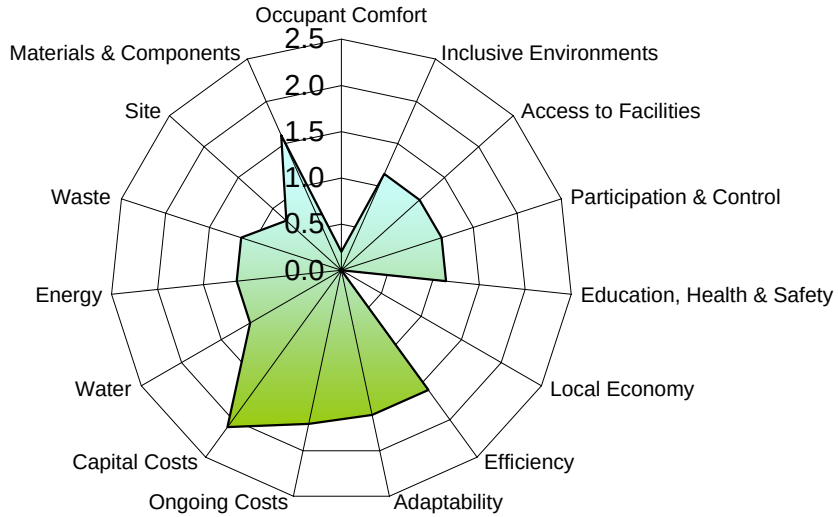
SUSTAINABLE BUILDING ASSESSMENT TOOL (SBAT- P) V1

PROJECT		ASSESSMENT	
Project title:		Date:	
Location:		Undertaken by:	
Building type (specify):	Residential/Community/Commercial	Company / organisation:	
Internal area (m2):		Telephone:	Fax:
Number of users:		Email:	
Building life cycle stage (specify):	Design/Construction/Operation		



Social	1.0	Economic	1.4	Environmental	1.2

Overall	1.2

Building Performance - Economic

	Criteria	Indicative performance measure	Measured	Points
EC 1	**Local economy**	Explanatory notes		0.0
EC 1.1	Local contractors	% value of the building constructed by local (within 50km) small (employees<20) contractors	0	0.0
EC 1.2	Local materials	% of materials (sand, bricks, blocks, roofing material) sourced from within 50km	0	0.0
EC 1.3	Local components	% of components (windows, doors etc) made locally (in the country)	0	0.0
EC 1.4	Local furniture/fittings	% of furniture and fittings made locally (in the country)	0	0.0
EC 1.5	Maintenance	% of maintenance and repairs by value that can, and are undertaken, by local contractors (within 50km)	0	0.0
EC 2	**Efficiency**	Explanatory notes		1.6
EC 2.1	Capacity	% capacity of building used on a daily basis (actual number of users / number of users at full capacity*100)	80	0.8
EC 2.2	Occupancy	% of time building is occupied and used (actual average number of hours used / all potential hours building could be used (24) *100)	0	0.0
EC 2.3	Space per occupant	Space provision per user not more than 10% above national average for building type (100%)	80	0.8
EC 2.4	Communication	Site/building has access to internet and telephone (100%), telephone only (50%)	0	0.0
EC 2.5	Material & Components	Building design coordinated with material / component sizes in order to minimise wastage. Walls (50%), Roof and floors (50%)	0	0.0
EC 3	**Adaptability**	Explanatory notes		1.1
EC 3.1	Vertical heights	% of spaces that have a floor to ceiling height of 3000mm or more	0	0.0
EC 3.2	External space	Design facilitates flexible external space use (100%)	80	0.8
EC 3.3	Internal partition	Non loadbearing internal partitions that can be easily adapted (loose partioning (100%), studwall (50%), masonary (25%)	34	0.3
EC 3.4	Modular planning	Building with modular stucture, envelope (fenestration) & services allowing easly internal adaptaptation (100%)	0	0.0
EC 3.5	Furniture	Modular, limited variety furniture - can be easily configured for different uses (100%)	0	0.0
EC 4	**Ongoing costs**	Explanatory notes		1.7
EC 4.1	Induction	All new users receive induction training on building systems (50%), Detailed building user manual (50%)	0	0.0
EC4.2	Consumption & waste	% of users exposed on a monthly basis to building performance figures (water (25%), electricity (25%), waste (25%), accidents (25%)	80	0.8
EC 4.2	Metering	Easily monitored localised metering system for water (50%) and energy (50%)	56	0.6
EC4.3	Maintenance & Cleaning	% of building that can be cleaned and maintained easily and safely using simple equipment and local non-hazardous materials	34	0.3
SO 4.5	Procurement	% of value of all materials/equipment used in the building on a daily basis supplied by local (within the country) manufacturers	0	0.0
EC 5	**Capital Costs**	Explanatory notes		2.1
EC 5.1	Local need	Five percent capital cost allocated to address urgent local issues (employment, training etc) during construction process (100%)	0	0.0
EC5.2	Procurement	Tender / construction packaged to ensure involvement of small local contractors/manufacturers (100%)	80	0.8
EC 5.3	Building costs	Capital cost not more than fifteen % above national average building costs for the building type (100%)	50	0.5
EC5.4	Technology	3% or more of capital costs allocated to new sustainable/indigenous technology (100%)	80	0.8
EC 5.5	Existing Buildings	Existing buildings reused (100%)	0	0.0

Building Performance - Social

	Criteria	Indicative performance measure		Measured	Points	Quantified modelled or measured performance data
SO 1	**Occupant Comfort**		Explanatory notes		0.2	http://greenbuilding.ca/
SO 1.1	Daylighting	% of occupied spaces that are within distance 2H from window, where H is the height of the window or where there is good daylight from skylights		20	0.2	
SO 1.2	Ventilation	% of occupied spaces have equivalent of opening window area equivalent to 10% of floor area or adequate mechanical system, with upolluted air source		0	0.0	
SO 1.3	Noise	% of occupied spaces where external/internal/reverberation noise does not impinge on normal conversation (50dbA)		0	0.0	
SO 1.5	Thermal comfort	Tempreture of occupied space does not exceed 28 or go below 19oC for less than 5 days per year (100%)		0	0.0	
SO 1.5	Views	% of occupied space that is 6m from an external window (not a skylight) with a view		0	0.0	
SO 2	**Inclusive Environment**		Explanatory notes		1.1	
SO 2.1	Public Transport	% of building (s) within 400m of disabled accessible (20%) and affordable (80%) public transport		0	0.0	
SO 2.2	Information	Comprehensive signage provided (50%), Signage high contrast, clear print signage in appropriate locations and language(s) / use of understandable symbols / manned reception at all entrances (50%)		34	0.3	
SO 2.3	Space	% of occupied spaces that are accessible to ambulant disabled / wheelchair users		80	0.8	
SO 2.4	Toilets	% of occupied space with fully accessible toilets within 50m along easily accessible route		0	0.0	
SO 2.5	Fittings & Furniture	% of commonly used furniture and fittings (reception desk, kitchenette, auditorium) fully accessible		0	0.0	
SO 3	**Access to Facilities**		Explanatory notes		1.1	
SO 3.1	Children	All users can walk (100%) / use public transport (50%) to get to their childrens' schools and creches		0	0.0	
SO 3.2	Banking	All users can walk (100%) / use public transport (50%) to get to banking facilities		80	0.8	
SO 3.3	Retail	All users can walk (100%) / use public transport (50%) to get to food retail		34	0.3	
SO 3.4	Communication	All users can walk (100%) / use public transport (50%) to get to communication facilities (post/telephone/internet)		0	0.0	
SO 3.5	Exercise	All users can walk (100%) / use public transport (50%) to get to recreation/excercise facilities		0	0.0	
SO 4	**Participation & Contro**		Explanatory notes		1.1	
SO 4.1	Environmental control	% of occupied space able to control their thermal environment (adjacent to openable windows/thermal controls)		0	0.0	
SO 4.2	Lighting control	% of occupied space able to control their light (adjacent to controllable blinds etc/local lighting control)		80	0.8	
SO 4.3	Social spaces	Social informal meeting spaces (parks / staff canteens / cafes) provided locally (within 400m) (100%)		0	0.0	
SO 4.4	Sharing facilties	5% or more of facilities shared with other users / organisations on a weekly basis (100%)		34	0.3	
SO 4.5	User group	Users actively involved in the design process (50%) / Active and representative management user group (50%)		0	0.0	
SO 5	**Education, Health & Sa**		Explanatory notes		1.1	
SO 5.1	Education	Two percent or more space/facilities available for education (seminar rooms / reading / libraries) per occupied space (75%). Construction training provided on site (25%)		0	0.0	
SO 5.2	Safety	All well used routes in and around building well lit (25%), all routes in and around buildings visually supervised (25%), secure perimeter and access control (50%), No crime (100%)		34	0.3	
SO 5.3	Awareness	% of users who can access information on health & safety issues (ie HIV/AIDS), training and employment opportunities easily (posters/personnel/intranet site)		80	0.8	
SO 5.4	Materials	All materials/components used have no negative effects on indoor air quality (100%)		0	0.0	
SO 5.5	Accidents	Process in place for recording all occupational accidents and diseases and addressing these		0	0.0	

Building Performance - Environmental

	Criteria	Indicative performance measure	Measured	Points
EN 1	**Water**	Explanatory notes		1.1
EN 1.1	Rainwater	% of water consumed sourced from rainwater harvested on site	0	0.0
EN 1.2	Water use	% of equipment (taps, washing machines, urinals showerheads) that are water efficient	0	0.0
EN 1.3	Runoff	% of carparking, paths, roads and roofs that have absorbant/semi absorbant/permeable surfaces (grassed/thatched/looselaid paving/ absorbant materials)	80	0.8
EN 1.4	Greywater	% of water from washing/relatively clean processes recycled and reused	34	0.3
EN 1.5	Planting	% of planting (other than food gardens) on site with low / appropriate water requirements	0	0.0
EN 2	**Energy**	Explanatory notes		1.1
EN 2.1	Location	% of users who walk / cycle / use public transport to commute to the building	0	0.0
EN 2.2	Ventilation	% of building ventilation requirements met through natural / passive ventilation	34	0.3
EN 2.3	Heating & Cooling	% of occupied space which relies solely on passive environmental control (no or minimal energy consumption)	80	0.8
EN 2.4	Appliances & fittings	% of appliances / lighting fixtures that are classed as highly energy efficient (ie energy star rating)	0	0.0
EN 2.5	Renewable energy	% of building energy requirements met from renewable sources	0	0.0
EN 3	**Waste**	Explanatory notes		1.1
EN 3.1	Toxic waste	% of toxic waste (batteries, ink cartridges, flourescent lamps) recycled	0	0.0
EN 3.2	Organic waste	% of organic waste recycled	0	0.0
EN 3.3	Inorganic waste	% of inorganic waste recycled.	80	0.8
EN 3.4	Sewerage	% of sewerage recycled on site	34	0.3
EN 3.5	Construction waste	% of damaged building materials / waste developed in construction recycled on site	0	0.0
EN 4	**Site**	Explanatory notes		0.8
EN 4.1	Brownfield site	% of proposed site already disturbed / brownfield (previously developed)	0	0.0
EN 4.2	Neighbouring buildings	No neighbouring buildings negatively affected (access to sunlight, daylight, ventilation) (100%)	0	0.0
EN 4.3	Vegetation	% of area of area covered in vegetation (include green roofs, internal planting) relative to whole site	0	0.0
EN 4.4	Food gardens	Food gardens on site (100%)	80	0.8
EN 4.5	Landscape inputs	% of landscape that does not require mechanical equipment (ie lawn cutting) and or artificial inputs such as weed killers and pesticides	0	0.0
EN 5	**Materials & Componen**	Explanatory notes		1.6
EN 5.1	Embodied energy	Materials with high embodied energy (aluminium,plastics) make up less than 1% of weight of building (100%)	0	0.0
EN 5.2	Material sources	% of materials and components by volume from grown sources (animal/plant)	80	0.8
EN 5.3	Ozone depletion	No materials and components used requiring ozone depleting processes (100%)	80	0.8
EN 5.4	Recyled / reuse	% of materials and components (by weight) reused / from recycled sources	0	0.0
EN 5.5	Construction process	Volume / area of site disturbed during construction less than 2X volume/area of new building (100%)	0	0.0

Instructions

Objective

The objective of the tool is to provide an indication of the performance of a building or the design of a building in terms of sustainability

Scope

The tool should be ideally be used on a building that has just been completed.
It can be used at other stages of a building's lifecycle but some criteria may not be relevant
The tool can be used on most building types such as schools, housing and offices, conventionally used by people to live and work in

Instructions

Step One **Setting the Project Up**
Complete the *project* and *assessment* sections of the *A. Report* section
Refer to *definitions* below

Step Two **Entering Measurements**
Complete each of the sections *B. Social, C. Economic* and *D. Environmental*
Should you require a description of the broad criteria used refer to *Criteria Notes.*
Under the column *Measured* indicate the percentage compliance from 0 to 100 % for each of the relevant criteria
If you do not have the information required for the criteria enter O%
Should you have detailed modelled or measured quantified performance data relevant to the criteria enter this under *Quantified modelled or measured performance data.* Where possible ensure that this data aligns with protocols provided in the green building assessment methodology (see http:greenbuildings.ca)
Detailed technical performance information on your building should also be entered directly into the powerpoint accompanying this document

Step Three **Reading the Report**
On completion return to the A. Report section. The spidergraph should now have filled and values should have appeared in all boxes.

Social provides an indication of the social performance of the building in terms of sustainability
Economic provides an indication of the economic performance of the building in terms of sustainability
Environmental provides an indication of the environmental performance of the building in terms of sustainability
Overall provides an indication of the overall building performance in terms of sustainability

Definitions

Occupied Space: Space that is normally used by people for living or working in
User: People who regularly use the building

Contact

Should you wish to comment on this tool, please contact:

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Criteria Notes

Reference	Criteria	Description	Examples of quantified performance indicators
SO1	Occupant Comfort	The quality of environments in and around buildings has been shown to have a direct impact on health, happiness and productivity of people. Healthier, happier, more effective people contribute to sustainability by being more efficient and therefore reducing resource consumption and waste.	
SO2	Inclusive Environments	Buildings should be designed to accommodate and be accessible to everyone, or specially designed buildings need to be provided. Ensuring that buildings are inclusive supports sustainability as replication is avoided and change of use supported. It also ensures that as legislation in this area tightens, expensive retrofits are not required in order to ensure compliance	
SO3	Access to Facilities	Conventional living and working patterns require regular access to a range of services. Ensuring that these services can be accessed easily and in environmentally friendly ways supports sustainability by increasing efficiency and reducing environmental impact.	
SO4	Participation & Control	Enablingusers to participate in decisions about their environment helps ensure that they care for and manage this properly. Control over aspects of their local environment enables personal satisfaction and comfort. Both of these support sustainability by promoting proper management of buildings and increasing productivity.	
SO5	Education Health and Safety	Buildings need to cater for the well-being, development, health and safety of the people that use them. Learning and access to information is increasingly seen as a requirement of a competitive work force. All of these factors contribute to sustainability by helping ensure that people remain healthy and economically active, thus reducing the 'costs' (to society, the environment and the economy) of unemployment and ill health.	
EC1	Local Economy	The construction and management of buildings can have a major impact on the economy of an area. The economy of an area can be stimulated and sustained by buildings that make use of, and develop, local skills and resources.	
EC2	Efficiency	Buildings cost money and make use of resources whether they are used or not. Effective and efficient use of buildings supports sustainability by reducing waste and the need for additional buildings.	
EC3	Adaptability and Flexibility	Most buildings can have a life span of at least 50 years. It is likely that within this time the use of the building will change, or that the feasibility of this will be investigated. Buildings, which can accommodate change easily, support sustainability by reducing the requirement for physical adaptation and associated disruption, energy consumption and cost as well as the need for new buildings.	
EC4	Ongoing Costs	Building cost money to operate. These costs include cleaning, maintenance, security and energy. These costs are often indicative of consumption and waste in the building. It is therefore important to monitor them. In addition operational budgets can be used to support the development of local economies.	
EC5	Capital Costs	Buildings are generally one of the most valuable assets that people, and often organisations and governments own. Money spent on buildings is not available for other uses such as health, education and business development. In addition,expensive buildings may mean that the services (i.e. health and education) they contain or the accommodation (for work and living) they provide is beyond the means of most users.	
EN1	Water	The large-scale provision of conventional water supply has many environmental implications. Water needs to be stored (sometimes taking up large areas of valuable land and disturbing natural drainage patterns with associated problems from erosion etc); it also needs to be pumped (using energy) through a large network of pipes (that need to be maintained and repaired). Having delivered the water, parallel efforts are then required to dispose of this after it is used in reticulation and sewerage systems. Reducing water consumption supports sustainability by reducing the environmental impact required to deliver water, and dispose of this after use. Maintaining natural ground water systems also supports sustainability through maintaining existing ecosystems and avoiding the environmental impact associated with for disposal of storm water and runoff.	
EN2	Energy	Buildings consume a large proportion of all energy produced. Conventional energy production is responsible for making a large contribution to environmental damage and non-renewable resource depletion. Using less energy or using renewable energy in buildings therefore can make a substantial contribution	
EN3	Waste	Raw materials and new components used in buildings consume resources and energy in their manufacture and processes. Buildings accommodate activities that consume large amounts of resources and products and produce large amounts of waste. Reducing the use of new materials and components in buildings and in the activities accommodated and reducing waste by recycling and reuse supports sustainability by reducing the energy consumption and resource consumption.	
EN4	Site	Buildings have a footprint and a size that take up space that could otherwise be occupied by natural ecosystems which contribute to sustainability by helping create and maintain an environment that supports life. (By, for instance, controlling the carbon dioxide and oxygen balance and maintaining temperatures within a limited range). Buildings can support sustainability by, limiting development to sites that have already been disturbed, and working with nature by including aspects of natural ecosystems within the development.	
EN5	Materials and Components	The construction of buildings usually requires large quantities of materials and components. These may require large amounts of energy to produce. Their manufacture may also require processes that are harmful to the environment and consume non-renewable resources. It is therefore important to carefully select materials and components and construction methods.	