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**GREEN BUILDING INITIATIVE**  
FOR RESOURCE EFFICIENCY &  
REDUCTION OF ENVIRONMENTAL IMPACTS

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GREEN GLOBES FOR NEW CONSTRUCTION  
**TWO GREEN GLOBES**

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**2021**



# 2021 GREEN GLOBES FOR NEW CONSTRUCTION



Blue Jays Player Development Complex  
Dunedin, Florida



March 4, 2021

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Subject: Green Globes® NC Assessment  
Blue Jays Player Development Complex (PDC)  
3031 Garrison Road  
Dunedin, Florida 34698

Thank you for the opportunity to complete a virtual third-party Green Globes site assessment of this unique project. The project includes both renovation and new construction of playing fields and buildings at the Blue Jays spring training facility for both major and minor league baseball players. This report focused on the new two-story clubhouse portion of the PDC (116,000 square feet) and the site. The first floor is the clubhouse and the second level primarily offices.

The building is predominantly structural steel frame with masonry and light gauge wall framing. The roof and second floor are concrete composite metal deck on steel bar joist. The building is founded on spread and strip concrete footings. The envelope is brick veneer, stucco, and prefab metal panels with TPO roofs.

I performed an onsite assessment of the property on October 21, 2020 to review the information provided in the Green Globes online self-evaluation. The meeting began in the morning with:

- Ryan Snow, Project Manager, Gilbrane Company (GC)
- Katie DiGirolamo, Project Manager, Toronto BlueJays
- Christa Broderick, Project Manager, The Lunz Group
- Bradley Lunz, President, The Lunz Group
- Maggie Briggs, The Lunz Group

We toured the facility to verify installation and implementation of the features noted in the online evaluation and demonstrated by documentation provided during the design review phase.

Based on the site assessment and previous design review the project achieved a score of **474.5** points scored out of **851.5** applicable points for a total percentage **55.7%** which is the equivalent of **Two Green Globes**.



### GREEN GLOBES RATINGS:

Once an assessment is verified by a third party, properties achieving a score of 35% or more receive a Green Globes rating based on the percentage of total points (up to 1,000) achieved.

**85-100%** FOUR GREEN GLOBES



Demonstrates national leadership and excellence in the practice of water, energy and environmental efficiency to reduce environmental impacts.

**70-84%** THREE GREEN GLOBES



Demonstrates leadership in applying the best practices regarding energy, water, and environmental efficiency.

**55-69%** TWO GREEN GLOBES



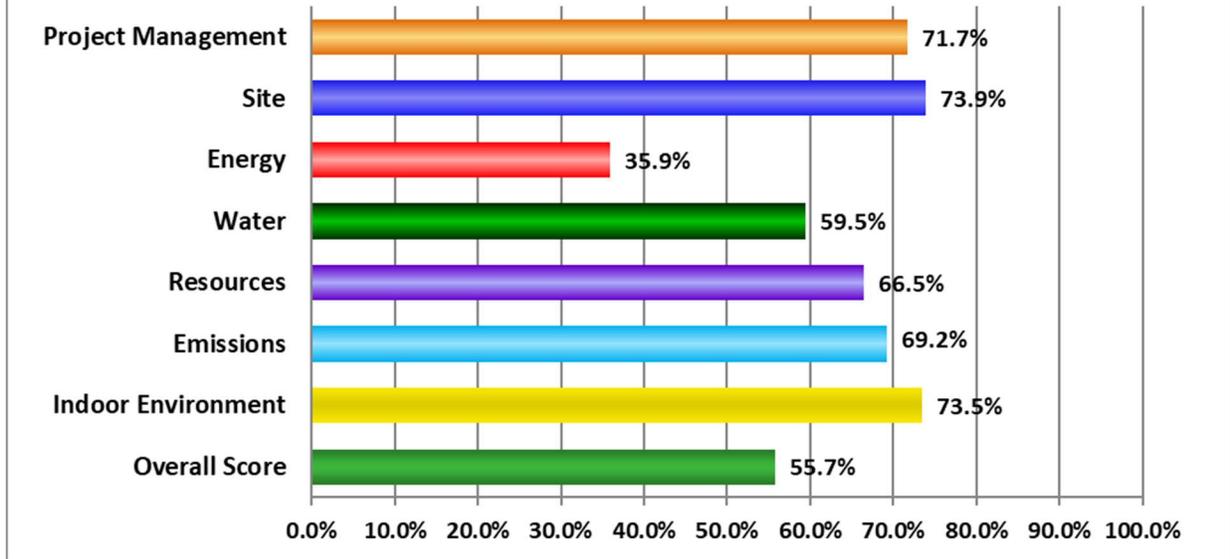
Demonstrates excellent progress in achieving reduction of environmental impacts and use of environmental efficiency practices.

**35-54%** ONE GREEN GLOBES



Demonstrates a commitment to environmental efficiency practices

# Blue Jays Player Development Center



## Green Globes® NC Assessor Point Summary - Stage II

Building Name: Blue Jays Player Development Center  
 Assessor: Lawrence Humphries  
 Assessment Date: 10/21/20  
 Report Date: 03/04/21

### SECTION 1: PROJECT MANAGEMENT

Description	Max Points Possible	Total Applicable Points - Final	User Self-Evaluation Points - Post-Construction	Assessor Awarded Points - Final	Point Variance from Assessor to User Self-Evaluation Points	Comment
1.1 Integrated design process	9	9.0	4.5	8.5	4.0	Green Globes criteria was used
1.2 Environmental management	12	11.5	11.0	9.0	-2.0	IAQ documentation was unavailable
1.3 Commissioning	29	29.0	18.0	18.0	0.0	
<b>Project Management Totals</b>	<b>50</b>	<b>49.5</b>	<b>33.5</b>	<b>35.5</b>	<b>2.0</b>	<b>71.7%</b>

### SECTION 2: SITE

Description	Max Points Possible	Total Applicable Points - Final	User Self-Evaluation Points - Post-Construction	Assessor Awarded Points - Final	Point Variance from Assessor to User Self-Evaluation Points	Comment
2.1 Development Area	30	30.0	15.0	20.0	5.0	Commercial zone is within 0.3 mi
2.2 Ecological Impacts	32	32.0	24.0	25.0	1.0	Observed opaque wall SRI met criteria; Reflectance data was unavailable
2.3 Stormwater Management	18	18.0	10.0	15.0	5.0	Municipal requirements and observed BMPs meets criteria for 50% retention
2.4 Landscaping	28	28.0	17.0	18.0	1.0	Extensive landscaping preparation observed
2.5 Exterior Light Pollution	7	7.0	7.0	7.0	0.0	
<b>Site Totals</b>	<b>115</b>	<b>115.0</b>	<b>73.0</b>	<b>85.0</b>	<b>12.0</b>	<b>73.9%</b>

SECTION 3: ENERGY						
Description	Max Points Possible	Total Applicable Points - Final	User Self-Evaluation Points - Post-Construction	Assessor Awarded Points - Final	Point Variance from Assessor to User Self-Evaluation Points	Comment
3.1 Energy Performance	100	100.0	0.0	0.0	0.0	
3.2 Energy Demand	35	35.0	15.0	6.0	-9.0	Interior mas walls were observed; Data to support power demand reduction was unavailable
3.3 Metering, Measurement, and	12	5.0	3.0	2.0	-1.0	Observed metering provisions
3.4 Building Opaque Envelope	31	31.0	26.0	26.0	0.0	
3.5 Lighting	36	30.0	30.0	25.0	-5.0	Changes due to observed daylighting areas and credit for substantial clerestory windows
3.6 HVAC Systems and Controls	59	38.0	20.0	26.0	6.0	Installed chiller exceeds ASHRAE 90 stds
3.7 Other HVAC Systems/Controls	32	32.0	22.0	22.0	0.0	
3.8 Other Energy Efficient Equipment	11	6.0	6.0	6.0	0.0	
3.9 Renewable Energy	50	50.0	0.0	0.0	0.0	
3.10 Energy Efficient Transportation	24	24.0	23.0	13.0	-10.0	Access to public transport is 1.1 miles
<b>Energy Totals</b>	<b>390</b>	<b>351.0</b>	<b>145.0</b>	<b>126.0</b>	<b>-19.0</b>	<b>35.9%</b>

SECTION 4: WATER						
Description	Max Points Possible	Total Applicable Points - Final	User Self-Evaluation Points - Post-Construction	Assessor Awarded Points - Final	Point Variance from Assessor to User Self-Evaluation Points	Comment
4.1 Water Consumption	42	32.0	14.0	14.0	0.0	
4.2 Cooling Towers	9	0.0	0.0	0.0	0.0	
4.3 Boilers and Water Heaters	4	3.0	1.0	3.0	2.0	Lochinvar condensing boiler onsite
4.4 Water Intensive Applications	18	11.0	8.0	9.0	1.0	UV system and flowmeters for re-use in therapy pools
4.5 Water Treatment	3	1.0	0.0	1.0	1.0	Observed water conditioning meet criteria
4.6 Alternate Sources of Water	5	5.0	0.0	5.0	5.0	Reclaimed water purchased from Dunedin
4.7 Metering	11	9.0	3.0	3.0	0.0	
4.8 Irrigation	18	18.0	9.0	12.0	3.0	Observed QuantumFlo commercial irrigation controller
<b>Water Totals</b>	<b>110</b>	<b>79.0</b>	<b>35.0</b>	<b>47.0</b>	<b>12.0</b>	<b>59.5%</b>

SECTION 5: RESOURCES						
Description	Max Points Possible	Total Applicable Points - Final	User Self-Evaluation Points - Post-Construction	Assessor Awarded Points - Final	Point Variance from Assessor to User Self-Evaluation Points	Comment
5.1 Building Assembly (core and shell including envelope)	33	33.0	20.0	20.0	-10.0	Supporting EPDs and calculation (to support original percentage) were unavailable
5.2 Interior FIT-OUT (including finishes and furnishings)	16	16.0	10.0	10.0	-5.0	Supporting EPDs and calculation (to support original percentage) were unavailable
5.3 Reuse of Existing Structures	26	4.0	0.0	0.0	0.0	
5.4 Waste	9	9.0	1.5	8.5	7.0	Waste records provided support 77%; Aggregate and fill was reused
5.5 Building Service Life Plan	7	7.0	1.0	0.0	-1.0	PM schedule was not available
5.6 Resource Conservation	6	6.0	4.0	4.0	0.0	
5.7 Building Envelope - Roofing/Opening	10	10.0	10.0	10.0	0.0	
5.8 Envelope - Foundation,	6	5.0	5.0	5.0	0.0	
5.9 Envelope - Cladding	5	3.0	3.0	3.0	0.0	
5.10 Envelope - Barriers	7	4.0	4.0	4.0	0.0	
<b>Resources Totals</b>	<b>125</b>	<b>97.0</b>	<b>58.5</b>	<b>64.5</b>	<b>-9.0</b>	<b>66.5%</b>

SECTION 6: EMISSIONS						
Description	Max Points Possible	Total Applicable Points - Final	User Self-Evaluation Points - Post-Construction	Points Assessor Final Award	Point Variance from Assessor to User Self-Evaluation Points	Comment
6.1 Heating	18	0	0	0	0	
6.2 Cooling	29	23	15	15	0	
6.3 Janitorial Equipment	3	3	3	3	0	
<b>Emissions Totals</b>	<b>50</b>	<b>26.0</b>	<b>18.0</b>	<b>18.0</b>	<b>0.0</b>	<b>69.2%</b>
SECTION 7: INDOOR ENVIRONMENT						
Description	Max Points Possible	Total Applicable Points - Final	User Self-Evaluation Points - Post-Construction	Assessor Awarded Points - Final	Point Variance from Assessor to User Self-Evaluation Points	Comment
7.1 Ventilation	37	37	30	34	4	Ventilation rates are shown on VAV sch
7.2 Source Control and Measurement of Indoor Pollutants	46	43	32	32	0	
7.3 Lighting Design and Systems	30	24	9.5	12.5	3	Area with DF >30% based on office area and main locker room
7.4 Thermal Comfort	18	9	4	4	0	
7.5 Acoustic Comfort	29	21	16	16	0	
<b>Indoor Environment Totals</b>	<b>160</b>	<b>134.0</b>	<b>91.5</b>	<b>98.5</b>	<b>7.0</b>	<b>73.5%</b>
<b>OVERALL TOTALS</b>	<b>1000</b>	<b>851.5</b>	<b>454.5</b>	<b>474.5</b>	<b>5.0</b>	<b>Overall Score</b>
					<b>Points</b>	<b>Overall Rating</b>
<b>FINAL ASSESSMENT SCORE AND RATING:</b>			<b>474.5</b>	<b>Accumulated</b>	<b>851.5</b>	<b>55.73%</b>
						<b>2 Green Globes</b>

## VERIFIED BUILDING FEATURES

### Project Management

- There are provisions in the specification for protection of weather sensitive materials.
- Training was required for the project maintenance staff.
- O&M manuals are specified for maintenance.

**Scored 35.5 out of a possible 49.5 for 71.7% of the available points**



## Site

- The property is above the 100 yr flood plain in a Zone X area.
- Professionally prepared ESC (Erosion and Sediment Control) design is shown in drawings.
- There is good onsite retention of stormwater.
- There are substantial portions of both native and drought-tolerant plants used in the landscape palette.

**Scored 85.0 out of a possible 115.0 for 73.9% of the available points**



## Energy

- The building automation system (BAS) incorporates distributed PLCs and proprietary HVAC unit controllers.
- There is good lighting control throughout the facility.
- Replaced HVAC equipment is high efficiency some air side economizer strategies.

**Scored 126.0 out of a possible 351.0 for 35.9% of the available points**

## Water

- Lo-flow plumbing fixtures are installed in the facility that result in a projected water savings.
- Reclaimed water from the city WWTP is used for irrigation.
- There is a sophisticated irrigation controller installation.

**Scored 47.0 out of a possible 79.0 for 59.5% of the available points**



## Resources

- The existing façade and structural system are reused to the extent possible.
- Multi-functional assemblies are used which minimizes the use of raw materials.
- The various building envelope systems address air barrier, moisture barrier and weathering are specified in accordance with industry standards.

**Scored 64.5 out of a possible 97.0 for 66.5% of the available points**



## Emissions

- The primary refrigerants are R-134a and R-410a.
- The janitorial areas meet the criteria.

**Scored 18.0 out of a possible 26.0 for 69.2% of the available points**

## Indoor Environment

- Various strategies, good practices and industrial standards have been incorporated in the project to provide adequate air exchange, good ventilation and emergency smoke evacuation.
- Low volatile organic compound emitting materials were specified for the building.
- Good indoor air quality is a high consideration.
- Thermal comfort strategies and zoning have been designed into the project.



- Acoustic comfort strategies have been considered in the project design.

**Scored 98.5 out of a possible 134.0 for 73.5% of the available points**



## RECOMMENDATIONS

Additional recommendations that may enhance the building and provide a better rating for the future include:

### Project Management

Green building has proved to be more successful when there is a team effort rather than some imposed generic standards for which there is no localization effort or buy-in by the participants. The items in the Project Management section are aimed to encourage structured participation by the entire project team including designers, owners, contractors, and major suppliers. The focus of this section is on sustainability decisions not typical OAC meeting items. Collaborative meetings with all key design and construction personnel should be held as early as possible in the design process and continued through building occupancy.

- Enhance the use of collaborative design input to maximize sustainability solutions. Conservation method are an evolving set of practices and soliciting suggestions from varied skillsets should yield practical yet innovative ideas.

### Site

A significant impact, of the project on the environment is the interface of our built surroundings to the natural physical environment. This interface is a focus of the Site section. Portions of this section include considerations prior to the site selection and enhancement of the site design. The facilities management team should have a complete set of civil and landscape/irrigation drawings to maintain or enhance the infrastructure and flora design.

- Consider lighter colors and texture with a higher SRI values for paved surfaces. Reducing the heat island effect in cooling required climates can reduce exterior water usage, increase comfort and reduce energy cost.

- Consider low-reflectivity glass and other strategies to reduce bird collisions to enhance the local bird population.
- Consider ways to expand pervious surfaces within the hardscape (e.g. plaza areas) and integrate such drainage systems into the stormwater plan. Such provisions have the potential to retain more stormwater onsite and promote natural geohydrology.

## **Energy**

Energy is a focus of many green building reviews. It tends to be more in the public eye due to debates about man influenced climate change. Beyond those considerations, it is a question about efficiency and economics. Building codes are on a progressive path to improving energy efficiency. Energy improvements can typically be shown as a wise investment depending on the time horizon used and method of financial analysis.

Energy savings achieved through equipment selection, building performance and performance prediction via an energy model are critical aspects in determining the sustainability of a facility. To ensure that the building continues to operate at the optimum level, continual monitoring and tracking of energy performance is essential. Additionally, the facility staff and maintenance personnel should receive regular training on the energy efficient aspects of the building and how individuals play a significant role in the energy efficiency of the facility.

- Consider use of an energy model calibrated to the actual consumption data contained in the BAS. A calibrated model is useful for building operations when evaluating planned energy efficiency modifications.
- Consider using the Energy Star Portfolio Manager, a free on-line tool that can normalize energy consumption data to weather. Such a tracking tool enables more accurate year-to-year comparison.
- Review exterior lighting timer settings within the parameters of security and safety. Review exterior light spectrums as this can impact biodiversity in the area.

## **Water**

Water is a resource that tends to be taken for granted due to the relative low cost and consistent availability over the recent decades. The water section of this review focuses on ways to conserve this irreplaceable finite resource both in the interior and exterior.

- Monitor water usage on a whole building basis to establish a baseline from which to improve conservation.
- Consider a water audit to identify areas of improvement for water conservation.
- A useful tool is the Green Globes Water Consumption Calculator. If the calculator is calibrated against actual usage data, it can assist to evaluate proposed water conservation measures.

## **Resources**

Energy, water, other resources and waste is embodied in various materials that is out of sight, thus out of mind. This section of the review looks at the material selection on a life cycle basis. This section is closely associated with the popular expression, “reduce, re-use, recycle”.

- Periodically review expendable materials purchases to ensure minimal pollutant materials are being used in as limited a manner as possible.
- Include the city sustainability team to assist with goals and keep such efforts fresh in the mind of all staff.
- Use of life cycle analysis (LCA) and/or evaluation of environmental product declarations (EPD) can help minimize cradle-to-grave environmental impacts and encourage a cradle-to-cradle perspective. Using the tools available enable the facilities management to optimize replacement material selection based on an overview of impacts in all sustainability areas (energy, water, toxicity, waste, etc) and not just a single consideration.
- Consider communication through onsite channels including video displays and personal interaction that will remind and encourage conservation.
- Down the road it is challenging to appreciate the design decisions that were made and the service expectations of the project. For the benefit of current and future facilities managers be sure these design decisions have been formalized in the building life service plan while the information is relatively easy to obtain.

### **Emissions**

Emissions have an impact whether to the atmosphere, to the waterways or the soil. The emissions water section of this review focuses on ways to minimize the impact of and to reduce the emissions.

### **Indoor Environment**

Our built environment is meant to enhance our lives. To truly do so the interior or indoor environment should be healthy. This section of the review focuses on items to improve the healthy aspects of the indoor environment including ventilation, reduced pollutants, light levels while encouraging natural light, thermal comfort and acoustic considerations. These quantifiable elements synergistically contribute to the subjective perception of a comfortable, healthy indoor environment.

- Communicate with the staff and encourage use of environmentally friendly products to minimize toxic load in the building
- Continue to use low VOC paints, adhesives, sealants and finishes to reduce off gassing and improve air quality
- Consider additional controls that maintain consistent artificial lighting levels only when daylighting is inadequate in office area.

## SUMMARY

Verification of the self-assessment and modifications by the Assessor resulted in a final score of 474.5 out of 851.5 available points for a score of 55.7% which is equivalent to a Two Green Globes. This level of sustainability is an outstanding accomplishment, and you can be proud of the design and construction of this facility.

Sustainability is a dynamic process and continues for the lifetime of a building. After 12-18 months of occupancy, the facility's operations & management policies can be evaluated under the Green Globes Continual Improvement of Existing Buildings (CIEB) program. The minimum length of occupancy mentioned above is required to evaluate utility bills and usage data and track building performance over time. Collection and analysis of operational data is essential to monitoring the achievement of building performance goals.

Sincerely,



L.L. "Buddy" Humphries, PE, GGA  
Principal, Efficient Green, LLC



### Notice

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