



THE SCHOONER



MAINSHEET

Your Community News

DECEMBER 2011 • ISSUE NO. 15

EDITOR'S NOTE

Schooner Bay's newsletter has been rechristened, *The Schooner Mainsheet*, and will begin featuring more frequent contributions from community members to reflect the diversity of perspectives and interests in Schooner Bay and The Bahamas at large. The name change is part of Schooner Bay's evolution from construction site to community, and is consistent with our belief in the importance of shared knowledge, open communication and community participation. We may on occasion request voluntary contributions to *The Mainsheet*, though please also feel free to submit unsolicited articles or suggestions of any nature to mainsheeteditor@lindroth.cc. We hope you enjoy the new format and content.

*Ring out the old, ring in the new,
Ring happy bells across the snow;
The year is going, let him go;
Ring out the false, ring in the true!*
– Alfred, Lord Tennyson

Though we're not likely to see any snow in Abaco this winter, Tennyson's avid optimism still resounds with the Schooner Bay Team as we forge ahead into 2012. With the phasing out of large-scale civil

engineering projects and the commencement of vertical construction, Schooner Bay is indeed ringing in a new and dramatic stage of development, one guided still by our unwavering commitment to true sustainability.

But, before turning to the year ahead, let us first reflect on the year past. 2011 was a monumental year at Schooner Bay, one in which the cumulative efforts of so many talented individuals over the past three years came palpably to fruition. While the year was not without its challenges – including a direct hit from a Category 3 hurricane and the return of global economic anxiety - we are pleased to report that Schooner Bay continues to grow and prosper, and our holistic approach to sustainability (which you'll find profiled in depth by *The Original Green* author, Steve Mouzon, in the "Library" section of this newsletter) continues to prove its merit in the face of calamities both natural and man-made.

NEWLY OPENED
SCHOONER BAY HARBOUR





THE COMPLETED
SECONDARY DUNE SYSTEM.



LANDSCAPE PROPOGATION

Among notable 2011 milestones, the significance of the opening of Schooner Bay Harbour and the completion of the secondary dune system cannot be overstated. These related projects are both essential to the viability of a permanent community at Schooner Bay and emblematic of our approach to sustainable development. The harbour has long been the ecological and economic nexus of traditional seafaring cultures and is still today the lifeblood of many Bahamian communities. A healthy, active, working harbour-front is foundational to Schooner Bay's approach to authentic development, making the harbour opening perhaps the most significant milestone to date. Watching the sea flood into Schooner Bay's harbour basin was an affirmation of everything we have worked for these last several years, and a powerful experience for us all.

The harbour excavation left us with 120,000 cubic yards of aggregate which we then used to construct a secondary dune system behind the restored primary dune on Schooner Beach. As the writer, Eric Knight, implored: "waste not the smallest thing created, for grains of sand make mountains, and atomies infinity." In this case, grains of sand sourced freely in situ created a 2,000 foot-long natural barrier to protect and fortify both intrinsically valuable swathes of coppice and extrinsically valuable real estate tracts. Indigenous dune plants - like sea oats, which were sourced and propagated on-site - were then planted to form a skeletal structure that will stabilize and sustain the dune in perpetuity.

Incidentally, the propagation of indigenous flora at Schooner Bay represents another long-running sustainability initiative that hit its stride in 2011 (see p. 13). The vast majority of Schooner Bay landscaping has been propagated on-site, giving preference to indigenous species and assuring considerable cost-savings. For example, we have grown thousands of coconut trees in our on-site nursery over the past three years, several hundred

of which can now be found ringing the harbour in striking relief to the village rising beyond.

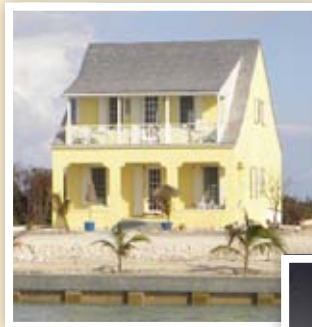
It is the “village rising” that we look most forward to in 2012. To this extent, we are encouraged by the overwhelmingly positive reception that followed the first glimpses of Schooner Bay’s residential character in 2011. The eclectic and authentic charms of Post House, Calgary House, Captain’s Cottage, Guest House, Turtle View, Over Yonder, Chez Bax, Island Cottage and The Jib, are winning the praise of residents, visitors and the international press, and these early houses stand as excellent examples of the architectural traditions being revived at Schooner Bay. With seven houses completed or nearing completion, nine more currently under construction – in addition to Black Fly Lodge, Schooner Bay’s first commercial enterprise - and several more scheduled to commence in the New Year, visitors in 2012 will witness Schooner Bay literally rising up around them.

And we expect many visitors in 2012, indeed. Between Post House, Guest House and Captain’s Cottage, Schooner Bay now has nine bedrooms available for overnight stays. Guests will find a warm welcome at Schooner Bay this winter. With the first residents already moving in, the village is becoming a hub of activity and a number of major events are on the schedule for 2012, including fishing tournaments, sailing regattas, art festivals, academic symposia, business conferences and community outreach events. To make visiting Schooner Bay as convenient as possible, we are offering a special weekend package that includes travel and accommodations (more on page 8), and our talented staff can now prepare a variety of meals featuring fresh local seafood and produce from Schooner Bay’s own organic farm (see page 11).

In fact, we’ve come to learn that our talented staff can do just about anything! We are constantly amazed at the diverse skills and boundless energy of the many people devoted to making Schooner Bay a special place (and



A HARBOUR VILLAGE RISES



CALGARY HOUSE

POST HOUSE



CHEZ BAX



ISLAND COTTAGE



GUEST HOUSE



CAPTAIN'S COTTAGE



we are pleased to introduce you to a few new faces in this edition of our newsletter). We've spent a great deal of time studying what makes a place truly special, truly sustainable. These are questions that matters to us all, whether or not we consciously deliberate them. At Schooner Bay, our search for answers has taken us through diverse and varied fields of study, including ecology, sociology, agronomy, biology, economics and engineering. But, what we've learned over decades of theoretical and practical research is that underpinning all of these bodies of knowledge are the people on the ground. It's the people that matter. People – not development corporations – are the true community builders. Places reflect the spirit of their citizens: their collective ideals, talents, characters and aspirations. Schooner Bay may have evolved out of a certain set of precepts, but what it ultimately evolves *into* will be shaped and colored by the day-in and day-out actions of the dedicated individuals who choose to live and work here.

So this holiday season, we give special thanks for our people, the people of Schooner Bay, the many wonderful individuals devoted to making this vision a reality. And that includes all of you reading our newsletter! In this spirit, we look forward to seeing you in 2012, and we wish you and your family health, happiness and sustainability in the New Year!

~ *The Schooner Bay Team*





SCHOONER BAY PERSONNEL UPDATES

We are pleased to announce several recent additions to the Schooner Bay Team. All of the individuals we have introduced and profiled in past newsletters remain with Schooner Bay, and the addition of valuable new personnel is a sign of the strong growth and progress of community development.

GLEN KELLY

Glen had just joined us prior to the publication of our last newsletter, in which we included an introductory profile. We're following up now to report that in just his first few months on the job, Glen has become an invaluable addition to the team. As our Town Manager and Harbour Master, Glen is overseeing Schooner Bay's evolution from construction site to community, and is responsible for numerous projects and initiatives including:

- *Schooner Saturdays, a monthly community outreach program bringing local children to Schooner Bay for a day of adventure and education.*
- *Development of Town and Harbor Policies and Procedures.*
- *Continued development of Food Production and sales channels for locally grown produce.*
- *Propagation of native landscape palette for common area and*

homeowner landscaping.

- *Development of the Vision and Operations Plan for the Schooner Bay Institute of the Arts and Environment.*
- *Implementation of Security Team member training and operating standards.*
- *Increased exposure for Schooner Bay Harbour with MOB and Coastal Angler.*
- *Initiation of onsite recycling program*

Glen has become a major asset to Schooner Bay and we hope you'll have the chance to meet him in the New Year.

DAVID & MANDY KNOWLES

How did we ever get by before these two came along? This young husband-and-wife team recently joined Schooner after a stint at a bed-and-breakfast in Colorado, and their contributions have already been immense. Always energetic, upbeat, and willing to lend a hand, David and Mandy have taken over the hospitality operations at Schooner Bay, important posts given the volume of new visitors we have been experiencing. David is Bahamian, a trained boat mechanic and general handyman with the ability to fix just about anything. His is a skill set that will no doubt be put to good use around the harbour; in fact, he's already proven a godsend to Captain

Clint and the Black Fly fishing fleet. Mandy is an American who brings a wealth of experience in the hospitality field and a very high standard of service to Schooner Bay. They are universally well-liked, easy-going, very professional, and add a youthful vitality to the Schooner Bay Team!

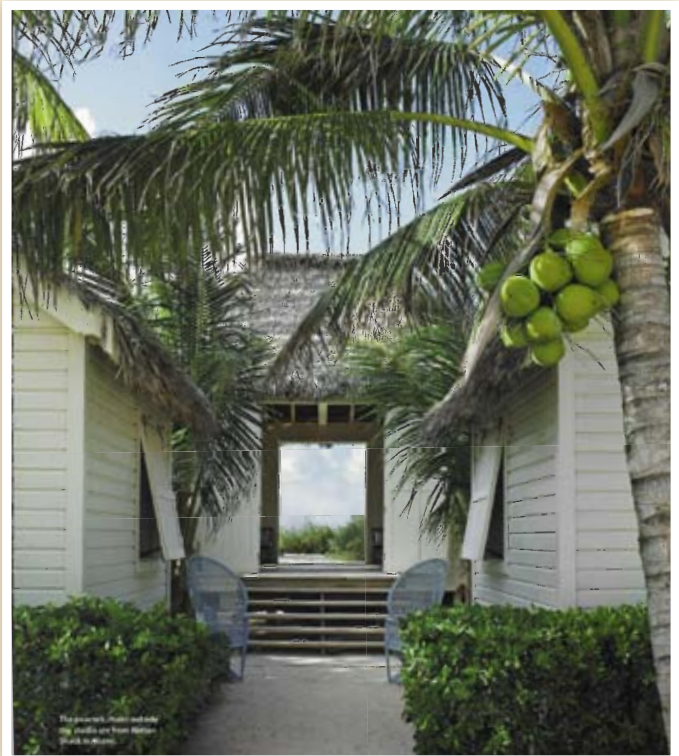
CARTER REDD

Carter is a veteran resort developer and project General Manager who comes to us most recently from Baker's Bay Golf & Ocean Club, a 585-acre resort development in Great Guana Cay, Abaco. While at Baker's Bay, Carter oversaw the construction of a 200-slip large yacht marina, 18-hole championship golf course, and the first 25 homes on the remote out island. He led a number of successful sales, marketing, and operations initiatives that have helped Baker's successfully navigate the uncertain economic times. Carter's experience has become widely respected and sought-after throughout South Florida and the Caribbean region and we are very fortunate to have him on board. Carter joins Lindroth Development Company in a corporate capacity as Vice President / Managing Director, and will be intimately involved with Schooner Bay on a daily basis.

SCHOONER BAY & ANTONIUS ROBERTS FEATURED IN COASTAL LIVING COVER STORY



The November issue of Coastal Living magazine featured Schooner Bay's Artist-in-Residence, Antonius Roberts, in an eight-page cover story. The article profiled Antonius in both his studio and home (Post House) at Schooner Bay, describing how these buildings – and the village of Schooner Bay itself – embody his ideas about sustainability and the artistic potential of the natural world. The article also featured rich interior images showcasing the impeccable taste and style of Schooner Bay's Designer-of-Record, Amanda Lindroth. With a readership of 1.2 million subscribers in the U.S. alone, Coastal Living is the world's premier beach lifestyle magazine, and we are thrilled to have been featured on the cover of this high-quality, high-profile publication.





Weekends AT SCHOONER BAY

Following the completion of the first residences at Schooner Bay, we are now pleased to announce Weekends at Schooner Bay! The \$500, 2-person package includes round-trip travel from Nassau on Schooner Bay's private aircraft, a two-night stay at one of Schooner Bay's three lovely houses, and breakfast and lunch featuring fresh ingredients from Schooner Bay's farm. Various dinner options and daily activities, including nature tours and guided fishing charters, can also be arranged upon request. We hope anyone interested in learning more about Schooner Bay – or just escaping Nassau for the weekend – will take advantage of this new offer. Day trips to Schooner can always be arranged, but now that accommodations and dining options have become available, we highly recommend an overnight experience in the village. Watching the light soften at dusk, sleeping under the spectacular stars amid the sounds of the coppice and the ocean, and waking to a pristine sun-rise over the dunes, are essential experiences for Schooner Bay visitors!



*Join us for a fun, relaxed getaway to see all that has happened
and what's just around the corner...*

*Round-trip private air charter,
Nassau (Odyssey Aviation)
to Sandy Point*

*Ground transportation to
Schooner Bay*

Guest House Accommodations

Daily housekeeping

Two passenger golf cart

Kitchen provisioning available

Breakfast each morning

*Available activities: walks on
the beach, sunbathing, ocean
swimming, paddle boards,
kayaks, and snorkeling*

EXTRAS

*Lunch and dinner at
the Guest House, the Beach or Club
Cabana – weather dependent*

*Additional guests will be \$200 per
person for the round-trip flight, as
well as \$125 per night per guest room.*

*Fee based activities: fly fishing,
bottom fishing/ lobster-conch diving,
yoga, eco-touring & birding.*

INFO / RESERVATIONS

Charlotte Greene
at 242.366.2044 or
charlotte.greene@lindroth.cc

DEPARTS

Friday at 4pm

RETURNS

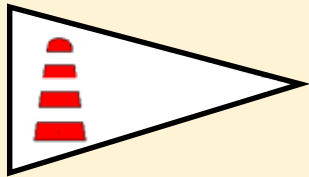
Sunday at 4pm

PRICE

\$500
per couple

WWW.SCHOONERBAYBAHAMAS.COM

SCHOONER BAY 2012 EVENTS OUTLOOK



Saturdays
AT
SCHOONER



2012 promises to be a busy year in Schooner Bay with the arrival of the first residents, the beginning of overnight stays, and the hosting of various events and activities. Among the notable goings-on in and around Schooner Bay:

- *Bahamas Financial Services Board Conference*
- *Bahamas Rotary Tuna Tournament*
- *Hopetown Sailing Club Optimist Regatta*
- *Marine Operators of the Bahamas (MOB) Fall Meeting*
- *George Mason University Eco-Symposium*
- *Black Fly Charity Fly-Fishing Tournament*
- *Remote-Control Sailboat Regatta*
- *2012 Schooner Bay Summerfest*
- *Saturdays at Schooner*
- *Antonius Roberts Art Symposium & Workshops*

We're also expecting additional visits from the international press in 2012, so keep your eyes peeled for more features of Schooner Bay on newsstands around the world!

FARMING UPDATE



Schooner Bay's 10-acre farm complex continues to produce a bounty of organic crops, that are being put to good use in the kitchens of Black Fly Lodge and Schooner Bay's three guest houses. Among the fruits and vegetables recently picked or harvested are yams, okra, watermelon, pineapple, snow peas, sugar cane, tomatoes, eggplant, cabbage and various herbs. As we reported in the last edition of the newsletter, we have also begun making wildflower honey that a visiting culinary expert judged to be among the world's best! The farm has become an integral part of Schooner Bay and will continue to grow as the community matures, ensuring sufficient yield to meet village needs. Recent visitors to Schooner Bay have gone home with gift bags full of assorted fruits and vegetables from the farm, and we are receiving very positive feedback about the quality of our organic produce!

HARBOUR UPDATE



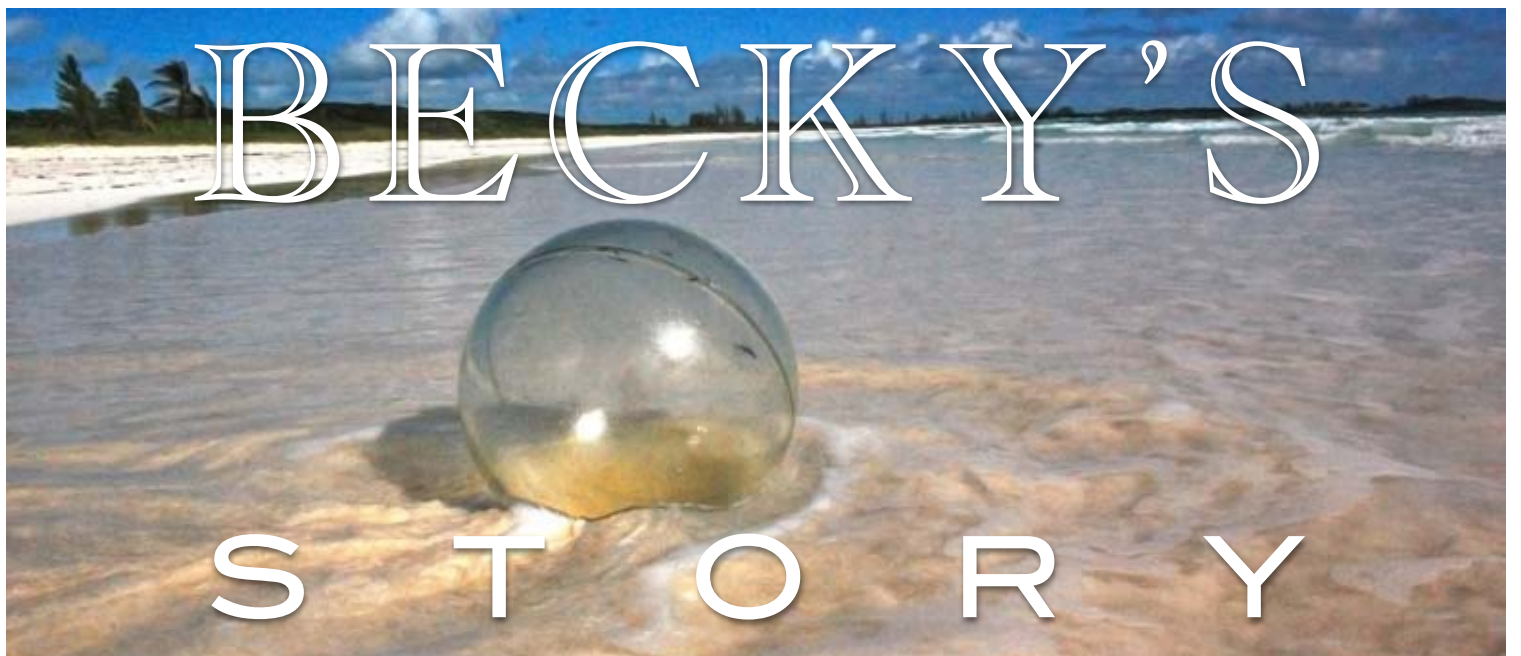
Schooner Bay engineers recently finalized the construction of the harbour ramp and spillway, allowing efficient flood drainage and boat launching capabilities. While Schooner Bay's drainage schematic proved its worth during Irene, the storm did present some opportunities for fine-tuning, and we have now implemented the lessons learned from the Irene experience. Construction of the first docks and piers in Schooner Bay Harbour is also now complete and the first owners' vessels are expected to arrive this winter. Arriving fishermen will be pleased to learn

that the first pelagic fish has recently been caught in Schooner Bay. The mahi-mahi was landed by a female angler, traditionally a sign of luck for a fishing community! Also bringing good omens to Schooner Bay's fledgling fleet is the new mermaid sculpture carved out of limestone and installed at the harbour entrance by Artist-in-Residence, Antonius Roberts. The mythological mermaid has traditionally assured safe passage to seamen fortunate enough to spot her, and we trust Antonius' mermaid will be a welcome sight for fishermen and boaters for years to come!

LANDSCAPING UPDATE

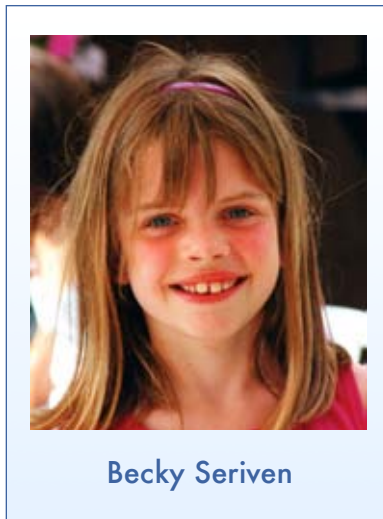


Schooner Bay will be looking much greener in 2012 as our massive propagation and landscaping campaign gains momentum. Schooner Bay's landscaping program is essentially a closed system, with the majority of plant material having been sourced from seeds collected on-site and propagated over the past three years in our nursery. Schooner Bay flora is not only indigenous, but local in the truest sense; the vast majority of plants at Schooner share the same DNA as the plants that thrived on this property before our arrival. In addition to the aforementioned palm tree and sea oat initiatives, Schooner Bay horticulturalists have also propagated successful mossings of green and silver Buttonwood. Furthermore, Schooner's landscaping crew has begun laying down zoysia grass around the harbour, softening the streetscape and contributing to Schooner Bay's evolving residential character. Grass has begun sprouting up in various places elsewhere around the village, a sign that our multi-year cleansing and distribution of nutrient-rich topsoil sourced on-site is beginning to pay off. Notably, a large swath of land next to Black Fly Lodge has been set aside to create a communal lawn and town green, just one of the many projects that will make Schooner Bay visibly greener in 2012!



It's amazing what washes up on the beaches of South Abaco. I spend hours beach combing, looking for interesting treasures, but sometime the treasure finds you. Such was the case this week when a large glass ball in a curious plastic shell washed up on Long Beach. Staff at the Black Fly lodge retrieved the ball that was unlike anything I had seen before. We were all very interested to discover what it was and where it came from. The ball was stamped with the word Vitrovex and a quick Google search revealed that the ball was made in the UK by the Vitrovex company and distributed by the RS Aqua company that specialize in high quality glass products for the marine environment. I found the company interesting and spent more time exploring the site to see what else they made and that is where the real story begins.

In the menu bar of the site there were several buttons that were related to the business of the company but one that seemed very out of place labeled "Epilepsy Bereaved", when I selected the button a story opened that touched me so deeply it brought tears to my eyes. I often wonder about the stories behind the trinkets I pick up on the beach and have never found a message in a bottle, but the glass ball from the deep brought a story with it. It was the story of Becky Seriven, the beautiful 11-year-old daughter of Rodger and Sandie Seriven, owners of the RS Aqua Company. Becky's story is one of a beautiful young girl taken tragically as a victim of Sudden Unexpected Death in Epilepsy. I had never heard of this syndrome and as I



Becky Seriven

read further, the beautiful story of Becky's life unfolded with pictures and poetry. As a father of two daughters, one that is about the same age as Becky, my heart broke and I was stunned by the reality of the ball washing up on the beach in front of our lodge and the story from the deep that was touching my heart in such a deep place.

I took the time to respond on the website to tell the story of the ball washing up in South Abaco and the impact of the story on my life. The following day I was delighted to receive a response from Rodger Seriven and his deep appreciation for hearing how Becky's story had come to me. Turns out that Rodger was giving a presentation in a few days at a symposium on SUDEP and shared the story of the ball and the power of a little girls beautiful story touching hearts on distant shores.

We are doing our part to bring awareness to SUDEP by placing a button on our Black Fly site with Becky's story. When the ocean brings you treasure it must be shared with others. Please take the time to read Becky's story and her poem "He Loves Me"

http://www.rsaqua.co.uk/epilepsy_bereaved.php

Clint Kemp
GM Black Fly Lodge
Schooner Bay, South Abaco

SCHOONER SOUNDINGS

MISCELLANY IN LESSER DEPTH:

- Scheduled flights from Nassau will begin in the New Year aboard Schooner Bay's Britten Norman Islander, a six-passenger twin-engine aircraft renowned for its safety and comfort. The service will provide regular transportation for Schooner Bay residents and guests at reasonable rates via Nassau's convenient FBO terminal, Odyssey Aviation. We plan to start with two regular weekly flights and will encourage feedback from property owners about the optimum frequency going forward.
- Schooner Bay site offices have been moved from the main town entrance down to the harbour village as part of an ongoing effort to consolidate key civic buildings in the village core.
- Schooner Bay is proud to announce its sponsorship of the Murphy Town Super Stars Junkanoo Group. We'll be cheering on these talented youngsters as they rush for glory in February 2012!
- The Beach Cabana is currently undergoing the transition into a bar and restaurant serviced by the Guest House kitchen. Visitors in 2012 will no doubt find this a pleasant place for a meal or a drink.



SCHOONER BAY'S BRITTEN
NORMAN ISLANDER



THE BEACH CABANA IN TRANSITION

SCHOONER BAY LIBRARY

*In our year-end installment of Schooner Bay Library, we feature a recently published article by renowned architect, town planner and author of *The Original Green*, Steve Mouzon. This comprehensive essay – which we publish slightly abridged with the author’s permission – appeared in *New Urban News* shortly after Mouzon’s recent visit to Schooner Bay. The piece explains Schooner Bay’s “Ecological Dividend” and puts forth Schooner as a model approach to enlightened, sustainable development. Thanks to Steve for the hard work and kind words, and we hope you enjoy his perspective on Schooner Bay’s development philosophy:*

The Ecological Dividend

By Steve Mouzon

Schooner Bay, rising now on the eastern shore of Abaco in the Bahamas, probably illustrates Original Green principles more clearly and broadly than any other place built in our time. The Original Green is the sustainability that existed before the Thermostat Age, which also happens to be the era during which we developed really big bulldozers, dump trucks, and the like, allowing crushing environmental impacts that simply weren’t feasible before.

The folks at Schooner Bay aren’t simply doing the right thing. Instead, they have also analyzed the cost savings of many of these low-impact measures. Orjan Lindroth, Schooner Bay’s Town Founder, calls it the Ecological Dividend.

Conventional development is driven by two things: asset inflation and

bank liquidity. Because of this, these developments are primarily marketing exercises, designed to create as much sales velocity as possible. The components of the Ecological Dividend don’t show up anywhere on a standard project pro-forma, but they can be immense, as we’ll see. Let’s examine the astounding Ecological Dividend that is accruing at Schooner Bay, keeping in mind that the same can be done elsewhere as well; it’s not specific to Schooner Bay.

TIME

Many components of the Ecological Dividend would not be possible in a high-velocity development bent on building out in 2-3 years. High-speed development is almost always high-debt development as well. Development driven foremost by the ticking interest clock forces decisions not in the

best interest of the place. Schooner Bay is not burdened with debt that requires a schedule dictated by cash flow. The market, rather than the debt, determines the pace of development. This is the way that most of the Most-Loved Places were built. Ultimately this is far more beneficial to both developer and the community. Homebuyers are not paying significant bank finance and interest costs in their land prices. These items can amount to 30% of the cost of a new development and these benefits are passed on directly to homeowners.

DIVERSITY

Schooner Bay has, from the beginning, opened its doors to a diverse population of primarily Bahamians as well as foreigners across wide socio-economic strata. Because of this, it will not be subject to the generational

SCHOONER BAY LIBRARY

The Ecological Dividend

By Steve Mouzon

risk faced by all single-purpose developments such as gated golf course subdivisions. Instead, the broad demographics of Schooner Bay will more closely mirror those of the Most-Loved Places of the Bahamas such as Harbour Island, Hope Town, and Man-of-War Cay. Building in this way should allow Schooner Bay to join that list of Most-Loved Places someday.

LANDSCAPING

One clear beneficiary of this expanded timespan is the cost of landscaping. Schooner Bay runs an onsite nursery which provides all plant material for the town. They plant heavily to create a subtropical paradise, but because the 200,000 trees they expect to plant will all be grown from seedlings in the nursery over several years rather than bought at a mature size from elsewhere, the savings should be approximately \$38.8 million (\$6/tree to propagate and grow vs. \$200/tree to buy large.)

EARTHWORK

From the very beginning of Schooner Bay's design, earthwork was always conceived as having

multiple purposes. Every bucket of dirt that needed to be moved was slated to be used where it could create an asset. Not one load of dirt or sand has ever or will ever leave or enter Schooner Bay from elsewhere. Grading in a balanced way doesn't just save on dump charges or borrow fees; it also saves large quantities of fuel necessary to haul the material back and forth. Conventional developments often mass-grade the site at the beginning for stormwater convenience and ease of construction. This also destroys all trees and other vegetation, eliminating all wildlife habitat as well. Savings on earthwork alone at Schooner Bay (existing plant material is counted below) should be about \$24.4 million over conventional practices.

FOREST

38 acres of forest are being preserved at Schooner Bay. A narrow band through the center of the forest is a parrot migration route preserved in DPZ's original plan. But once Orjan saw the beauty of the coppice, he dramatically expanded the preserved area. DPZ couldn't at first believe how many

lots he wanted to eliminate in order to save the coppice, but his response was "you really must see this." Planting a coppice like this one would cost at least \$1 million/acre; preserving the whole thing cost only \$200,000, for a net Ecological Dividend of \$37.8 million.

DUNE

Years ago, when Seaside went through its first major hurricane, it came out virtually unscathed, while there was major devastation for miles on either side. Hurricane experts from all over flocked to Seaside, and for several months afterwards, news reports referred to it as the Seaside Miracle. Analysis eventually showed that while Seaside's higher structural standards helped, the biggest single factor was the decision to build behind the dune instead of on the dune. Schooner Bay took this to heart, planting the first dune with thousands of native dune plants so their collective root systems will reinforce it. They then built a second dune a few dozen yards behind it, further strengthening the shoreline and providing a platform for houses just behind the second

SCHOONER BAY LIBRARY

The Ecological Dividend

By Steve Mouzon

dune. The second dune turned lower-value lots with no view into oceanfront lots by elevating them, and was built using the sand spoil from the harbour excavation. It turns out that because the dune adjoins the harbour, the second dune's location was actually the closest place the sand spoil could have been used, reducing hauling to a minimum. Building a dune in conventional fashion by hauling sand onto the site would have cost about \$7.5 million, but using harbour spoils costs only \$200,000, for a dividend of \$7.3 million.

HARBOUR

The Harbour at Schooner Bay was the source of many feet of topsoil that had eroded over the centuries from the higher rocky land to the hollow that became the harbour. Returning the topsoil to the higher land made it more valuable, especially because Schooner Bay is doing so many things to become a Nourishable Place. Building that much topsoil for gardens would take each homeowner several years of work. The harbour itself contributes food as well, as it will be home to a small fishing fleet,

making Schooner Bay an authentic fishing village. It should be noted that the natural whale-tail shape of the shoreline at this point shelters the harbour to an unusual degree, making Schooner Bay the best site for a harbour for many miles around. The dividend created by all the benefits of the harbour is estimated at \$20 million.

COMMUNITY CISTERN

Normally, water is stored in steel tanks with pressure equipment, all of which is subject to corrosion and normal wear and tear. Schooner Bay took an alternative route, building a 2-acre sand tank on the ridge 60 feet above the town center and allowing the water to gravity-flow to its destinations. Net savings are \$2 million, plus all the avoided maintenance in the future. Also, material excavated to create the cistern was used to make building pads. As elsewhere, everything on the site has at least a double use, in good "Cradle-to-Cradle" fashion.

ECO MACHINE

Sewer treatment in a remote location is usually expensive, as you have to create your own sewer

treatment plant. Normally, these are large, smelly, undesirable things as well. The Eco Machine lets nature do the job instead, digesting sewage below ground level in what appears to be nothing more than a long swale or rain garden planted with a variety of plants designed for each step of the digestion process. The Eco Machine trades odor for beauty, and saves \$2.5 million.

SMALLER & SMARTER HOMES

Schooner Bay champions the idea of building smaller and smarter as well as any place being built today. They are literally satisfying the same customers in half the space they might otherwise have built. So while other oceanfront developments in the Bahamas might average \$800,000 in construction cost per house, Schooner Bay is doing enough clever things that they are averaging only \$400,000 per house... and those houses are extremely well-built. At 500 homes, that's a staggering \$200,000,000 difference in construction cost.

But as stunning as this is, it's only half the story. The other half is the

SCHOONER BAY LIBRARY

The Ecological Dividend

By Steve Mouzon

fact that Schooner Bay will have a completely unheard-of range of 40 to 1 from most expensive to least expensive homes... or from around \$4 million to just under \$100,000. In short, it will feel like other great Bahamian towns like Dunmore Town, full of a complete range of Bahamian culture, rather than terminally boring subdivisions where everyone is wealthy. And yes, at this price range, most of the residents will be Bahamians, not foreigners.

LIVING TRADITIONS

Orjan and a group of fellow Bahamians commissioned A Living Tradition [Architecture of the Bahamas] several years ago; the book has since won a CNU Charter Award. The title isn't marketing fluff; rather, it makes note of the core aspiration of the book: to start a new living tradition of Bahamian architecture based on patterns that make the most sense for regional conditions, climate, and culture. I have tested many ideas over the years meant to contribute to restarting living traditions, and what I have found is that without a living tradition, builders will

price standard suburban sprawl details as "standard price," whereas better details that make more sense and even use less labor and materials get "custom pricing." But once a tradition begins to spring to life in the builder community, the equation inverts: when they now know why they're doing the better details, those better details get "standard pricing" and the bad details they don't want to do anymore get "custom pricing." It's not yet clear what the savings will be from the traditions beginning to live at Schooner Bay, but it will doubtlessly be somewhere in the tens of millions of dollars.

CAPITAL COST DIVIDEND

Just in case you're not keeping track, the total Ecological Dividend of building the Original Green way totals \$332.8 million. And that doesn't even consider the other benefits of time, nor the value of living traditions. But there are operating cost savings as well:

ELECTRICITY & GEOTHERMAL COOLING

Building smaller and smarter creates several dividends beyond

the initial construction cost. Smaller houses daylight better and also cross-ventilate better because each room is likely to have more exterior walls. This reduces both cooling loads and lighting loads, and a reduced lighting load reduces the need for cooling even further. So you're not only lighting and cooling less space, but you're also doing it more efficiently... which is a really good thing, because electricity is expensive in the Bahamas.

Schooner Bay cools geothermally, which will save up to 50% versus standard heat pumps. The savings below are calculated assuming everyone shuts the houses up and runs the heat pumps all the time. But geothermal cooling has a huge hidden benefit: because the units dump heat into water rather than into air, you don't need condenser units sitting just outside, buzzing and blowing hot air most of the time. A courtyard with a couple condenser units is uninhabitable when they're running because they're so annoying, and they're blowing hot air on you if you're sitting nearby. But a quiet (and cooler) courtyard entices you

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The Ecological Dividend

By Steve Mouzon

outdoors, where you get acclimated to the Bahamas' balmy climate, and therefore need less air conditioning when you return indoors. You might actually find that you need air conditioning only on the hottest days, and if so, you'll discover that there is no equipment so efficient as a machine that is off. Discover this, and you'll find a way of saving far more than the 50% savings over standard heat pumps, while enjoying your outdoor rooms much more than you otherwise would. Total electricity savings for cooling and everything else should be about \$2 million per year on the roughly 500 houses that will populate Schooner Bay at full build-out.

WATER SUPPLY & REUSE

Water supply is very expensive in the Bahamas as well, and more subject to inflation than most commodities as fresh water is quite limited. Schooner Bay captures rainwater and treats it rather than buying it from elsewhere. Homes and other buildings at Schooner Bay reuse greywater for flushing toilets and irrigating gardens, reducing the need for treated water by about half. The water

supply and reuse dividend should be about \$2.5 million per year.

WASTE WATER TREATMENT

When you reuse water, and use less water to begin with, you don't have to treat as much waste water. The wastewater treatment dividend is estimated to be \$1.44 million per year.

FOOD

Schooner Bay will not only be a true fishing village, but will be ringed by acres of organic gardens on the landward side. Farmed in a bio-intensive manner, it may be possible to feed the entire town with food raised in the gardens and fished from the sea. There are many benefits to local organic food, including the facts that it is both healthier and tastier, that it doesn't require countless gallons of oil to transport from faraway fields in foreign lands, and that you know your farmer. Yes, that's correct... it's likely that the farmer will provide housing for the farm workers at Schooner Bay or immediately adjacent. But how do you put a value on that? Would eating that way be worth

a difference of a dollar a meal to you? If so, then that's a food dividend of \$1.5 million per year.

TRANSPORTATION & THE LOCAL ECONOMY

Orjan is working harder than any New Urbanist developer I have ever worked with to create a local economy at Schooner Bay. The benefits of being able to walk to shops and services are obvious, but how do you do it in a way that survives the early years, when there aren't enough residents to support those businesses? Engagement with the locals living around Schooner Bay is essential to develop a customer base outside Schooner Bay... and these people are very sparsely served now, with most goods and services over 25 miles away in Marsh Harbour. Schooner Bay has already begun reaching out to its neighbors with the Schooner SpringFest held recently, featuring footraces, bike races, and a day of food, music, and general good times attended by several hundred Abacoans.

There are other ways of making shops self-sustaining early on, and

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they center around two questions: “How can you reduce the costs of operation?” and “Who can open a shop without needing a full income?” The principles of building smaller and smarter apply as well to shops as to homes, of course. Tiny shops have a long history in the Bahamas, where small island populations seldom supported large operations, so they should fit in naturally. Two potential types of shopkeepers come to mind when answering the second question: Retirees looking for a second career are the most likely candidates, but it’s also possible that some professionals who can live at Schooner Bay and work remotely might also run a coffee shop or the like on the side.

In either case, expect to be able to go to Schooner Bay and not drive for days in the relatively near future. The goal is to reduce driving by 80%, which at full build-out would save \$4.8 million per year. This figure, of course, doesn’t even take into account the other economic and social benefits of a local economy that allows people to make a living where they’re living.

OPERATING COST DIVIDEND

The total dividend of the things we’ve counted above is \$12.24 million per year. But to really see what it means, you have to ask “what can we buy now that we don’t have to spend that money on operating expenses?” Using

a capitalization rate of 5%, this computes to an operating cost dividend of \$244.8 million!

In other words, the yearly operating cost savings are so large that a true market-based pro-forma that reflects the Ecological Dividend would look far different from a standard development pro-forma. Simply put, the Ecological Dividend is a tool that enhances all aspects of development. Those who want to build Most-Loved Places in a sustainable way should choose this lens in order to see the real impacts of their community-building choices.