



BETTER WORLD BETTY'S BETTER BUSINESS CHALLENGE

Pippin Hill Farm and Vineyards

Global Sustainability, Fall 2011

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ABSTRACT

Team Objectives

The Charlottesville Area Better Business Challenge is a new competition that incentivizes local businesses to integrate sustainable practices into their core business strategy. By doing so, Charlottesville's businesses can be "smart, sustainable, and successful" in both the market place and community. The challenge's resources, particularly its scorecard of sustainability points, help businesses through a three stage process: get "ready" by determining their baseline standing in six sustainability sectors, get "set" by creating benchmarks and goals for future success, and "go" by documenting and rewarding implemented efforts.

As consultants for The Better Business Challenge, we have three major objectives that will help bring the challenge's mission into fruition. Firstly and most broadly, we are striving to make Charlottesville a more sustainable city as a whole through its business sector and friendly competition. Secondly, it is our responsibility to guide and advise our business partner, Pippin Hill Farm and Vineyards, through the Better Business Challenge. Thirdly, throughout the competition we will research and relay potential sustainable practices that can be implemented at Pippin Hill Farm in order to further their standing in the challenge.

What we have accomplished and how

Over the course of the competition, we have accomplished preliminary responsibilities and set a schedule of tasks for implementation as the challenge progresses. During the beginning weeks, we successfully met with our coordinator at Pippin Hill, Charlotte Drummond, to answer any questions or concerns about the Challenge and its mission. Since then, we have met one more time and had consistent contact via conference calls and emails. With the enthusiasm and engagement of Pippin Hill, we have been able to document their progress and points in the challenge. Dialogue has also aided us in discovering areas of improvement and possible ways to address these gaps, such as composting food waste.

Food waste was the main area of improvement that we have researched recently. Pippin Hill is now considering either an onsite composting routine for their kitchen's food waste or a possible contract with an outside source. In order to facilitate discussion, we have created a simple cheat sheet of different onsite composting practices with their advantages and disadvantages (see Appendix 2). We have also contacted a local composting company, called Black Bear Composting, which has expressed interest in working with Pippin Hill. After more discussion within Pippin Hill's management board, we will implement a composting strategy that will improve the business' already highly sustainable standards.

Lastly, as we are nearing the halfway point of the competition, we have created a detailed schedule of applicable point opportunities with attached documents for Pippin Hill. Our goal is that it will be a helpful reference for planning purposes or if the business has simple questions. It will also be a more efficient way to access important documents, like the indoor comfort survey, when actually implementing action items.

INTRODUCTION

The Purpose

Charlottesville as a community has made a general effort to become more sustainable and have less of a negative impact on the environment through different initiatives. For example it is the first city in Virginia and one of the first in the nation where homes and businesses are equipped with "smart meters" in an effort to reduce energy consumption.

The Charlottesville City Council Vision 2025 is titled "A Green City," clearly and concisely committing the community to become more sustainable. However, there is much more that can be done to mitigate the

impact that Charlottesville businesses have on the environment. Better World Betty, in connection with the Local Energy Alliance Program (LEAP) and other various non-profit partners, started the Better Business Challenge in an effort to engage businesses in the Charlottesville community and improve overall sustainability. Through friendly competition and education, Better World Betty hopes to “empower people and businesses with the tools they need to adopt more sustainable behaviors in a fast, fun, and friendly way”.

Broadly, our project addresses the individual sustainability of small businesses in the surrounding Charlottesville area. We will be investigating several issues of sustainability related to our assigned business, Pippin Hill Farm & Vineyard, and helping them discover new ways to become more eco-friendly in their unique business practices. Specifically, we will be focusing on practices related to energy, water, transportation, waste, purchasing, and leadership. By acting as their consultants – or ‘concierges’ – we will help Pippin Hill Farm take full advantage of the opportunities to improve their sustainability and the chance to compete in the Better Business Challenge.

Our Partners

Our primary community partner is Better World Betty, owned and run by Teri Kent. Founded in 2007, Better World Betty is a non-profit organization with grassroots ambitions like using local solutions to combat global climate change. This young organization’s mission is to “empower people and businesses with the tools they need to adopt more sustainable behaviors in a fast, fun, and friendly way.”

Living out its mission, Better World Betty has recently launched a new effort to engage the Charlottesville community and improve overall sustainability. Along with other nonprofits, such LEAP, Better World Betty is sponsoring a challenge for businesses in the Charlottesville area called the Better Business Challenge. Approximately a hundred local businesses are participating in the challenge, promising to address their footprint on the environment however big it may be. By partaking, businesses gradually gain points over the course of eight months. The businesses earn points by taking steps to change aspects of their operations that increase their sustainability while decreasing their environmental impact.

While Better World Betty is our overseeing community partner, Pippin Hill Farm is our client for the Better Business Challenge. We will work with Pippin Hill Farm for the entirety of the challenge, researching and advising them about sustainable practices suited for their business model. In Better World Betty lingo, we serve as ‘concierges’ or consultants to our specific business. In this role, we have agreed to learn and address the individual needs of our business. We are then responsible for researching and relaying these needs to the Better Business Challenge Team Leaders. Through research and meetings with the Team Leaders, we are responsible for finding appropriate answers and actions that Pippin Hill Farm can potentially implement. Essentially, we are the middlemen, taking the questions of the businesses and providing answers based on our research and meetings with the experts. Prior to meeting with Pippin Hill Farm, we also took advantage of our temporary outsiders’ perspective and brainstormed possible areas of improvement that they (to our previous knowledge) were not currently addressing.

Pippin Hill Farm and Vineyards is a boutique winery and vineyard with a commitment to and enthusiasm for sustainable business practices. In keeping with this foundation of environmentally friendly beliefs, Pippin Hill Farm is a leader in sustainable business sector. As a newborn business that is less than a year old, Pippin Hill Farm already uses geothermal heat and air conditioning, rainwater harvesting, and bio-filter processing. The management team’s enthusiasm and readiness to achieve maximum sustainability will serve as an asset for this competition. Their eagerness and enthusiasm will also aid us in helping them achieve their goals, as we are motivated to match their passion! While finding new ways for Pippin Hill Farm to surpass its current sustainability will require us to be resourceful in our research, it has also provided us an amazing opportunity to be creative in the competition.

The Stakeholders

The stakeholders are first and foremost the business owners and employees of Pippin Hill Farm. More broadly, the Charlottesville community that comprises the business' market is an indirect stakeholder. By voluntarily participating in this competition, Pippin Hill Farm has the opportunity to become more environmentally friendly and economically efficient. In general, businesses enjoy lower costs when they minimize their wastes and/or materials to become more sustainable. Additionally, solely by participating and especially by winning the competition, Pippin Hill Farm can improve its public opinion and earn extra publicity in the local community. Association with this program can differentiate our business from their less environmentally conscious competition, as well.

Nevertheless, changes to become more sustainable can require initial investment in order to enjoy the long term benefits. Consequently, Pippin Hill Farm might be negatively impacted by the initially high cost of implementing some sustainable practices. Likewise, consumers may have to pay higher prices for the goods and services, namely, wine, tastings, catering, and events at Pippin Hill, depending on the magnitude of these additional costs. However, both gradually and ultimately with proper implementation, Pippin Hill Farm will experience benefits that make it both environmentally sustainable and financially efficient.

BODY

Approach

During our first meetings with her, Teri Kent outlined the general way that we were to approach The Challenge, our business, and our responsibilities as concierges. Before working with our business, Teri performed a workshop about the best way to approach and interact with our soon-to-be client. She advised us on basic communication etiquette and ways to answer questions concerning The Challenge. We also compiled a list of expectations in the beginning of the process that were to be communicated to the business involved in order to ensure effective collaboration during our short amount of time together.

We spoke over the phone and eventually via e-mail determined a first meeting time with Pippin Hill Farms. On October 24th, we met with Financial Controller Charlotte Drummond at Pippin Hill Farm. This was the first of two in-person meetings we had with the business. During the meeting, Charlotte briefly discussed some of Pippin Hill Farm's current practices – such as their use of grey water, geothermal heat, and local food – and gave us a tour of the site. During the meeting, we recorded notes and ideas to research (see Appendix 1). We also discussed current problems and areas Pippin Hill Farm has not yet addressed including recycling, food composting, transportation options, and sustainable purchasing.

Before our second meeting, we researched and unearthed answers to the questions raised during the first discussion. After assembling and assessing our information, we helped to advise Pippin Hill Farm determine the most appropriate action and how they can implement the practices either during our after the Better Business Challenge.

Implementation Options

In determining the best method of approaching the problem, we brainstormed various options:

I. Composting Food Waste:

Pippin Hill Farm caters and hosts private receptions, weddings, and high-end social events that center around their theme of "vineyard-to-table cuisine." On a daily basis, they also serve food in their tasting room. This business is already performing sustainable practices by using fresh and local ingredients in their dishes. Additionally, they hope to extend their sustainability by cultivating a garden to grow their own vegetables and herbs.

Inevitably, food waste will result from Pippin Hill Farm's catering service and additional daily business operations. This creates an opportunity for further sustainability, specifically in the form of composting. This process occurs when organic materials – such as vegetable peels, meal scrapings, and plant trimmings – decompose into a rich organic matter that looks similar to soil. Compost is a natural fertilizer for gardens, avoiding artificial chemicals and their environmental consequences.

Composting is an excellent option for Pippin Hill Farm for multiple reasons. From a purely environmental standpoint, creating your own compost avoid its extraction from wildlife sites and reduces food waste inputs to landfills. From a business perspective, composting is cheaper than buying fertilized soil and can be used to nurture Pippin Hill Farm's infant vegetable and herb garden, as well as potentially their vineyard -- which is a major part of their business. Pippin Hill Farm is an ideal candidate because it has property that it can devote to a small composting area.

There are multiple composting methods available, including holding units, turning units, heaps, sheet composting, and pit trenching (see Appendix 2). Some of the factors that go into choosing an appropriate method for composting include: desired maintenance level, space available for on-site composting, use for compost, cost of composting service/implementing on-site composting mechanism, pest/animal attraction, and aesthetics.

II. Energy Reducing Lighting:

An area of high value on the scorecard and easy changes if applicable is lighting. We discussed this as a tentative option during our first meeting with Charlotte, as she was unsure of the current lighting used at Pippin Hill. An easy modification, if applicable, would be to set exterior lighting to photo sensors or timers. This would reduce energy costs with minor effort. Another simple alteration would be to replace all of the business' incandescent bulbs with LEDs or CFLs, which are known to be more efficient. Both of these actions would require minimal input costs that would be paid back through the energy saved. We can attempt to monitor a change in the electric bill throughout the challenge to determine if the modifications were significant.

III. Host a Business Sustainability Event:

In order to extend Pippin Hill Farm's endeavors toward sustainability past its site, the business could host a community event that advertises and educates about its unique practices. Hosting a function could have potential business benefits while displaying its commitment to sustainable practices. The owner of Pippin Hill, Dean Andrews, has already expressed interest in sharing his enthusiasm for sustainable practices through events and presentations he has given about his experience at Pippin Hill. Hosting an event, even for just the participants in the Better Business Challenge, could be an easy way to promote sustainable practices and draw attention to the amazing efforts that Dean and the other Pippin Hill staff have already achieved.

A social sustainability event would take advantage of Pippin Hill Farm's existing expertise and property. It would call attention to the business' environmental conscience and entity as a whole to the Charlottesville community. This could differentiate the business from its local competitors, of which there are many in the area. Ideally, the event would accommodate other Challenge competitors in a social and educational environment to share innovative ways to be sustainable. Knowledge transfer, environmental enthusiasm, and good food would create a fun atmosphere to motivate important change. We would need to find funding for the event in order to avoid all the costs from falling on Pippin Hill Farms, however.

IV. Solve Recycling Problem:

Since Pippin Hill opened in May 2011, a mere few months before beginning the Better Business Challenge, they haven't had a consistent recycling collection system. Their current trash company has neglected to bring them a recycling bin or collect any recyclable products.

Recycling is a fundamental process practiced by virtually any environmentally conscious individual or business. Pippin Hill Farms is clearly conscious, but is being impeded by their waste company. This is one area for drastic improvement, which should return easy points for the competition and simple steps toward sustainability.

A member of the Pippin Hill staff initiated a recycling program to recycle the many corks used. This does not solve the major issue of recycling, but it is illustrative of the enthusiasm shared by all of Pippin Hill employees for sustainable practices, and also offers an area for expansion of sustainable goals and potential for publicity.

V. Purchase "Green" Cleaning and Paper Products

As a spotlessly clean site of social events, Pippin Hill Farms requires cleaning products to maintain its facilities. In addition, as an organizer and host of these events, the business also uses paper products on a daily basis.

It is possible to be clean and green at the same time. Therefore, Pippin Hill Farm could adapt its purchasing practices to include products that are not detrimental to the environment, as well as making an effort to purchase from companies who use sustainable practices in production. There are a variety of brands in grocery stores that are even cost-effective, too. Likewise, Pippin Hill Farm could also purchase recycled paper products, especially for planning purposes. Using recycled products would be a physical reminder of their mission every time they propose and plan new ideas and events.

Solution Selection Matrix

After brainstorming options, we came up with a series of criterion that we used to score the potential options for approaching the problem:

Solution Selection Matrix (Ranked from 1-10 worst to best)

	Composting Food Waste	Energy Reducing Lighting	Host a Business Sustainability Event	Solve Recycling Problem	Purchase "Green" Cleaning and Paper Products
Implementation Cost	9	7	5	8	7
Maintenance and Time Commitment	3	8	5	9	8
Ease of Implementation	8	8	4	8	9

Relevance to Business' Mission	9	9	9	9	9
Long-term Cost Savings	7	5	1	5	5
Business Differentiation Potential	10	5	10	7	8
Environmental Benefit	8	8	9	9	7
TOTAL	56	50	44	55	53

Given the overall goals, structure, and allowance for completion of many different tasks in our project, we may be able to choose numerous approaches for achieving different goals that Pippin Hill wants to reach. After speaking with Charlotte, we focused each option to meet an area in which the business exposed interest: waste, purchasing, energy, and leadership.

Based solely on the matrix, the priority of implementation should be:

1. Composting Food Waste
2. Solving the Recycling Problem
3. Purchase "Green" Cleaning and Paper Products
4. Energy Reducing Lighting
5. Hosting a Business Sustainability Event

Our Approach

After our first meeting with Pippin Hill Farm, we identified several areas in which would like to increase their sustainability and move forward with the project. Although the building and grounds themselves are constructed very sustainably, there are current subtle practices that can be adjusted and improved.

For the sake of cost and time-commitment constraints, we chose to focus on the first two implementation options: solving the recycling problem and composting food waste.

Initially, we thought that we would have to hire a new recycling firm since the current trash collector for Pippin Hill had been unresponsive in their efforts to obtain a recycling bin. However after much back-and-forth, Charlotte was able to obtain a recycling bin and Pippin Hill was able to begin recycling for the first time since they opened. This achievement gave Pippin Hill a few more points on the scorecard, but more importantly, allows for them to now become a much more sustainable company through recycling their waste.

The most significant area of increasing sustainability we identified was in implementing a composting system. As of now, Pippin Hill has no system of composting, and all food scraps and other compostable items are thrown away with the trash. As a business that serves food every day in their Tasting Room and also in mass quantities at weddings, composting is an area that Pippin Hill could increase their sustainability and gain points for the Better Business Challenge. Appendix 2 shows a deliverable that we are drafted to give to Pippin Hill management to educate them on their choices for composting methods.

In discussing the factors previously outlined as to choosing an appropriate composting method with Charlotte, our contact at Pippin Hill, we initially understood that the Pippin Hill staff was looking for a very low-maintenance option. Since the kitchen staff would be responsible for composting and they already have a long task list to complete at the end of the day, Charlotte was hesitant to commit their time to an on-site composting method. Additionally, she was unsure that they would be able to hold or use the volume of compost that they would produce. Since Pippin Hill is a destination for weddings and other events, aesthetics play a huge role in making decisions of this nature as well—and adding a large composting site might not be the best option for them at this time. For all of these reasons, we decided to look into an off-site composting option. We found a good option for this with Black Bear Composting (see Appendix 4). In a recent phone conversation with Charlotte, we found out that she discussed composting with the kitchen staff and they expressed enthusiasm and interest in doing on-site composting for use in their garden that is in the process of being built. We plan to discuss what plans to make moving forward on this issue in our next meeting with Charlotte, but one possibility would be to use Black Bear Composting's pick-up services until an on-site method has been decided upon and built, and in the future moving to complete on-site composting and using the compost for the garden.

With further discussion of lighting and purchasing, Charlotte talked to the owner and found that Pippin Hill already uses sustainable lighting, as well as timers in the bathrooms, and task lighting as opposed to overhead in the office areas. Additionally, lighting for events is brought in by a lighting company and is only used during the event. In terms of purchasing, Charlotte was unsure at our last meeting of the percentages of paper products and other items that are produced from recycled products, but she is looking into it. She is also looking into shifting future purchases to companies with sustainable practices. Food is already purchased as locally as possible, with all cheeses purchased locally and most meat and bread.

Our last 'action-item' before completion of the semester was to create a cheat-sheet for Pippin Hill to reference for achievable and applicable items from the scorecard (see Appendix 3). In our meetings with Charlotte, we found that looking through the scorecard to was a bit tedious, and not completely helpful since many of the items weren't applicable to Pippin Hill. With the cheat-sheet, we listed the items that we think Pippin Hill should focus on completing before the end of the Better Business Challenge, the points allotted to these items, and the resources necessary to complete the items. Pippin Hill recently appointed a new staff member to take charge of the Better Business Challenge, and this list will be a big help in getting her up to speed on the things she should focus on in moving forward with the Challenge.

We are continuing with the idea to host a sustainability event, and plan to discuss this further at our next meeting with Pippin Hill.

Schedule

10/12	Complete Meeting Log on Google Docs
10/13	Challenge Mentor Meeting
10/13-19	Pursue Assigned Action Item
10/19	Submit Progress made on Action Item
10/21	Provide feedback on student progress
10/24	Final Research/Work on Action Item to Group
10/24-27	Follow Up with Business on Progress Status and Resources Found; Make next appointment
10/31-11/4	Continue Uncompleted Action Items

11/7-9	Meet with Business
11/9	Complete Meeting Log on Google Docs
11/10	Challenge Mentor Meeting
11/14-16	Pursue Assigned Action Item
11/16	Submit Progress made on Action Item
11/21	Provide feedback on student progress
11/21	Final Research/Work on Action Item to Group
11/28-12/1	Follow Up with Business on Progress Status and Resources Found; possibly make appointment with business
12/5-6	Meet/Contact Business-Winter Break, Next Contact, POC during Dec/Jan

CONCLUSION

Accomplishments

While the Challenge is still underway, we can successfully say that Pippin Hill is making progress in the competition. Unlike many of Charlottesville's local businesses, Pippin Hill was created with an embedded philosophy centered on sustainability and simplicity. Through our meetings, we have documented the business' points for sustainable practices and outlined future action items. By going through the scorecard we discovered neglected areas and brainstormed solutions with Charlotte. Initially, lack of a consistent recycling program was a loss of points and a missed opportunity for sustainability. Although Pippin Hill tried to create a routine of recycling, their waste collection company had not provided necessary containers for retrieval. Now, with the persistence of Pippin Hill for feedback, they have received the proper bins and are recycling.

As consultants, we have accomplished our objectives of researching potential sustainable practices for Pippin Hill that are not currently employed. A prime example of this is our search for a sustainable solution for the food waste generated from Pippin Hill's kitchen. Upon deciding that composting was a great way to decompose food waste while producing a richly organic fertilizer, we further researched both onsite and offsite options. We created a cheat sheet of onsite composting options. If onsite composting requires more maintenance than Pippin Hill can handle now, we also contacted a local composting company that collects food waste for \$9 a visit. Black Bear Composting has expressed interest and we hope to strengthen their relationship with Pippin Hill once management decides on offsite or onsite composting.

Additionally, one of our documentation deliverables will be a detailed schedule of point opportunities. This will aid in the ease and efficiency of future action item implementation. It will also serve as a reminder of Pippin Hill's goals for the Challenge and how they can accomplish them. Nevertheless, we will still serve as consultants for our partner and research answers for questions that pertain to their unique needs.

Remaining Barriers

Progress is always accompanied by a few roadblocks. Unfortunately, there are still a few barriers that burden Pippin Hill in the Better Business Challenge. Specifically, the scorecard has caused confusion throughout the competition.

Fundamentally, the scorecard is quite vague in certain sections. This requires extra research that may be redundant and inefficient. Although the website is full of useful resources, navigating the site can be difficult and there are pages that have yet to be updated with promised documents or forms.

The point allocation process and standards also put Pippin Hill at a disadvantage for two reasons. First, Pippin Hill is a newly opened business and therefore does not yet have proper bills and documentation that allow it to create baseline goals. These are the easiest points on the scorecard, but not applicable at the moment for Pippin Hill. Second, Pippin Hill has practiced several sustainable measures since its inception. As a result, it will be difficult for Pippin Hill to make large percentage reductions in areas, like water, that they have been mindful of since the beginning. By the very nature of Pippin Hill not having business vehicles, it also loses an opportunity to earn points from an entire transportation subsection of the scorecard. From a competition point of view, this makes it difficult for Pippin Hill to earn maximum points and compete to be labeled one of Charlottesville's most sustainable businesses.

Working with Pippin Hill, our main question is what the owner, Dean, thinks about the ideas that we have brainstormed with Charlotte. Unfortunately, he has been unable to meet with us during our previous meetings, so we have not yet heard his feedback or suggestions. Because the decision for final implementation rests in his hands, we will have to meet with him soon to organize a formal plan of action item execution.

Documentation and Assessment

At each of our meetings with Pippin Hill, we took detailed notes of the plans and questions discussed. We also took some photographs, and saved all of our email conversations with our contact at Pippin Hill as well as those with Black Bear Composting. All of these items can be found in the Appendix for review.

The success of our project can most specifically and quantifiably be measured in the scorecard for the Better Business Challenge. As it stands now, Pippin Hill has earned enough points on the measurement scale to be 'Certified', but hopefully with our continued consulting help next semester they will gain sufficient points to join the Winners' Circle.

Although not quantifiable, the discussions and ideas that have come out of our meetings with Pippin Hill have continued to promote and catalyze the implementation and progression of sustainable practices, and we believe this can be seen as a success.

FUTURE WORK

What remains

During our last conversation with Charlotte via phone on December 6th, we continued discussions of implementing a composting program. After winter break, we will meet with her again to make a decision on off-site versus on-site, and future work associated with this endeavor. We have reached out to Black Bear Composting and passed the information and contact onto Charlotte, so future conversations and decisions on that will be out of our hands. However, should they decide to implement on-site composting, we will continue to research the details of doing so, and discuss the plans for the method, location, maintenance, and use of the compost.

Charlotte iterated that she was interested in shifting future purchases to companies with sustainable practices. In order to do this we will need to know what Pippin Hill purchases, and research companies that produce these items in a sustainable way.

Additionally, we will continue discussion about holding a sustainability event at Pippin Hill to showcase their sustainable business practices and hopefully educate others of their enthusiasm and work to be a leader in sustainability. We have spoken to Tom about the possibility of holding one of the Lunch and Learn events at

Pippin Hill as a start, but he needs to discuss the matter with Teri, and then get back to us. If this is approved, we will need to discuss the logistics with Charlotte and possibly Dean.

An option for future expansion of goals to the larger community as well as publicity for Pippin Hill, mentioned briefly in the description of recycling under our considerations for our approach to the project, is an expansion of the cork-recycling program started by one of the employees of Pippin Hill. We came up with an idea that Pippin Hill could create some kind of container to give to restaurants to use to recycle corks. The container would have Pippin Hill's logo on it, and possibly some more information. This would encourage restaurants to buy Pippin Hill's wine, broaden Pippin Hill's consumer base by reaching the restaurant-goers, create a tangible community relationship, and showcase Pippin Hill's amazing commitment to sustainability. We will discuss this as an option in the future as well, as it would require more resources to create the containers, reach out to the restaurants, and expand the cork-recycling program.

Other, simpler items that we believe Pippin Hill should work toward in the future are outlined on the sheet we created with the achievable score-card items and resources (see Appendix 3). These are the items on the score-card that we believed to be applicable and achievable for Pippin Hill, and that Charlotte expressed interest in doing when we went through the scorecard with her.

As far as a timeline for future work, we hope that the items outlined on the cheat-sheet we made will be completed in time for the end of the Challenge. This includes implementing a composting program, as well as all of the items on the sheet. Hopefully we will be able to hold a sustainability event before the end of the Challenge as well, but the timeline on this will be mostly in the hands of Dean and his availability, as well as the availability of Pippin Hill since weddings are held at the venue most weekends.

LESSONS LEARNED

Barriers to success

Throughout the process, we faced some barriers that inhibited our success. First, the project had kind of an abrupt, but delayed start a few weeks into the semester. Since Pippin Hill is a young, growing business, they are very busy and we had trouble arranging a first meeting and getting started on time to create our project design and move forward with action items.

Additionally, we had some difficulty applying Pippin Hill's practices to align with the items on the scorecard. Each section of the scorecard had a section about current baselines and goals for reduction, but since Pippin Hill is such a young business, they don't have access to a year's worth of information to set base levels and are still setting the standards of energy use and water use, etc. Also, some of the items of the scorecard were vague, and there were questions that we were unable to answer about what exactly was necessary to achieve the points. For example, we discussed the item under energy about the 'Indoor Comfort Survey', but some questions arose regarding how many of the staff are expected to complete the survey, and what level of staff should take the survey. In looking on the website, we weren't able to answer these questions. We asked our mentor, Tom, and he relayed to us that all staff should take the survey, so the question was resolved—but overall, there were some issues with the logistics and details of the items on the scorecards, and more guidance and resources for these would have been useful.

Another slight barrier that we had was that our point of contact at Pippin Hill was not the owner, like most of the other participants in the Challenge. This did not turn out to be detrimental to our success, but it resulted in some delay since the questions we had about the current operations could not all be completely answered by our contact, who in turn had to talk to the owner, and then get back to us. Additionally, this proved to be a slight barrier in terms of our proposal for hosting a sustainability event. While our contact was

very helpful, it's difficult to discuss having the owner speak and hold an event without getting direct feedback and ideas from the owner himself.

Creating Change

From our experience with the Better Business Challenge, and trying to create change through improving and adding sustainable business practices at Pippin Hill Farm and Vineyards, we've learned a lot about the nature of creating change, and specifically about changing and implementing business practices. We found that there's sort of a give and take at times between smart business practices and sustainable business practices, smart meaning mostly financially feasible and logical. Often times these things work together to create monetary gain as well as sustainable success, but sometimes there is a sacrifice that goes along with it. For example, since a main purpose of Pippin Hill is to host weddings that happen largely at night, lighting is necessary, and probably not the most sustainable amount of lighting. So, in order to maintain this practice, other things, namely the amount of energy used, need to be given.

In terms of creating change in general, a big lesson learned is that it is easy to come up with ideas, but much harder to implement these ideas and see them through to success. It is very difficult to facilitate communication between all necessary parties efficiently, and the process of creating change is easily delayed without constant attention.

If we were to do this again, we would definitely want to start earlier. Getting a late start, along with communication chain barriers described above, inhibited our ability to create much change in Pippin Hill's current business practices. We would want to meet more often and have more time to review at the beginning. This would allow us to have concrete baselines to move from, since our late start required us to plan things before actually knowing what was appropriate. Setting goals is important, as well as relaying those goals to all parties involved. We would have liked to set some basic goals in the beginning so that our role as concierges could be utilized further and we could have been more help to Pippin Hill throughout this process.

APPENDIX

Acknowledgements: Project Mentor and Key People

Our project mentors are Teri Kent and Tom Cassidy. For the mentor meetings, we were assigned to meet with Tom, who has guided us throughout the project by providing expertise on communication, research, salesmanship, and (of course) business sustainability. With periodic meetings and briefings, emails and check-ins, Teri and Tom have kept us on track with The Challenge's schedule. Tom has been our go-to resource when we are asked questions by Pippin Hill Farms to which we do not know the answers.

Another key person in this process has been Charlotte Drummond, our contact at Pippin Hill. Charlotte has been very helpful, responsive, and enthusiastic about the Challenge. However, as the Financial Controller for Pippin Hill, she is very busy and has now passed on her role as the head of the Challenge for Pippin Hill to another member of the Pippin Hill staff, who will be our new contact moving into the second half of the Challenge in the spring.

Our Graduate Teaching Assistant for our Global Sustainability course, Harriett Jameson, has also been a key help in our process with this project. She advised us on our initial difficulties in meeting with someone at Pippin Hill, as well as on the reporting process and other aspects involved in the project.

We have used all of these key people as experts and resources throughout the Challenge and project. We have also utilized sustainability websites and the Better Business Challenge website to learn more about the advantages and disadvantages of potential practices.

Budget and Funding

Our first action item, solving the recycling problem, did not necessitate any monetary spending since it was the fault of the trash company that nothing had been done. Pippin Hill was able to attain the recycling bin and being recycling, adding points to their score without spending money.

Our second item, creating a composting system, will cost money. However, the option we found through Black Bear Composting only costs nine dollars per pick up, and pick ups would probably happen once every one to two weeks. This would only cost Pippin Hill \$18 to \$36 per month, and with their commitment and enthusiasm to sustainable practices, is definitely doable. If they do decide to pursue an on-site composting method in the future, the building or purchasing of the composting mechanism will cost money, but money will be saved through the discontinuation of Black Bear Composting's services, as well as on fertilizer since the compost will be used to fertilize the vegetable garden that is being built.

While our options were perhaps slightly limited by Pippin Hill's budget constraints (discussion of solar energy and other expensive options were not extensive), this was not a large factor in the success of our project since the Pippin Hill staff is so eager to do everything they can to be a leader in sustainability.

Appendix 1

Pippen Hill Farm & Vineyards *Meeting Notes*

Meeting 1: October 24, 2011 @ Pippen Hill Farm with Charlotte Drummond

- Login Information to Appalachian Power for energy bills
 - <https://www.appalachianpower.com/account/Default.aspx>
 - charlotte@pippenhillfarm.com
 - PHF8063

- Fuel
 - Tiger Fuel
 - As of August 22: 9956 gallons -> \$2,066.26 including tax
 - looking for another bill from May
- Recycling
 - have been asking for a recycling bin from Allied Waste but they have yet to provide one
 - Therefore, throwing away cardboard and bottles
 - look into new recycling firm?!
 - recycle corks
- **COMPOSTING**
 - sustainable practice that hasn't been implemented yet***
 - possibly have a special container in the kitchen for easy collection
 - can have composting on site if very simple to maintain; concerns:
 - Concerned about maintenance time of composting themselves. Very limited with time and employees!
 - may be difficult because of their large volume of food waste
 - Lawn service: contact is Tyler
 - if not on site, find local compost business:
 - Panorama
 - Others???
- Already practicing large-scale water catching
 - NO WATER BILL!
- Food
 - largely locally bought (all cheese, most meat and bread)
 - Chef: Amalia Scatena (usually free Wed/Thurs afternoon 2-4PM)
- Cleaning products
 - Unsure
 - Ask owner Dean
- Stink Bug Problem
 - Dean has implemented an organic solution instead of chemicals
- Energy
 - Kitchen uses propane
 - geothermal build on site provides energy
 - high rating washer/dryers
 - Kitchen appliances:
 - *IPSD washer
 - Imperial Ovens
 - Brown Salisbury Fridge

- Star rated freezer
 - energy saving NSF rated appliances
 - Bathrooms
 - low flow flush toilets
 - hand drier (Dyson dirblade) is energy rated
 - lights???
- Transportation
 - have partnered with Wahootie in the past to bring people to events so they don't have to drive
- Leadership
 - Dean give talks to organizations like the Rotary club, Chamber of Commerce, etc about the importance of green building

Meeting 2: November 14, 2011 @ Phippen Hill Farm with Charlotte Drummond

- Black Bear Composting follow-up
 - Call to determine a potential corporate composting collection agreement
- Recycling – Allied 36 month agreement
 - Bought 2 recycling bins...wait and see if they come to pick it up
 - Look into single-stream
 - % capture
 - Process
- Have a no idling policy
 - In general Charlottesville, buses cannot idle for more than 3 minutes (state policy)
 - BUT trucks are excluded from regulation
 - Ask Teri about progress on truck reform
- Have insulating shades
- Have a rain water fueled well/cistern
- Have a rain runoff system into a pond at the entrance of the site, too, with natural filtering
- Look into EPEAT certified computers
- Need to take pictures of the geothermal and rainwater collection systems
- Considering hosting an afterhours event
- Short video clip idea: Dean talking about green business
- Questions for the Challenge Team Leader
 - Comfort survey – how many employees must take it?
 - Thermostat settings – what if you already have a low setting and decreasing by 10 more degrees is not feasible?
 - Water: have no water bill...still get points?
 - Do we get points for planned implementation even if it isn't done yet?
 - Social network? ...as in lunches or does facebook count?

Methods of Composting

Holding Units

- Bins that hold yard/kitchen materials until composting is complete
- Low maintenance
- Slower composting
- Size can vary



Turning Units

- Designed to be turned to aerate
- Faster than Holding Units
- Smaller capacity



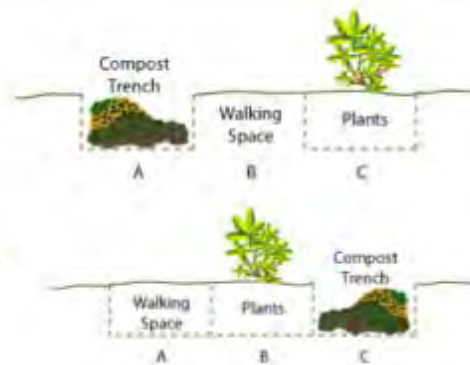
Heaps

- No structure required
- May attract pests if unturned
- Need space available away from immediate area



Pit or Trench Composting

- Simplest way for composting kitchen scraps
- Food scraps can be put into a trench of unused garden space, complete the composting process, and act as fertilizer for the garden



Appendix 3

ACHIEVABLE POINTS

ENERGY

- Free LEAP Presentation about energy use (2 pts)
- Indoor comfort survey (2-11) (1 pt)
- List of company equipment (1 pt)
- Lighting Assessment (12-18) (1 pt)
- Set thermostats to EnergyStar recommended settings (19) (1 pt)
- Set water heaters at 120°, insulation blanket (1 pt)
- 3rd party professional energy audit (5 pts)
- Retrocommissioning (20-21) (5 pts)

TRANSPORTATION

- Discuss transportation reducing fuel/ improving transportation options with staff (1 pt)
- Participate in Clean Commute Day (22) (1 pt)

WATER

- Discuss water-saving options with staff (23) (1 pt)
- Conduct inventory of water fixtures (1 pt)

WASTE REDUCTION

- Implement composting program (24) (2 pts)
- Make all office events 0-low waste (24) (10 pts)

PURCHASING

- Select vendors based on sustainability factors (2 pts)
- Use at least 30% recycled printer/copier paper (1 pt)
- Use 'green' cleaning products (25) (1 pt)

LEADERSHIP

- Publicize company's participation in the challenge (1 pt)
- Join the challenge's social networks (facebook) (1 pt)
- Underwrite sponsorship of community sustainability effort (2 pts)

For the sake of space, we only included the first page of this document. In the deliverable that we gave to Pippin Hill, all relevant resources and documents are included.

Appendix 4

Relevant Emails

Black Bear Composting

Hi Eric,

That's great news! Pippin Hill Farm is currently in Charlottesville's Better Business Challenge, a competition centering around mutual business and environmental sustainability. I am a second-year student at the University of Virginia and one of their consultants for the challenge. One of my responsibilities is to research new ways they can be more sustainable. I'm not sure if you've heard much about Pippin Hill Farms, but they are already quite sustainable! Since opening last May, they have already implemented geothermal energy and rain water collection systems.

I was happy to see they had room for improvement in their food waste practices and even more happy to come across Black Bear Composting. Would you mind explaining how Black Bear Composting could collect their waste? Is there a fee associated and what are the specific steps Pippin Hill Farms must fulfill? Ideally, we are looking for a low maintenance solution.

I look forward to hearing from you!

Thanks,
Theresa Hackett

Hi Theresa,

Wow, it sounds like great things are happening at Pippin Hill! I would love to be a part of their sustainability efforts.

Pippin Hill would be a great candidate for our Commercial Collection program. The following link has a great overview of the program and a picture of one of our collection carts:
<http://www.blackbearcomposting.com/commercial-collection.php>

While charging at rates less than traditional trash service, our program is a paid service. However, it will result in savings over time as the size of Pippin Hill's dumpsters are decreased and fewer pick-ups required. Based on your location, you're looking at roughly \$9 per cart pickup.

Source separating organics is an easy process and our program is set-up to make it as low-maintenance as possible for our clients.

If you and Pippin Hill are interested, the next step would be for me to come out to look at the facility to learn more about Pippin Hill and to discuss the program with you and key stakeholders.

When you're ready, please give me a call and we'll set up a time for me to come out for a meeting.

Thanks,
Eric Walter
Black Bear Composting
www.blackbearcomposting.com

[434.989.5219](tel:434.989.5219)

Appendix 5

Pippin Hill – Charlotte Drummond

Teri, I'm copying Kelly Knox on this email to introduce you two. Since Kelly works in our Sales & Marketing office, she would be the best person at Pippin Hill to receive notifications about the networking and lunches. If you would switch her email for mine, she'll be able to start coming to the meetings and getting information out about the challenge from our perspective.

Also, thanks again for sending Theresa and Julianne to us. They are really helpful in this process and are assisting me to chase down some of the unknowns on the questionnaire. Both Theresa and Julianne are pro-active, attentive to detail, helpful with suggestions, organized, and reliable in following up. I'm happy to add my kudos and recommendations to your's when it comes to evaluating their internship.

Best,
Charlotte

Charlotte Drummond
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