

**CITY OF KEENE
NEW HAMPSHIRE**

**PLANNING BOARD
MEETING MINUTES**

Monday, April 27, 2015

6:30 PM

Council Chambers

Members Present

Gary Spykman, Chairman
Mayor Kendall Lane
Douglas Barrett
Councilor James Duffy
Andrew Bohannon
Christine Weeks
Nathaniel Stout
George Hansel
Maria Temple, Alternate

Staff:

Rhett Lamb, Planning Director
Karen Purinton, Planner
Michelle Chalice, Planner

I. Call to order – Roll Call

Chair Spykman called the meeting to order at 6:30 PM and a roll call was taken.

II. Minutes of previous meeting – March 23, 2015

A motion was made by Nathaniel Stout to accept the March 23, 2015 minutes as printed. The motion was seconded by Andrew Bohannon and was unanimously approved.

III. Elections – Vice Chair

Item not addressed. Chair Spykman indicated that he will not be present at next month's meeting which raises concern as to who would be the Chair. The Planning Director stated that at an instance like that the Board could elect a temporary Chair to run the meeting.

Chair Spykman opened the Public Hearing.

IV. Public Hearings

1. **SPR-172 – 510 Washington Street – Site Plan Modification** – Applicant and owner Toby Tousley proposes the exterior appearance of a gas canopy approved for installation at an existing convenience store and Laundromat located at 510 Washington Street. The site is 3.17 acres in size and is located in the Commerce and Low Density Zoning Districts (TMP# 012-002-008).

A. **Board Determination of Completeness.**

Planning Director, Rhett Lamb recommended that the Board find this application, SPR-172, complete. A motion was made by Mayor Kendall Lane that the Board accept this application as complete. The motion was seconded by Christine Weeks and was unanimously approved.

B. **Public Hearing**

Mr. Toby Tousley of 499 Washington Street stated that this application is in conjunction with the plan that he brought before the Board in February. He indicated that he did not want to have this

plan engineered for the canopy until the Board approved the application for the gas station. Mr. Tousley stated that they decided to go with the Mobil blue color and added that it is a standard canopy used at gas stations and does go well with the color of the existing building.

He went on to say that he owns five properties in the adjacent area, he lives in the area and has a vested interest and will make sure that the site is maintained.

Mayor Lane clarified that there is no existing canopy at this location as the rendering seems to indicate. Mr. Tousley stated that the picture the Board has is just an example of what they are proposing.

Staff comments were next. Planner Karen Purinton addressed the Board and stated that in February Mr. Tousley came before the Board for approval of a gas station which includes four gas pumps and a few other changes. Instead of submitting detailed information about the appearance the applicant asked that the approval be granted and require him to go through the site plan process again once he decides on the final canopy design.

Ms. Purinton stated that the Site Plan the Board approved in February has been signed by the Planning Board Chair and what is before the Board is the final step in this process. She noted that any sign or symbol Mr. Tousley chooses to use would go through the City's Sign Code process and what the Board is approving is only the appearance and color of the canopy.

Ms. Weeks asked about lighting. Ms. Purinton stated that the recessed lights are a requirement of gas station canopies. She indicated that staff did have a concern about the ratio of the lighting but because the applicant's proposal is for the use of LED lighting, staff approved the lighting a little bit brighter than they normally would have, understanding that LED's tend to have a brighter light and can't focus it downward like traditional lighting could.

Mr. Hansel clarified what Ms. Purinton said about the sign. Ms. Purinton indicated that any branding the applicant proposes will have to go through the Sign Code process. The applicant has expressed a desire for Mobil and that's why the color is blue. The Board is approving just the appearance of the sign.

The Chair asked for public comment next. With no public comment, the Chair closed the public hearing.

Chair Spykman noted that what the Board was waiting for was the appearance details. The Board's Standard 19 is what deals with appearances and Standard 19 talks about buildings. Gas canopies are always an anomaly and the Board doesn't have much to go by.

C. Board Discussion and Action

A motion was made by Mayor Kendall Lane that the Planning Board approve SPR-172, Modification #3, as seen on the plan titled "Dinkbees, 510 Washington Street, Keene, NH" prepared by Structural Design and Management, Inc. and dated March 11, 2015, and the plan titled "Gas Pump Canopy Elevation," prepared by SVE Associates at a scale of 1"= 5' and dated March 24, 2015 with the following conditions:

1. Prior to signature by Planning Board Chair, owner's signature appear on plans.

The motion was seconded by James Duffy and was unanimously approved.

2. **SPR-01-15 – Keene Energy and Agriculture Project – Site Plan** – Applicant Keene Energy & Agriculture Project, LLC (KEAP) Proposes to build a 1-acre commercial greenhouse with a connected 12,600 square foot hard-shell processing, aquaculture, packaging and distribution facility on City property. There are waivers requested from Standard 6: Landscaping and Standard 10: Lighting, as well as a Surface Water Protection Conditional Use Permit associated with this project. The site is 20.45 acres in size and located in the Rural Zoning District (TMP # 919-10-034).

Alternate, Maria Temple joined the Board. Mr. Lamb noted that during the Advice and Comment portion of this matter a few months ago Board members Lane, Duffy and Hansel were recused due to their conflict and the same members will be recused from this hearing.

A. **Board Determination of Completeness**

Planning Director, Rhett Lamb recommended to the Board that SPR-01-15 was complete. A motion was made by Maria Temple that the Board accept this application as complete. The motion was seconded by Andrew Bohannon and was unanimously approved.

B. **Public Hearing**

Don McCormick, President of Keene Energy and Agriculture Project (KEAP) addressed the Board next. Mr. McCormick stated that this proposal is for a one-acre greenhouse with a 12,600 square foot attached metal building which would house all of the operations. He indicated they have been working on this project for many years in collaboration with the City. He noted that this site is part of the landfill property which captures the landfill gas and runs it to an energy plant which will be used as a combined heat and power facility. Mr. McCormick stated that at the present time the energy facility can only benefit the City when the transfer station was in operation so the energy is lost overnight but with the greenhouse needing heat and power all day and night, this energy can now be used.

Mr. McCormick went on to explain that as topography goes up in elevation, there are some man-made and naturally occurring terraces and a flat area where the facility will be located. One of the challenges they face is to make sure that this area receives solar exposure and locate the building in such a way that it has no impact on the precautionary slopes as well as avoid the wetlands that are located on the opposite side.

Mr. McCormick then talked about the waivers they were requesting which have to do with lighting and landscape requirements. He indicated that the site is forested which will remain intact and the plan is on not taking down trees that are below a certain height which provide a buffer from the landfill operation. He also noted that there are no other residences or businesses within 500 feet of this site and the other abutter is Mr. Barrett's wood lot. Mr. McCormick stated that their proposal is to use an indigenous seed mix of plantings and keep the area mowed and loamed but not anything to follow a specific landscape plan. He added that their goal is to provide a landscape plan for the stewardship of the environment.

As for the lighting it is more about energy conservation; there is no need to provide lighting for safety reasons as the facility will be closed at night but provide some light should any of the employees need to visit the site.

Mr. McCormick then referred to the rendering for the greenhouse. The material being used would make it possible to see inside the greenhouse. The inside of the greenhouse will be a large

controlled space. The greenhouse would be 180 feet x 240 feet for a total of one acre. From the north looking back at the head house of the greenhouse is a metal building designed to handle all the products that come out of the greenhouse and sort it through cooling, packaging and shipping. There is also a large aqua culture facility (60,000 gallons) in size to harvest tilapia.

Ms. Temple asked that Mr. McCormick explain where this facility is located as it relates to the landfill. Mr. McCormick referred that question to Don Marsh of Marsh Engineering. Mr. Marsh pointed to the western edge of the landfill; the transfer station is located at the bottom of the hill. Access to this facility will be via the first turn to the right just before the attendant's gatehouse which would minimize interference with the transfer station operation. They would then create a new access road to the facility. Mr. Marsh stated that the existing landfill gas electric generation facility will be relocated on a concrete pad at the edge of the proposed access road.

Mr. Marsh went on to say that the stormwater from the greenhouse will be collected in the gutters, reused and stored in a 50,000 gallon tank underneath the facility. Some of the runoff will flow into an infiltration basin and some of the water will also come down the road to the same treatment facility. The Alteration of Terrain Permit has been submitted and is under review by DES. The project is subject to the EPA's Stormwater Pollution Prevention Planning Process and that documentation will be prepared and submitted once a contractor is selected.

Mr. Marsh stated that since the Advice and Comment the width of the greenhouse has been made smaller which gives a 40 foot wetland buffer from the edge of disturbance. Tree cutting will happen lower in grade than the wetland so water won't flow from the site to the wetlands. There will only be 18,000 square feet of impact on the precautionary slope which is below the 20,000 square foot threshold. With reference to parking, Mr. Marsh stated that the site has 32 spaces which is sufficient for their need. The City has indicated that five more could be used for over flow parking at the transfer station.

Mr. Jonathan Sisson, Wetland and Soil Scientist addressed the Board next. Mr. Sisson stated that these wetlands are known as forested wetlands and is a pit and mound system. There are quite a few forested trees on this property - hemlock, red maple, yellow and grey birch, white pine and quite a few saplings. Mr. Sisson explained that if the applicant was to cut down any of the red maples they would sprout up from their own root system, the same would be true with the yellow birches. He indicated that the applicant would like to remove some of the trees so that sunlight could get into the greenhouse.

Mr. Sisson stated that the question he was asked is if the trees on the slope were cut, whether the drainage conditions would change. Mr. Sisson referred to the soil map and noted that the higher area is terrace like; the upland soil has a dense restrictive layer 20 inches down which means the soil is compacted and water doesn't run through it very well. Hence, very little to no water will ever travel to the cut area.

Ms. Temple clarified the parking needs with the 32 spaces being proposed. Mr. McCormick stated that they would only have 25 employees and if there is a need they would use the five spaces at the landfill as proposed by staff.

Mr. Barrett asked Mr. Sisson what the tree clearing would have on the overall quality of the wetlands. Mr. Sisson stated that the red maples' root system will still be intact but the white pines and hemlock won't grow back so there won't be that large root system to soak up the water. He stated that the water quality won't change but there might be a slight increase in the

water flow that travels downhill but there won't be a change in the water quality. He added that as the trees grow the water flow will lessen.

Mr. Barrett asked whether Mr. Sisson sees any change to the wetlands due to the tree clearing. Mr. Sisson answered in the negative. Mr. Barrett asked whether Mr. Sisson sees displacement of any species that might exist here. Mr. Sisson stated that he did not see any sign of amphibians.

Staff comments were next. Mr. Lamb stated that he would like to give the applicant time to address the criteria for the requested waivers even though they were described briefly earlier by the applicant. There are certain criteria that go along with the waivers that the applicant needs to address. Mr. Lamb added that the Board should also spend some time addressing the criteria in the surface water ordinance and the Board would need to make some Findings relative to the conditional use permit. He added that he has heard a lot of mention about trees being removed in the wetland and noted that the surface water ordinance does not deal with activities in the wetlands and the removal of trees is in that category. The Board's ordinance deals with the buffer - 75 feet from the edge of the wetlands, in this case towards the building site is where the Board has jurisdiction and this area is going to see tree removal. He added that if the applicant is removing trees from the wetland, this would require a wetland permit from the State.

Planner, Michelle Chalice was the next speaker. Ms. Chalice stated that proximity to the landfill has given this application a challenge but because of the applicant's efforts they have been sensitive to the issues staff has raised.

Drainage: Ms. Chalice stated that this site is taking care of rainwater in several different ways; the roof runoff will be captured entirely in underground tanks for their use and the road and pavement runoff will be captured by a downslope swale. The separate head house roof runoff discharges through a culvert to a stone bed and then runs into an infiltration basin. The level spreader will handle the infiltration basin overflow into the undisturbed forest.

Sedimentation and Erosion Control: This is the first project that has a silt fence that overlaps with a silt pocket which will provide for any overflow which will keep the fence from failing. A stabilized construction entrance is also being provided to reduce on the sediment that leaves the site during the time of construction.

Hillside Protection: The applicant will not disturb more than 20,000 square foot area hence there is no need for a conditional use permit.

Landscaping: This site does not have any surrounding residences or businesses and will not be seen from the highway (Route 12) and the only thing that will be seen from the highway is the glow from the greenhouse and this too only during foggy nights. At the corner of the parking lot they have added a small flowering tree and generator pad is screened not only with a fence but also with some shrubs. Ms. Chalice added that the removal of the trees will definitely be a shock at first especially because an acre of land is going to be cleared.

Screening: The only area that needs to be screened is the new pad for the methane to come into the site. The rest of the site does not require screening because it will not be visually accessible by traditional means.

Lighting: The site will not be used at night so there is no requirement for lighting to be provided but lights will need to be on for plant growth. There will be lights on inside the building as well as on the building itself which the applicant is relying on for their lighting requirement.

Traffic: Taking into consideration all the different types of vehicles that will be coming to this site; school buses, UPS trucks, delivery trucks, visitors and panel trucks which project to about 60 trips per day. The estimate is with this addition and taking into account the landfill traffic, there will be a 13% increase of traffic in this area. Ms. Chalice noted that an abutter had recently pointed out the backup traffic issue that happens with the landfill traffic on Saturdays but because this site is not open on Saturdays, this will not be an issue.

Comprehensive Access Management: A bicycle rack has been provided if an employee wanted to bike up this route. Sidewalks will not be appropriate in this circumstance because random pedestrian traffic should not be travelling to this site on their own. An accessible route has been provided by the applicant in response to staff's concern.

Wetlands: Ms. Chalice noted that it is unusual to see wetlands delineation with a straight line but this is what is show on the plan. She indicated that the 75-foot buffer will be altered.

Stump Dumps: The applicant plans on using stump dumps as part of the base buried at the toe of the fill slopes. Staff has asked that the applicant notify DES of this issue.

Architectural and Visual Appearance: Ms. Chalice stated that the Board's standard 19 does not anticipate a greenhouse. She noted that the features used on the greenhouse are not shiny or loud but added that the building is quite large. This concluded Ms. Chalice's comments.

With reference to the tree clearing, Mr. Lamb stated that an acre of tree clearing will happen just around the building but there will be 6.5 acres of tree clearing for the entire site.

Ms. Purinton addressed the Conditional Permit next. She explained that the Conditional Use Permit is required through the Surface Water Ordinance and is a component of the review needed for activities taking place within the buffer. In some areas it is a 75-foot buffer but in more developed areas in the City it is a 30-foot buffer. She indicated that usually you won't see this in the rural zoning but because this is a greenhouse it is allowed but the ordinance does not contemplate this type of intense use within the 75-foot buffer.

Ms. Purinton stated that this item was referred to the Conservation Commission but they tabled it until next month. Ms. Purinton stated that she had advised the Commission that their comments were advisory in nature only and that the Planning Board might have sufficient information to make a determination.

Ms. Purinton went on to say that there is a 75 foot buffer from a wetland that is not on the project site but on the adjacent site and is bordered between the site and the wetland by a stonewall which is how you get the straight line as was mentioned earlier by Ms. Chalice. Within this buffer there are activities related to tree removal, grading, installation of a retaining wall and pavement construction. She noted that the activities occurring in the wetland would be the purview of a DES Wetlands Permit. Since the Advice and Comment portion of this application the applicant has decided to minimize the impact on the buffer by orienting the building 15 degrees north and decreasing the width of the greenhouse. Grading activities are taking place within 40 feet of the wetland.

She noted that tree clearing is happening right up to the wetland and hence staff feels it is important to re-vegetate this slope; native soil mix is a good option but low growing shrubs or trees would be preferred. Ms. Purinton noted that there has been concern raised over the use of pesticides; the applicant is proposing to use pesticides for maintaining the cleared area, but there has been a question as to whether the Surface Water Ordinance allows that, previous drafts of the ordinance restricted pesticide application within the buffer but this was not part of the final documentation for the Surface Water Ordinance. Hence, staff is not requiring the applicant to revise their plan.

Mr. Bohannon asked whether the questions raised by the Code Department were addressed. Ms. Chalice stated that they were addressed in the Memo the Board received separately. Mr. Bohannon asked about the comments from the Police Department as well and added that he had not seen those addressed. Ms. Chalice stated that the stone walls are not protected at this site. However, the stonewall next to the wetland will remain.

Ms. Temple clarified that the trees that are proposed to be cut will be clear cut. Ms. Chalice stated that her understanding is that the trees will be clear cut but one of the conditions in the Conditional Use Permit is that within the buffer area, the stumps need to remain to preserve the root masses and to keep the soil stabilized. Mr. Lamb suggested that the Board ask the applicant to explain what kind of cutting is going to happen and where this cutting is going to happen. Mr. Bohannon asked that the applicant also explain if new shrubs are introduced what types of pests would threaten the green crops.

Chair Spykman asked whether the conditional use permit needs to be addressed at a separate hearing from the site review application. Mr. Lamb stated that when it is combined with a site plan review as in this case it can be addressed as one and determination can be made as one. There could be times when just the Conditional Use Permit is required for an application but that is not the case here. Chair Spykman asked whether there could be a case when the conditional use permit is approved but not the site plan or vice versa. Mr. Lamb stated that he wasn't sure but will look into it. Chair Spykman stated that he would like to hear from the applicant explanation as to tree cutting.

Mr. Marsh addressed the Board again and noted that they wanted Mr. Sisson to address the potential impact with reference to tree cutting in the wetlands but added that he wanted to be clear that they are not asking for any work to be approved in the wetlands. He referred to the narrow area to the west close to the head house, all the trees here will be cut and the area graded, then re-seeded with native seeds or plantings. South of the greenhouse will be clear cut and stumped and will be maintained with grass and low shrubs. North of the greenhouse line won't be cut at all except for grading purposes. The area to the east, Mr. Marsh referred to the different sections that have been zoned – In Zone D, any trees that are greater than 20 feet will be trimmed or cut, in Zone C, 30 feet tall is the cutoff, Zone B, 40 feet is the cutoff.

Mr. Marsh stated that along the outside perimeter, where there are no structural issues the stumps could be placed in that location. Mr. Stout asked aesthetically how locating the stumps along the perimeter would look like. Mr. Marsh stated that they would be buried. Mr. Stout noted that there could be quite a lot of biodegradable stumps and asked whether this won't affect the grade eventually. Mr. Marsh agreed that there could be some differential settling but if the stumps are covered well they don't breakdown as much.

Mr. McCormick addressed the Board again stated that this proposed one acre facility will provide enough salad to feed 20,000 people and agreed that he sees the loss of woods in this area but by building this facility it will reduce the clearing of hundreds of acres elsewhere.

Mr. McCormick then went over the waiver criteria for the landscaping request:

That granting the waiver will not be contrary to the spirit and intent of these regulations;

He stated that this facility is going to be located in a remote area that would not be visited by the public and does not have a retail purpose. It cannot be viewed by any business or residence except at the front corner which has now seen some screening for the generator pad. He added that this is a beautiful facility that is going to be located next to a landfill and a woodlot and felt there will not be an adverse impact by the location of this site and felt this should be taken into consideration. He stated that their goal is to provide an aesthetically pleasing entrance and site but it is necessary to reduce the amount of plantings near the greenhouse to reduce on the amount of pests that can be drawn into the greenhouse.

That granting the waiver will not increase the potential for creating adverse impacts to abutters, the community or the environment;

From the point of view of the abutter, the community is not a general participant of the project. From the point of view of the environment, they are conscious that the soils and terrain are maintained and that the plants being used are native to the area. This is a low impact project.

That granting the waiver has not been shown to diminish the property values of abutting properties.

This facility will not decrease the value of the landfill or the woodlot which is the other neighbor.

Consideration will also be given to whether strict conformity with the regulations or Development Standards would pose an unnecessary hardship to the applicant.

The main issue here is that low vegetation needs to be maintained around the greenhouse and the front of the site needs to be kept open for solar, hence most of the landscaping is about that function.

Mr. Bohannon asked for explanation about what Mr. McCormick said about the landscaping that would need to be kept in mind to avoid attracting pests into the greenhouse. Mr. McCormick explained that bringing in larger amount of cover of plants closer to the greenhouse provides for a habitat for pests. Lower vegetation is necessary for better air circulation and to avoid mold.

Ms. Temple stated that during the site visit there was a suggestion made about planting perhaps blue berry bushes farther away from the green house to reduce the impact of the clear cutting. Mr. McCormick stated that he was in favor of this and added that the grass area should be the closest to the greenhouse but what they are trying to do is to keep a certain area clear from the greenhouse. He added that once the greenhouse is more stable and the pest issue is under control they would like the opportunity to plant shrubs.

Mr. McCormick addressed the lighting waiver next:

That granting the waiver will not be contrary to the spirit and intent of these regulations;

Mr. McCormick stated that the intent of these regulations is for safety and security and easy navigation in parking lots. He noted that their staff will be gone by evening hours. During winter months when the daylight hour ends by 4 pm there are still small amount of light for safety

reasons. Also in the winter months when the transfer station operation shuts down the greenhouse light would provide for sufficient lighting.

That granting the waiver will not increase the potential for creating adverse impacts to abutters, the community or the environment;

Reducing the light will be a positive aspect for the abutters.

That granting the waiver has not been shown to diminish the property values of abutting properties.

By adding or decreasing light there will not be an impact on abutting property values.

Consideration will also be given to whether strict conformity with the regulations or Development Standards would pose an unnecessary hardship to the applicant.

It is about energy efficiency on one hand and therefore not expending money on electricity they don't need, is important for a company that is focused on environmental stewardship.

Mr. Stout asked for someone who lives southeast of this facility and looks northwest whether the glow effect would be increased by requiring additional lighting. Mr. McCormick agreed.

Mr. Bohannon asked for this facility's hours of operation and what accommodations are going to be made to allow access to this site should the main gate be locked. Mr. McCormick stated that they have a key to the gate and the work day is from 8 am – 4:30 pm.

Chair Spykman noted that the two waivers have been addressed and the next item that needs to be addressed is the conditional use permit for the surface water protection buffer zone. Mr. Lamb stated that the Board might already be comfortable with that item based on Ms. Purinton's presentation and the applicant's presentation. Chair Spykman called the Board's attention to pages 27 and 28 of the Staff Report and asked the Board whether they had any questions for the applicant on the conditional use permit.

Mr. Stout stated that he has not seen this site in terms of invasive species and asked whether there are invasives that could put a burden on the applicant with the clearing process because the conditional use permit calls for the removal of invasives. Mr. Lamb stated that the criterion establishes the principal that you should leave the buffer zone in its natural state but it creates an exemption to remove invasives if they are present. In this case, with the buffer being altered so dramatically by removing nearly all of the trees between the building site and the wetlands, the Board is outside this individual criteria; all the trees and invasives are going to be removed from this buffer. Mr. Stout asked what happens if there is Japanese knotweed away from this clear cut area, he asked whether the City will require the removal of such invasive species. Mr. Lamb agreed and added that the ordinance will allow removal in the buffer if an invasive species were present, without the need for a conditional use permit.

Mr. McCormick stated it is normal practice in stormwater management to use pesticides but they would pledge not to use any at this site but there are organic treatments that they might pursue.

The Chair asked for public comment next.

Mr. Robert Sutherland of 66 School Street asked that the Board consider beyond just this application. He noted that the City has had occasional problems and referred to the site on Key Road which ran out of money. He indicated that this project relies on nearly a million dollars of

federal funds granted through the EPA, as well as block grant to fund the employees and an investment of \$225,000 from tax payers of Keene. Mr. Sutherland stated that his concern is that every change along the way increases the cost.

Mr. Sutherland referred to the original plan vetted by John Bartok that was presented to the City. Mr. Bartok identified that one of the problems with the greenhouse design is that it was a sketch and his recommendations were that review of the design and included equipment should be conducted before the contract is signed. Mr. Sutherland noted that the contract has already been signed with no review of the design and all the City has seen are elevations. Mr. Sutherland noted that the City has no idea of the design or what the interior is going to look like. Chair Spykman pointed out that interior design is not the purview of this Board. Mr. Sutherland referred to language from the Planning Board's Standard "Lighting" as follows:

The City of Keene Planning Board recognizes that inappropriate, poorly designed, and excessive outdoor lighting causes glare and unsafe driving conditions; results in light pollution that limits the ability of citizens to enjoy the nighttime sky... adversely impacts the enjoyment of adjacent properties. Therefore, it is the purpose of Standard #10 to enhance public safety and welfare by providing for adequate and appropriate outdoor lighting....

Mr. Sutherland indicated that regardless of the LED lighting being proposed this site will cause light pollution and added that it will be a giant glowing orb on a hillside in Keene. He added that the intent is clear and light pollution is something that is important to this community. Chair Spykman stated again that the standards the Board is operating under refer to exterior lighting not interior lighting as Mr. Sutherland is referring to.

Mr. Sutherland referred to the following language from the Board's standards:

#8 Intent – Preserve the rural character of the community in non-urbanized areas. He noted that a giant glowing orb on a hillside in Keene is going to be viewed by properties down the hill. He felt it was incumbent upon Mr. McCormick to provide the Board as to the amount of light this greenhouse was going to create and how this will affect the rural setting in the City and the light pollution it will cause.

Mr. Sutherland stated that he is also concerned about the clearing of 6.5 acres of forest and the possible erosion this would cause. Mr. Sutherland noted that Mr. Bartok had also indicated that clearing would be required but had also indicated that this was not the ideal location for this purpose because of the hill side and the 15 degree variance from true north. Mr. Bartok also talks about runoff; 1.25 acre roof, the head house building and the parking lot which would all add up to about two full acres of runoff. He noted that the plan the engineer provided indicates water will run to the east as to not impact the wetlands. There will also be snow removal that would also happen towards the east. He also noted to the guardrail located to the east and expressed concern about how snow removal will happen here.

With respect to the runoff, Mr. Sutherland noted that Mr. Bartok has calculated that 1.25 acres of roof runoff will collect about 34,000 gallons of water for a one-inch rainfall. He stated that the Board has a standard for a 50-year, 24-hour rainfall event and wasn't sure how much rain that would result in. Mr. Sutherland pointed out that the applicant has indicated that they are going to be providing a 50,000 gallon retention tank which will take most of the rainfall. The issue however, is that the Fire Department has indicated that the tank has to be maintained at 42,000 gallons for fire prevention. Mr. McCormick has indicated that they would have a 4,000 gallon usage per day which would cause an issue with their drainage strategy.

Mr. Sutherland went on to say that there is a reference in this plan to wastewater but there is nothing included in the application about wastewater and asked whether this was a requirement for this application to be a complete. He noted that there are going to be 25 employees at this site, school groups visiting which would all require use of bathrooms. He also indicated that his understanding is that when the water temperature gets below 82 degrees in the greenhouse the tilapia will die off and questioned where this water will go. How often will this tank be evacuated and felt this is also something the Board should be considering. There is also reference to a leech field which is also an important aspect the Board should be looking into.

Mr. Sutherland felt that items such as lighting pollution, runoff, and water treatment have not been addressed adequately for the Board to make a decision. He also noted the removal of the stonewall, and there is also a secondary stonewall in the wetlands setback area. Mr. Sutherland pointed out that the requests for exemptions for this application includes an exemption to cemeteries, cellar holes, relics etc. and asked whether any cemeteries have been identified in this plan. It was indicated that this was standard language. Mr. Sutherland clarified that if any cemeteries were located whether they will be relocated.

Mr. Lamb explained that the process of the exemptions being requested relate to the presence of these types of characteristics on the land. He indicated that there is a lengthy list that an applicant has to go through to submit an application to the Planning Department and the applicant has to indicate if those items are present or not present on their property. He indicated that there is no cemetery on this property known to the City and the applicant asked for an exemption for having to show cemeteries and it has been granted.

With reference to concerns raised by Mr. Sutherland, Mr. Lamb talked about wastewater first. He indicated that a septic system that has been proposed and it will have a leech field and they would need a State permit to construct it. The Planning Board has no jurisdiction over that.

The Lighting Standard relates to outdoor lighting only and the intent section makes this explicit. Mr. Lamb indicated that in his experience he can't recall a time when the Board has evaluated indoor lighting. He agreed that this is the first greenhouse the Board has evaluated. He recommended the Board check with the applicant about a reflective covering that can be used at night to lessen the impact and have the lights directed at the plants instead of sending it into the atmosphere. He added that the Board does not have jurisdiction over indoor lighting.

Mr. Lamb stated that it was indicated by Mr. Sutherland that the Board's standard requires analysis of a 50-year design storm but this is incorrect. The Regulations use a 25-year design storm and drainage has been reviewed and approved by the City Engineer. He went on to say that there is no limit on tree clearing.

Mr. Don Bemis who owns a garage on the access road to the recycling center addressed the Board next. Mr. Bemis stated that he was in support of this application but felt now would be the time to widen the entry way in front of his garage. He stated that this area is difficult to access because of heavy traffic especially on a Saturday until about 1pm.

With no further comments, the Chair closed the public hearing.

The Chair asked whether the Board had sufficient information to move forward with this matter. The Board agreed that they did.

Mr. Lamb explained that the first two items in the draft motion relate to State permits and the applicant has asked that they be given time to turn these in when a building permit is issued and staff is in agreement of this.

C. Board Discussion and Action

A motion was made by Christine Weeks that the Planning Board approve SPR-01-15, along with associated waivers and Conditional Use Permit, as shown on the plan set entitled “Keene Energy and Agriculture Project, LLC”, Tax Map 919-10-34, located at 63 Old Summit Road, Keene, Cheshire County, NH, prepared by Horizons Engineering, Holden Engineering & Surveying, Inc. and Marsh Engineering Services, dated March 2015, at various scales; with the following conditions:

1. Prior to signature by Planning Board Chair, submittal of:
 - a. Completion of a corrected address request in accordance with NH 911 requirements.
 - b. A revised site plan showing:
 - i. “No Disturbance” signage and snow fencing protection for the designated 40-foot buffer.
 - ii. A phased planting plan of native small shrubs, native large shrubs and native perennials for the wetland buffer to mitigate the loss of the treed wetland buffer, to be approved by the Planning Director.
2. Prior to signature, submittal of security for landscaping and “as-built” plans showing the location, form and condition of all built items in a form and amount acceptable to the Planning Director and City Engineer.
3. Receipt of NHDES Alteration of Terrain Permit.
4. Receipt of s USEPA Stormwater Pollution Prevention Plan General Construction Permit.
5. A copy of the notification letter issued to NHDES regarding stump dumps.

The motion was seconded by Andrew Bohannon.

Mr. Stout asked for explanation of the first item regarding the reference to 911. Ms. Chalice stated that this is a request from engineering due to the fact that we now have a separate piece of land from the landfill area and needs its own distinct address in case of an emergency.

The motion made by Christine Weeks was unanimously approved.

V. KSC Student Report on Traffic

Melissa Plumley and Shannon Nugent from Keene State College addressed the Board. They are students from Dr. Green’s Environmental Sociology class who have done research on quality of air at Central Square Keene.

The presentation is as follows:

Central Square is creating an environmental and safety issue and the suggestion is for a redesign to reduce carbon emissions and congestion. The first issue is Air Inversion. Temperature inversion is the process is in which the temperature of the atmosphere increases with altitude and contracts to the normal decrease with altitude. When temperature inversion happens, warm air traps cold air and pollution gets trapped with the cold air. This situation happens in areas surrounded by mountains or hills and the air cannot rise into the atmosphere and disperse due to the altitude of the mountains.

Since Keene is a valley sitting at approximately 480 feet above sea level with surrounding mountains, it is susceptible to temperature inversion. Particulate Matter (PM) 2.5 which are particulates that are less than 2.5 micrometers in diameter which can be chemically active in their inner components. Most of this particulate matter is due to biomass, fossil fuels, and coal. In Keene because of the use of things like woods stoves there has been recorded high concentration of PM 2.5. This can create long-term health effects such as respiratory issues. The emissions from vehicles also add to the increase to particulate matter.

It was indicated that during certain times of the day there could be up to about 20 cars idling on Main Street. The primary function of a roundabout is to slow traffic down hence if the lights are taken out of the Central Square, roundabout traffic will be able to move easily which would result in the reduction of PM 2.5.

Roundabouts have been implemented globally as an alternative and have proven to be safer for drivers and traffic as it makes drivers have to slow down more and pay attention to traffic and pedestrians before entering their passage. It has been estimated that roundabouts could decrease accident rates by 30%-70%. When traffic continuously flows emission is reduced. They are low in maintenance after construction is completed. It was noted that Central Square is the only roundabout that uses traffic signals.

More information on air pollution on health – there have been studies that have linked carbon emissions to the hardening of arteries and tail pipe exhaust has been detected in the blood stream. These have led to cardiac disease and strokes. For every 10 microgram per cubic meter in pollution there is a 24% increased risk of heart attack.

Social surveys were also conducted in the community and 70% population felt that traffic was inefficient or somewhat inefficient around Central Square which tells us that the population would be receptive to a change in the traffic pattern and making this into a complete roundabout.

The students then went over some data that showed that Main Street and West Street create the largest amount of congestion at certain times of the day. They also showed the Board photographs of the congestion on the two streets.

The proposal they made is a trial run to eliminate the red lights at the Square and change this to flashing yellow lights. The research they have done indicates that the roundabout will be able to maintain up to 25 cars and thereby reducing carbon emission and making downtown travel that much easier to navigate.

Woodstove pollution is one of the leading causes of air pollution. However, the students did not feel it should be the City's agenda to dictate how people heat their homes but the City can control how we use public space and just 1% in the reduction of air pollution can make a big difference to this community. This concluded their presentation.

Ms. Chalice asked whether there was any data to support that Keene has an increase in respiratory issues compared to other similar communities. The students indicated that they didn't have that particular data, but what they looked at was whether the roundabout could handle the traffic volume. However, if this is a project that might come to fruition then that type of data can be obtained. Mr. Bohannon thanked the students for their presentation.

Councilor Duffy stated that Keene has been one of the first cities to start using the roundabouts. He indicated that Keene also hired a well-known roundabout expert Barry Crowne for his advice on where roundabouts should be located in the City. The Councilor stated that his recollection is that the manner in which parking is configured at Central Square is one of the reasons a roundabout would not be feasible in this location. The Councilor felt this is a good idea and thanked the students for their presentation.

Mayor Lane agreed that Barry Crowne did look at Central Square and there was a lot of interest in turning Central Square to a roundabout. The number of lanes and the parking were some of the concerns about turning Central Square into a roundabout. The Mayor thanked the students and indicated that there is an item in the CIP to look at the traffic pattern in the downtown. Mr. Lamb noted that a true roundabout has deflection at its entrance in order to slow traffic before entering the circle. He said a roundabout would have severely altered Central Square the way it is today. Those who like Central Square today with its monuments etc. had concerns about it. The question was raised as to why lights were installed. Mr. Lamb stated that this is not actually a roundabout, there are entrances that come in straight and you don't have to slow down to enter the circle. With a true roundabout there is a deflection at every entry. Taking the signals out without creating some deflection will be hazardous. This concluded the discussion on this item

VI. Planning Director Reports

Mr. Lamb noted that the date of the next Joint Meeting has been moved to May 19th to accommodate a special Finance Committee meeting on the 12th.

Ms. Purinton stated that this would be her last meeting with the Board. She indicated that this was a great Board to work with. Chair Spykman thanked Ms. Purinton for all she has done for the Planning Board.

VII. Upcoming dates of interest – May 2015

Planning Board Meeting – **TUESDAY**, May 26, 6:30 PM

Planning Board Steering Committee – Wednesday, May 13, 4:30 PM

Joint PB/PLD – **TUESDAY**, May 19, 6:30 PM

Planning Board Site Visits – TBD

On a unanimous vote, the meeting adjourned at 9:35pm

Respectfully submitted,

Krishni Pahl
Minute Taker

Reviewed by: Rhett Lamb, Planning Director
Edits, Lee Langella