The Historic Dimension Series

A student publication series by the UNCG Department of Interior Architecture

Utterly Moo-tiful: An Exploration of NC Dairy Barns and their Adaptive Use

by Nikki Mauro

Fall 2020

Dairy farms have seen a steady decline in production over the past several decades. The associated structures stand abandoned and vacant. The wedding industry may just come to the rescue of these moo-tiful structures.

In 2017, 15% of couples chose a barn, farm, or ranch for their wedding reception according to *The Knot*, an online wedding planning platform. That makes barns the second most popular wedding reception venue behind banquet halls. Many studies have been conducted on the preservation of barns and the 1987 "Barn Again!" program of the National Trust for Historic Preservation provided farmers with information on how to rehabilitate historic barns. While barns have become adapted for new uses, little is written about the process of complying with state or federal laws in converting a barn into a working venue or how a barn can be adapted to new use, often offering great savings over the cost of a new building. Dairy barns, the initial growth and subsequent decline of dairy farming, and case studies of converted dairy barns within North Carolina are the subject of this brief.

History of Dairy Farming in NC

Humans have been drinking milk from cows for thousands of years. The American Dairy Association Northeast states that, in the early 1600s, immigrants brought cattle with them from Europe to supply their families with dairy products and meat. Although many different breeds of cattle including Durhams, Ayrshires, Guernseys, Jerseys, and Brown Swiss were imported through the next few centuries, it was not until the late 1800s that cattle breeds were developed specifically for dairy purposes.

Modern dairy farming began in the early 1900's after pasteurization was developed and practiced. Pasteurization allows for a safer product and extends milk's shelf life by eradicating spoilage causing bacteria through the application of heat. This process allows milk to last longer and be shipped further. In rural America, milk and milk products were made primarily for home or local use. However, with the movement of population from the farms to the cities at the turn of the century, it became necessary to mass produce and improve the quality of milk. The National Agricultural Library describes how significant inventions such as commercial milk bottles, milking machines, tuberculin tests for cattle, pasteurization equipment, refrigerated milk tank cars, and automatic bottling machines contributed towards making milk a healthful and commercially viable product.

Most of North Carolina in the nineteenth century had an agriculture-based economy. At the time, commercial dairying in North Carolina comprised only a small part of the state's agricultural economy, although most farmers raised a few cows for domestic consumption. After 1900, in areas of North Carolina where farms were changing from row crops to livestock, some farmers with milk surpluses started regular dairy routes. These routes gave farmers ready cash each month rather than forcing them to wait for the annual row crop harvest. Small dairies, or creameries, usually served nearby areas, selling fresh milk, butter and ice cream to local families. By the early 1940's, such creameries were delivering milk to homes and grocery stores daily. Commercial dairies were usually located near towns or cities

Fig. 2: Wakefield Dairy Complex prior to renovation

where the populations supported commercial agriculture. North Carolina supported few such markets in the nineteenth century. In 1869, of the 39 out of 90 counties in the state that produced any milk at all, it was Wake and New Hanover counties, serving the Raleigh and Wilmington markets respectively, that led the state in milk production. In 1870, Davie County had an average number of dairy farms when compared with other small North Carolina counties. Historic dairy farms from both Davie County and Wake County are case studies within this brief.

With increased rail construction, industrialization, and urban development in the late nineteenth century, commercial dairying grew in North Carolina. Whereas in 1870, 17,000 gallons of milk were produced statewide, that number had grown to more than 55 million gallons by 1890. It was at the end of the nineteenth century that commercial dairying began to become an important part of Davie County's agricultural economy. Several factors contributed to the expansion of commercial dairying in North Carolina after the turn of the twentieth cen-tury. Among these were a more scientific approach to livestock breeding; rail expansion; improved roads that brought – especially after World War I – a widespread use of trucks; growth in demand for dairy products, particularly in the Piedmont where there was an increasing number of textile mill towns; and innovations in refrigeration and pasteurization, which insured the safety of perishable dairy products. The establishment of cooperate creameries as collection, and in some cases, processing centers also allowed farmers to make distribution more efficient. In 1917, nine creameries had been established throughout the state. Commercial dairying in America coincided, in large part, with the formation of state departments of agriculture in the early twentieth century. Agricultural extension offices promoted dairying by ensuring the quality and safety of milk products through new government regulations and by promoting sanitary farm conditions. The Agricultural Extension Service even designed standardized plans for milking barns, with gable or gambrel roofs and concrete-block walls. Concrete block construction was considered easier to clean than frame construction, and by the 1920s new state hygiene laws required milking barns to have concrete floors that could be easily washed down.

In many North Carolina counties, the arrival of the cotton boll weevil had a major impact. It reached Wake County by the 1930's forcing farmers to abandon cotton production and diversify their farming operations. The agricultural depression of the 1890s further encouraged the development of a dairy industry as plummeting cotton prices exposed the weaknesses of a cash crop economy. To overcome the state's reliance on tobacco and cotton, the NC Agricultural Extension Service encouraged Wake County farmers to undertake dairy production. According to the National Register of Historic Places (NRHP) nomination curated by Ellen Turco and April Montgomery, county extension agents provided farmers with barn plans that incorporated modern sanitary practices intended to increase milk quality and production. As a result of this effort, the volume of milk produced in the county quadrupled between 1920 and 1930.

According to Chester Middlesworth, 1938 marked the beginning of a growth trend in North Carolina dairy

Fig. 3: View of Win-Mock prior to renovation

Fig. 4: View of Win-Mock prior to renovation

herds and an improvement in the overall quality of milk in the state. In 1944, for the first time in North Carolina's history, the state produced enough milk for both home consumption and export to other states. North Carolina continued to appropriate funds specifically for dairy industry support in the annual budget from that time to the present. Dairy farmers were able to get more milk from each cow through better nutrition, care, and facilities. Eventually this success resulted in over-production, and some dairy herds were sold off.

Decline and Loss of Dairy Farms

America's dairy industry has faced losses since hitting highs in 2014, forcing some dairy producers out through foreclosure. According to Eller, others have thrown in the towel volun-tarily, unwilling to wipe out what is left of their assets. Dairy producers are leaving the industry at about twice the average annual rate. Prices in 2018 were about half of what they were in 2014 and have not yet hit an all-time low. But it is the longest time period for which low prices and negative profit margins have persisted. With the downturn expected to stretch into a fifth year, many farmers already have eaten through their financial cushion and banks are re-evaluating whether they can continue to loan money to some dairies. Though bittersweet, the loss of dairy farms could help pull the milk supply in line with demand.

As of 2018, North Carolina is home to 45,000 milk cows, mostly black-and-white Holstein. The next most common breed is the brown Jersey, most of which are descended from the herd at the Biltmore in Asheville, NC. Most of the 175 dairy farms in the state are family-owned and operated. Each cow produces an average of 8.1 gallons of milk per day. Dairy is a big contributor to the economy in Western North Carolina. Some 6,555 jobs are directly related to milk production, processing, and the distribution and sale of those products. Dairy farmers also grow much of their own silage of hay, corn, and alfalfa, and the weather can wreak havoc on the crops. A lack of rain can mean less nutritious grass and less grass in general. A mid-season drought can mean only one hay crop, and that means less food for the winter. Boyd states a single thunderstorm with hail can destroy a field of corn in minutes. However, in 2018, more than 2,700 United States dairy farms closed according to Dickrell. In 1975, North Carolina produced 1,498 million pounds of milk contributing 1.3% to the U.S. total. According to the U.S. Department of Agriculture, in 2000, North Carolina produced 1,189 million pounds of milk contributing 0.7% of the nation's total.

The recent acceleration in the decline reflects how difficult it is to operate a dairy, particularly in the last several years. Since the end of 2014, dairy farmers have struggled with low prices resulting from large supplies outweighing demand, in the U.S. and around the world. However, toward the end of 2019, milk prices surged to levels not seen since 2014. According to Nepveux, these prices were a function of increasing milk powder prices along with higher cheese prices helping to lift both Class III (cheese) and Class IV (butter and dry milk) milk prices. Unfortunately, this surge happened too late to assist many of the producers who had already reached a breaking point.

Dairy Barn Characteristics

So, what to do about the abandoned farm structures from unsuccessful dairy farms? In some regions, barns are dismantled for lumber, their beams sold for reuse in living rooms. Yet, Auer points out that historic barns can be refitted for continued use in agriculture, often at great savings over the cost of new buildings. Before getting into the hurdles of preserving a dairy barn, let us discuss the characteristics of dairy barns to then understand issues that may arise. Rarely do barns,

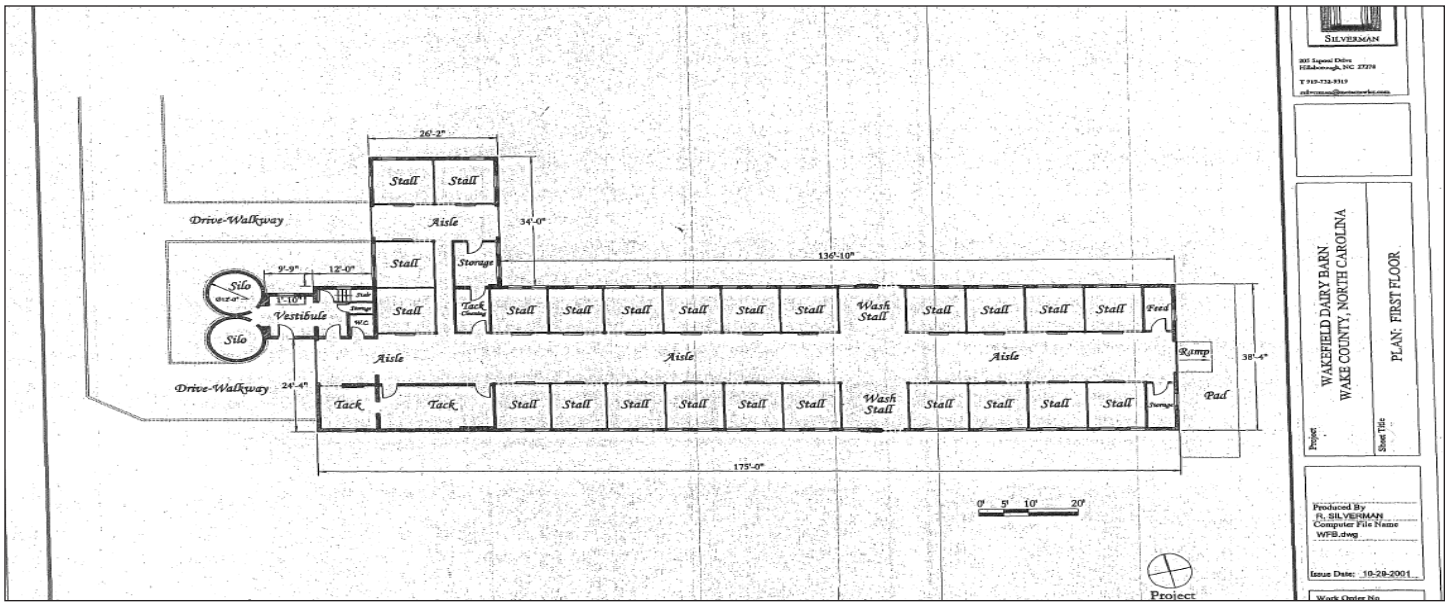

Fig. 5: Floor plan of Wakefield Dairy Complex Dairy Barn prior to renovation

especially twentieth-century barns, reflect architectural styles. Rather, their appearance is dictated by their functional needs. Barns evolved according to the needs of farmers as well as advancements in agricultural technology. Prior to 1900, most barns were multi-purpose in use, of timber frame or log construction, gable roofed, and had few windows. From about 1900 to 1940, many large dairy barns were built in northern USA. These commonly have gambrel, or hip roofs to maximize the size of the hayloft above the dairy roof and have become associated in the popular image of a dairy farm.

After the first decade of the twentieth century, more modern barns began to take shape, especially for dairies. These new designs assumed lumberyard distribution of standard-sized sawn boards and machine-made nails. The new barns did not require skilled joinery and were faster to build. The plank frame barn became the most popular. The main reasons for the building of the plank frame barn were the design saves in cost of lumber, provides far more storage room in the hayloft, and is less labor intensive to build than any other type. Professionals such as agricultural engineers and farm experts influenced barn design by working with the United States Department of Agriculture, state agricultural colleges, agricultural experiment stations, extension services, and agri-businesses.

One of the most popular dairy barn forms became known as the Wisconsin Dairy Barn. This barn had a narrow width-to-length ratio, light roof framing – often with a gambrel form –that provided for a maximum loft size, large hay doors at either end of the loft, side walls with rows of closely spaced windows for light and ventilation, a low main-floor ceiling, a floor plan with stalls and alleys arranged for maximum efficiency – usually meaning a center alley with two flanking rows of stalls with stanchions – and an attached silo. Other features of a dairy barn include a milk house – an attached structure where the milk is collected and stored prior to shipment – a grain bin, found in the mow (hayloft) and usually made of wood with a chute to the ground floor provid-ing access to the grain, and a tack room where bridles, saddles, etc. are kept.

Considerations for Conserving Historic Barns

Historic barns are preserved for a number of reasons. Some are so well built that they remain useful even after a century or more. The big potential profits that can come from adding an agri-tourism business to an existing farm have sparked a pop-up of corn mazes, farm camps, and rustic barn wedding venues. A survey by *The Knot* in 2019 estimated that converted farm barns are the second most popular wedding reception venue. However, opening and operating a wedding venue on farmland presents challenges such as complying with local zoning and ordinance laws and potentially complying with state or federal farmland preservation laws.

Farms are typically zoned for agricultural purposes, but most are not zoned for commercial business. If you are not zoned commercial, you will likely need to apply to your local zoning board for a variance. Checking for residential and agricultural zoning lines is key because some towns have special rules that prohibit the operation of a business in residential zones. Zoning codes can also dictate if and where you can place an industrial kitchen on the property, the location and number of restrooms needed, and whether you can have a liquor license. These are separate issues, each with their own guidelines and permitting process. Zoning codes are a local issue, so while the state may provide general guidance about what is acceptable, the local governing body must be consulted.

Local ordinances are yet another factor to consider. These are matters not already covered by state and federal

Fig. 6: View of renovated dairy barn at Win-Mock

laws. In the case of creating a wedding venue, compliance with local noise ordinances is required. Nothing can ruin the success of a wedding venue quicker than making the neighbors angry with loud noises late at night or high traffic volume at inconvenient times.

The biggest obstacle one could face is complying with farmland preservation laws – assuming the farmland is preserved. Preserved farmland is farmland that has had its development rights sold to the government in exchange for a cash payment, essentially preserving it as open space designated for agricultural use in perpetuity. Preservation laws do not allow you to build new infrastructure on the property unless it is for agricultural purpose. This can sometimes be crucial in saving a family farm, but the restrictions could make it difficult to convert the space into a wedding venue.

Two Case Studies of Adapted NC Dairy Barns

In North Carolina, there are two prime examples of historic dairy barns that have been converted into event spaces. Both barns are listed on the National Register of Historic Places. The Wakefield Dairy Complex located in Wake County and Win-Mock Farm Dairy located in Davie County are both successful event venues that utilized dairy barns as their main event space. Win-Mock used state historic tax credits to rehabilitate the property and Wakefield Dairy Complex opted not to use tax credits but did comply with the Wake County Historic Preservation Guidelines.

Federal and state rehabilitation tax credits provide jobs, bolster the tax base, and revitalize existing buildings and infrastructure, while preserving the state's priceless historic character. According to the NC State Historic Preservation Office website, owners and developers may potentially receive a 20% federal income tax credit and a 15-25% state income tax credit for certified rehabilitation

Fig. 7: View of renovated silos at Win-Mock

of income-producing historic structures. Buildings listed in the National Register of Historic Places, either individually or as a contributing building in a National Register Historic District, are eligible candidates for tax credits. The rehabilitation of the historic structure must be substantial and all rehabilitation work must meet The Secretary of the Interior's Standards for Rehabilitation. Applications are subject to a joint review by the State Historic Preservation Office and the National Park Service.

Win-Mock Farm Dairy

Standing on a hilltop above the flood plain of the Yadkin River, the Win-Mock Farm Dairy is located at the eastern edge of Davie County in North Carolina's central piedmont. Between 1924 and 1933, R. J. Reynolds Tobacco Company executive S. Clay Williams (1884-1949) purchased more than 1,500 acres along the eastern edge of Davie County in North Carolina's Piedmont region. With the former county demonstration agent as his farm manager, Williams established one of the premier dairies in this area of the state. Williams developed his dairy at a time when scientific advances in dairy farming supported barn and other dairy building designs that accommodated more livestock and promoted more efficient use of labor, increased mechanization, and a greater emphasis on animal health and sanitation. In the National Register nomination, Laura Phillips points out that the Win-Mock Farm Dairy buildings illustrate these advancements.

With a 38' by 108' footprint, the great barn is an exceptionally large barn sheltered by a Gothic-arch roof that provides the most unobstructed loft space for the storage of hay of any barn roof designs. Among other features, the barn has a poured-concrete floor with manure gutters that aided sanitation, roof ridge ventilators that provided healthier air for the cows, a

Fig. 8: Renovated dairy barn at Wakefield Dairy Complex

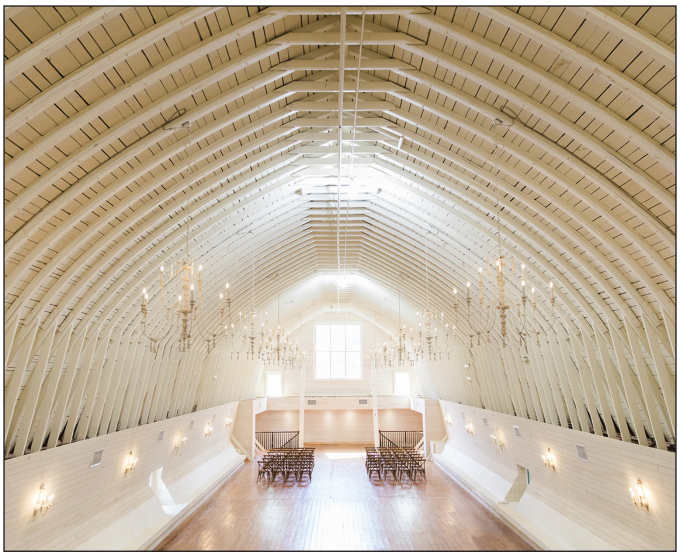

Fig. 9: Renovated interior at Wakefield Dairy Complex

plan with a center alley and flanking stalls and milking stanchions that allowed for greater efficiency, a north-south alignment that allowed the long rows of side windows to get the maximum amount of light, wings where calves were born and nursed, and proximity to its related buildings, the granary and the bottling plant. At the north end are two tall, concrete silos that allowed the storage of silage for year-round feeding of the cows. Just east of the barn is a round, concrete water trough.

On June 1, 1949, three months after the death of S. Clay Williams, his heirs sold 1,200 acres of the farm to Southern Steel Stampings, Inc., a Winston-Salem company owned by members of the Bahnson family. In 1980, when the family sold the Southern Steel Stampings Company, they transferred all the Win-Mock Farm property from the company to their private ownership, dividing it by value among the four sons. In 1996 Reid, Henry, and Alex Bahnson sold their 339 acres to the Hillsdale Group, LLC, for development.

The Hillsdale Group sold the property to the Sterling Event Group in 2010. Wayne Thomas, president of the Sterling Event Group, was gracious enough to provide an interview for this project. The intentions of this purchase were to convert the dairy barn and the surrounding buildings into an event space. The company knew of the barn's historical significance and went about compiling a nomination for the NRHP. The nomination took ten months to complete. Through the accepted nomination, they were able to secure state historic tax credits for the renovation. Mr. Thomas knew what they wanted out of the structure and sat down with a general contractor and an architect to get the renovation right. He said they had no issues with zoning because the property the barn and aiding structures were on was not zoned for agricultural use. They did however have to contemplate parking and fire suppression.

There was much back and forth with the State Historic Preservation Office during the renovation but Thomas states that the state was "pretty gracious" during that process. He explains that they "took it down to the bones, they left the siding on and replaced a lot of supporting elements. They took the roof off and put a whole new roofing structure on. They dug out the floors for more ceiling room and also to put the HVAC underground." The state originally told him dairy barns could not be heated or cooled but he said it had to have that, so the compromise was to put it below ground. Wayne said they wanted to put in a porte cochere (with a grand staircase), but the state told them no and they had to compromise on a "nice set of stairs." The state also asked them to put in pickets in the front like a dairy barn would have had and to keep the exposed beams and rafters in the front of the barn. Wayne explained that the most challenging part of the renovation was connecting the power cabling to all three buildings (dairy barn, granary, and bottling plant). They also converted the milk processing plant and the granary into associated venue spaces. These renovations started in November of 2010 and took seven months to complete. The dairy barn was finished first and they started booking the barn for weddings as soon as they started the renovations and they gave the brides hard hats with bridal veils on them.

Win-Mock's website boasts: "WinMock at Kinderton hosts business conferences, social events and weddings throughout the year. Attendees know, the minute they arrive, that they will be spending time in a captivating place imbued with history—the polar opposite of the indistinctive (and indistinguishable) events venues that are so common."

Wakefield Dairy Complex

The Wakefield Dairy Complex was constructed in 1934 for John Sprunt Hill's Guernsey dairy herd. Hill was a prominent North Carolina banker, businessman, and philanthropist. His farm at Wakefield was one of three model dairy farms he owned in Wake and Durham

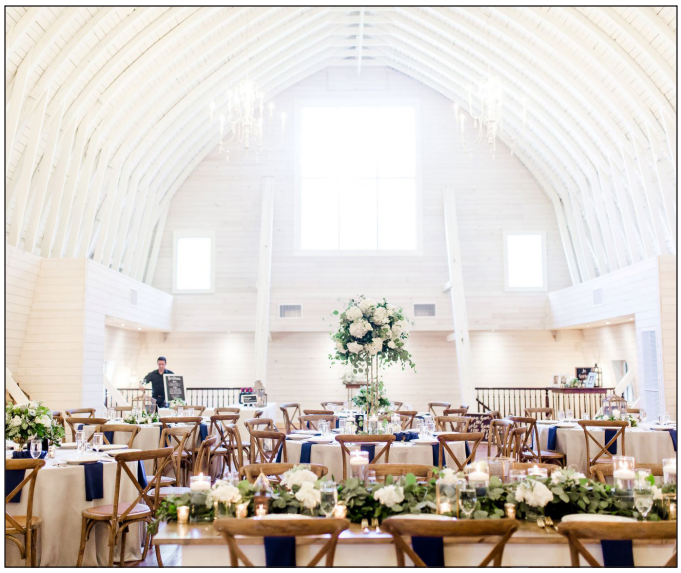

Fig. 10: Renovated Wakefield Dairy Complex in use

Fig. 11: Renovated Win-Mock barn in use

Counties. In the years following the Depression, Hill purchased many small local banks to form what would later become Central Carolina Bank. One of the banks Hill acquired was the Bank of Wake Forest. Hill's tract at Wakefield was assembled through foreclosure sales. The farmers around Wake Forest were eager to divest of their no Ionger profitable farms and Hill provided a welcome opportunity to do so. Hill amassed a large tract on which he could indulge his farming hobby, particularly his interest in raising Guernsey dairy cows. By the time Hill acquired the Wakefield tract his family was already operating three dairy farms in Durham County; Wakefield Farm became the Wake County outpost for Hill's dairy operations. The farm also produced hay for feed, and hybrid com and carala wheat. Hill also raised Percheron draft horses there.

The Wakefield Dairy Complex is one of only a few dairy complexes surviving in Wake County, out of approximately 20 that operated in the early 1930s. The Wakefield Dairy Complex is distinguished from other local dairies by its size and exterior appearance. Unlike the simple and unadorned side-gable milking barns found in the county, the stylish structures at Wakefield are unified by decorative motifs, such as the white and green paint theme and the X-batten window shutters and doors. According to the NRHP nomination curated by Ellen Turco and April Montgomery, the barn's predominant feature is the graceful bell-shaped roof that slopes steeply from the ridge to the slightly flared overhanging eaves. These design elements identify each building as part of the larger complex. The size of the buildings and the level of architectural embellishment sets the Wakefield Dairy Complex apart from the modest working farmsteads that characterized Wake County.

Business partners Samad Hachby and Tae Park purchased the property in 2017 and it has now become an event and wedding venue. The current owners of the Wake-field Dairy Complex - Southern Oak Events - could not be reached during the research for this brief.

Jeremy Bradham from the Capital Area Preservation Inc., stated there is no Certificate of Appropriateness (COA yet. However, the only alterations are the removal of the original windows and their replacement with bars for the horses before it was landmarked (sometime in the 1980s after the originals were removed), the current large window in the barn door opening on the second floor and the removal of one of the one-story wings closest to the golf course.

Conclusion

With the steady decline of dairies, abandoned dairy barns, and the growing demand for rustic barn weddings, converting dairy barns into event space proves to be cost effective over building a new building, environmentally friendly, and meets a need in a multi-million-dollar industry. Based on two local case studies of historically significant barns, with the aid of historic tax credits cushioning the expenses to rehabilitate historic barns, and the knowledge of zoning laws and ordinances, converting a barn into an event space is a viable way to earn extra income for those with a historically significant barn.

Bibliography

Agriculture.com Staff (2010). About Barn Again! Retrieved from https://www.agriculture.com/machinery/buildings-and-bins/About-BARN-AGAIN_221-ar6507.

American Dairy Association Northeast (2020). Dairy Farming History. Dairy Farms. Retrieved from https://www.americandairy.com/dairy-farms/dairy-farming.stml.

Auer, Michael J. (1989). The Preservation of Historic Barns. Preservation Briefs. National Park Service, Washington, D.C. Retrieved from https://www.nps.gov/tps/howtopreserve/preservedocs/preservation-briefs/20Preserve-Brief-Barns.pdf.

Dickrell, Jim (2019). More than 2,700 U.S. Dairy Farms Closed in 2018. Dairy Herd. Retrieved from https://www.diaryherd.com/article/more-2700-us-dairy-farms-closed-2018.

Eller, Donnelle (2018). After Years of Catastrophic Losses, dairy farms are increasingly closing their barn doors. USA Today. Retrieved from https://www.usatoday.com/story/money/nationnow/2018/11/02/dairy-farmers-increasinglyclosing-shop-after-years-low-milk-prices/1847295002/.

Fox, Justin (2019). A Productivity Revolution is Wiping Out (Most) Dairy Farms. Bloomberg Opinion. Retrieved from https://www.bloomberg.com/opinion/articles/2019-06-05/dairyfarms-fall-victim-tothe- productivity-revolution

Hoffman, Marilyn (1989). Historic barns are getting overdue attention architectural gems or Local landmarks, relics are being rehabbed across U.S. Los Angeles Times. Retrieved from ProQuest.

Joyce, Emma (2019). The Importance of Preserving Old Barns. UNH Extension.Retrieved from https://extension.unh.edu/blog/importance-preserving-old-barns.

Middlesworth, Chester Paul (2006). Dairy Industry. NCpedia. Retrieved from https://www.ncpedia.org/dairy-industry.

National Agricultural Library (2020). Early Developments in the American Dairy Industry. United States Department of Agriculture Special Collections. Retrieved from https://specialcollections.nal.usda.gov/dairy-exhibit#EarlyHistory.

National Trust for Historic Preservation (1996). Barn Again! Forum News. Retrieved from http://forum.savingplaces.org/viewdocument/barn-again.

Nepveux, Michael (2020). Largest Decline in U.S. Dairy Farms in 15-Plus Years in 2019. Market Intel. Retrieved from https://www.fb.org/market-intel/largest-decline-in-u.s.-dairy-farms-in15-plus-years-in-2019.

North Carolina Department of Natural and Cultural Resources (2020). Income Producing Properties. Historic Preservation Tax Incentives for Income-Producing Properties. NC State Historic Preservation Office. Retrieved from https://www.ncdcr.gov/about/history/division-historical-resources/nc-state-historic-preservation-office/restoration-0.

Phillips, Laura (2010). Winn Mock. Winston Salem, NC. National Register of Historic Places Nomination.

Phillips, Sarah (2019). Are You Turning Your Barn into a Wedding Venue? Here's What You Need to Know. Penn State. Retrieved from https://sites.psu.edu/phillipstheagriculturalentrepreneur/2019 /02/05/are-you-turning-yourbarn-into-a-wedding-venue-heres-what-you-need-to-know/.

Rocchi, Julia (2013). 10 Ways to Save Your Historic Barn. National Trust for Historic Preservation. Retrieved from https://savingplaces.org/stories/10-ways-to-save-your-historicbarn.

Thomas, Wayne (2020, October 5). Personal communication [phone interview].

Turco, Ellen and April Montgomery (2002. Wakefield Dairy Complex. Wake Forest, Wake County, NC. National Register of Historic Places Nomination.

U.S. Department of Agriculture (1981-2001). National Agricultural Statistics Service, Milk Final Estimates, February 1981, and Milk Production, February 2001.

Acknowledgements

The author thanks Wayne Thomas of Sterling Event Groups, Jessica of Southern Oak Events, Ellen Turco of Richard Grubb & Associates, and Jeremy Bradham of Capital Area Preservation, Inc. for providing direct data and information for this brief.

The author also thanks Mitch Wilds, Andrew Edmonds, Tim Simmons, and Jennifer Cathey, all from the North Carolina State Historic Preservation Office. for assisting her in various barn restoration projects in the state that used tax credits and providing a second barn turned event space as another case study.

Image Credits

Fig 1. Library of Transylvania County: The Rowell Bosse North Carolina Room
Fig 2 & 5. NRHP Nomination Form for Wakefield Dairy Complex
Fig. 3 & 4. NRHP Nomination Form for Win-Mock Dairy Barn
Fig. 6, 7 & 11. Win-Mock at Kinderton Website
Fig. 8, 9 & 10. Photographed by Bow Tie Collaborative on The Historic Wakefield Barn Website

The Historic Dimension Series is a collection of briefs prepared by UNCG students under the direction of Professor Jo Ramsay Leimenstoll. For information on other topics in the series please visit the website at go.uncg.edu/hds