

# 10. "Burning Brick and Making a Large Fortune at It Too": Landscape Archaeology and Lowcountry Brickmaking

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his study uses the research approach of landscape archaeology to examine and document the role of brickmaking within the Wando River basin of South Carolina during the period between 1740 and 1860. Landscape archaeology is an approach which looks not only at why humans occupy a specific site or region, but also at how they modify the landscape to fit their own cultural patterns and, in turn, how these modifications affect the landscape through time.

The European colonists perceived the New World in terms of commodities. They began almost immediately to catalog and devise ways to exploit the available resources. Because there was a perception that the land was vast and resources limitless, little concern was given to the effects of environmental exploitation. The land was something to be mastered and altered to suit a cultural mind-set.<sup>2</sup>

The process of adaptation was influenced by both environmental and historical factors. The impetus for the development of the brickmaking industry in the lowcountry was proximity to the urban center of Charleston and that city's demand for fireproof construction materials.

Between 1740 and 1860, there were at least 79 brickmakers operating in the Charleston vicinity, almost half of them on the Wando River or its

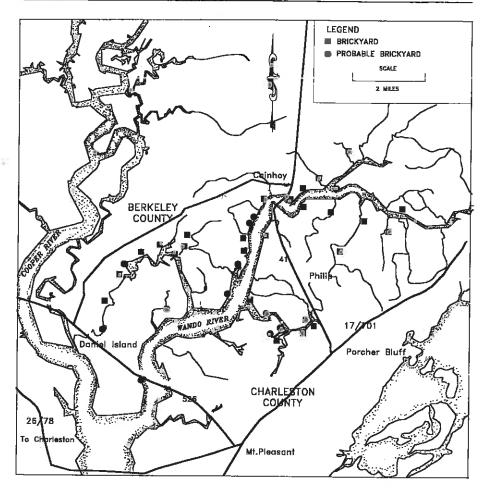
tributaries (map 10.1). Each brickmaker produced thousands of marketable bricks per year, most of which went to the city for construction of houses, churches, commercial buildings, and fortifications. In Christ Church Parish on the Wando River this production represented a third or more of the yearly income of the plantations, surpassing the lowcountry cash crop staple of rice.

# The Wando River Basin

The drainage basin extends 20 miles northeast of Charleston through portions of two counties or historic parishes (map 10.1). The 10-mile-wide peninsula between the Wando River and the Atlantic Ocean in Charleston County, known as Wando Neck, was historically Christ Church Parish. Unlike much of the lowcountry, the Wando Neck could not readily support the cash crops of indigo, rice, and cotton. The soils are poorly drained and frequently wet, and the river itself too saline to support rice cultivation, except at the extreme upper reaches of its tributaries. A similar situation exists along the northern and western shorelines in the neighboring parish of St. Thomas and St. Denis in Berkeley County.

This river basin did have assets. The first was

Map 10.1. Brickyards identified in the Wando River Basin, S.C.



proximity to Charleston and the second was water transportation. This led to development of the region as a production center for the urban market. Area agriculture centered on produce and livestock, supplemented by income from firewood, timber, naval stores, and bricks.<sup>3</sup>

Brickmaking has four basic requirements: suitable clay, sand to temper the clay, fuel to fire the kilns, and labor. The Wando River basin had an abundance of all of these items, with labor provided by plantation slaves. In order to develop beyond the on-site usage level, one more item was required—transportation. The navigable river flowing to Charleston provided market access, which turned brickmaking into a thriving industry in this region.

A property advertisement which appeared in 1747 demonstrates the early recognition of the

attributes present along the Wando River: "To be Sold ... the Plantation where the Subscriber now lives, convenient to a good Landing on Wando River ... also great conveniency for Brick Works, there being excellent Clay close to the Landing with Plenty of Wood at Hand for burning ... William Bruce."

# **Historical Development**

Brickmaking has a long history, dating back to the ancient Middle East where it began with sun-dried bricks. The craft was well developed in the low countries of northern Europe, particularly the Netherlands, by the fifteenth century. From there it was introduced to southeastern England where it was actively adopted because of a lack of local building stone.

Since the largest single group of early European settlers in North America came from this area of England, it is likely that they brought the technique of brickmaking and masonry with them to the New World. Immigrants from the Netherlands and France also contributed to the establishment of the industry; in fact, the principal early period of brick building in the colonies in the late seventeenth century corresponds to the influx of French Huguenot settlers. A large group of these Huguenots settled in the South Carolina lowcountry, particularly in the parish of St. Thomas and St. Denis.

Bricks were made in the lowcountry from the beginning of its settlement, but not on a large scale. By 1682, Thomas Newe's letters from South Carolina stated that "here is excellent Brick made, but little of it." The industry received a major impetus from a series of disastrous fires in Charleston. In 1713, an act of the Assembly required all buildings within the fortified portion of Charleston to be of brick or stone construction. This act was repealed in 1715 as a result of complaints about the scarcity and expense of brick.

Another fire in November 1740 destroyed much of the center of the city and the Assembly again acted, requiring that "all the Outside of all Buildings hereafter to be erected or built in Charles Town to be henceforth made of Brick or Stone, ... and be covered with Tile, Slate, Stone or Bricks." The act also set the price of bricks for the next ten years at six pounds per thousand for English brick, five pounds per thousand for Carolina brick, and three pounds, ten shillings per thousand for the less desirable (and smaller) New England bricks. This act was probably instrumental in promoting the establishment of thriving brickyards in the region surrounding Charleston.

Evidence of how important these products were to the plantations within the Wando River basin rests in the ledgers and diaries of the antebellum period. Ledgers of Dr. Anthony Toomer, owner of a plantation on Toomer Creek, list numerous sales of cords of wood, turkeys, corn, butter, cabbages, carrots, chickens, eggs, spinach, asparagus, calves, artichokes, peas, rice, hay, ducks, and building

materials such as brick, lime, and lumber. Bricks were the second-largest category in terms of income; firewood was the largest. While similar records have not been located for other properties within the study area, their outputs were probably much the same.

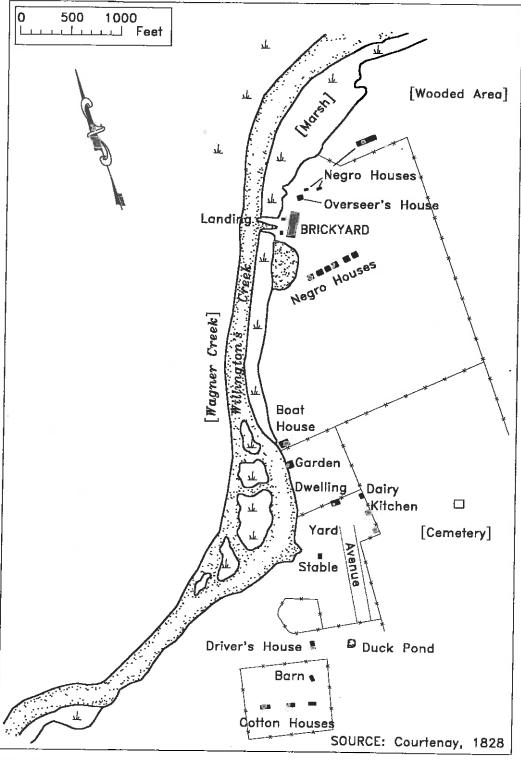
Dr. Toomer's shipping records also provide a clue as to the volume of bricks being produced; in a three-year period, he listed shipments of 195,900 bricks to Charleston from a single kiln. <sup>13</sup> The adjacent Lexington plantation to the northwest had a pair of kilns with an associated brickmaking complex (map 10.2). Elm Grove plantation to the east had two brickyards, <sup>14</sup> and similar brickyards are recorded for many of the properties along the Wando and its tributaries. <sup>15</sup>

This manufacturing enterprise was sufficiently valuable to the plantations that, in his post—Revolutionary War claims for losses to the British, Arnoldus Vanderhorst of Lexington included his building "200 feet long by 30 for Sheltering Bricks" valued at 1,000 pounds. This is half the value claimed for his dwelling on the Vanderhorst Kiawah Island cotton plantation. 16

The importance of this industry is also reflected in plantation settlement patterns, in which slaves, the means of production, were often located in proximity to the kilns rather than to the owner or the agricultural fields (map 10.2).

Brickmaking was often a winter and spring occupation. The source scheduling complemented the region's truck and grain farming and livestock production. The combination of available resources, a ready market, and a suitable labor force (slaves), led the majority of the plantations in the area to develop brick yards and landings along major streams. As one writer said of the Cooper River brickmaking industry: "The extensive brickmaking on Cooper River was sometimes a very profitable second string to rice. One old lady, said to have been Mrs. Frost, advised by three successive dreams, turned to it as an industry, and like [John] Gordon, made a fortune." This statement applies to the planters along the Wando River.

The plantations of the Wando River basin also



Map 10.2. Lexington kiln site, Charleston County, S.C.

provided a convenient location for Charleston businessmen who wished to acquire the financial investment and status of planter without much distance between themselves and their major source of income in Charleston. At the same time, proximity to Charleston allowed planters to invest in Charleston businesses which complemented their plantation activities, such as factorages, shipping, and brickmasonry.

An example of this interrelationship can be seen at Lexington Plantation. The Vanderhorsts, primarily planters, also owned wharves and stores in Charleston. The next owner of this property was A. S. Willington, who was primarily a Charleston businessman and newspaper publisher. The third owner, Effingham Wagner, was also involved in Charleston commercial activities. All of these owners of Lexington owned homes in Charleston.19 Their neighbors were equally involved in Charleston commerce. Anthony Toomer of Richmond Plantation, southeast of Lexington, and the Horlbecks of Boone Hall were brickmasons in Charleston.<sup>20</sup> William Hopton, owner of the property northwest of Lexington, was a merchant and public official.21

It is important to note, however, that although the planters and businessmen may have listed themselves as brickmakers, it is highly unlikely that they actually were personally involved in the manual labor of making brick. As Eaton points out, "During the eighteenth century and to a lesser extent in the ante-bellum period, household industries were carried on by slaves, who were employed on the large plantations to weave cloth, to make bricks, staves, and barrels, to manufacture nails, to boil soap, to do blacksmith work, and even to make artistic furniture."22 Thus, the role of the named "brickmaker" in the lowcountry was essentially that of the supervisor and instructor. Often, the "brickmaker" was, in fact, merely the property owner, and an unnamed overseer actually directed the brickmaking. For example, in 1770, John Moore, identified as a brickmaker in St. Thomas and St. Denis Parish, advertised for an overseer who understood brickmaking.23

Little documentary evidence exists for the

unnamed slaves and overseers who provided the labor and skill for brickmaking. There is an occasional advertisement such as that for an 1849 slave sale which listed four female slaves as "brick stowers."24 This same advertisement provides evidence of the importance of this skill in its heading, which lists "Several Brickmakers" as the first skill for those being sold.25 As a result of this lack of documentary information, discussion of brickmakers necessarily focuses on those property owners who were identified in the written record as practitioners of this trade.

This study identified 79 people as brickmakers in the lowcountry between 1745 and 1830; 38 brickvard locations near Charleston were matched to this list. There were probably others who could not be identified due to gaps in the written record, as well as the nature of that record. Information on eighteenth-century brickmakers was gathered primarily from newspaper advertisements and records of transactions for building materials.26 The later antebellum information was based largely on map references, city directories, and census records.27 It is interesting to note that in a maledominated society several women were listed as brickmakers. At least two, Hannah Goodbe and Mrs. Frost, were actively engaged in providing bricks to the market.28

It is rather difficult to estimate the total brick production in the Wando basin prior to 1850. Some idea of scale can be drawn from references to the amounts of brick ordered for specific projects. A single structure, the 1745 Pinckney house in Charleston, required a total of 275,800 bricks ordered from three makers. During this same period, Zachariah Villepontoux provided almost 417,000 bricks for St. Michael's Church.29 Hollings stated that it had taken about 100,000 bricks for a two-story, 45-foot square house. 30 After the Revolutionary War, Arnoldus Vanderhorst of Lexington Plantation claimed losses of materials for construction of a "3 story brick house in Charleston" at a value of 2,500 pounds, which could represent over 400,000 bricks at the going rate.31 The many Charleston area fortifications continually required

bricks; Villepontoux and Goodbe provided 94,000 between 1757 and 1758, while two other brickmakers provided an additional 68,600 during the same period.<sup>32</sup> Between 1775 and 1776, the Second Council of Safety purchased 40,500 bricks for Dorrels Fort from three different brickmakers.<sup>33</sup>

Based on the available comparative data, it seems likely that a brickmaking complex like that at Lexington Plantation on Wagners Creek could have been producing several hundred thousand bricks each season.34 This could translate into more than \$2,000 per year income for the planter, without the investment in seed or stock required for agricultural activities, or the risks of crop failure or insect damage. As evidenced by the settlement pattern, this brickyard was obviously an important part of the plantation (map 10.2). In addition to two kilns and numerous claypits, the complex included the plantation overseer's house and the only slave cabins within the property, consisting of three groups of dwellings. One of these dwellings was a 200-foot-long, 10-room quarters structure which may have been used for slaves brought in seasonally to make bricks.35

Total annual production figures were located for three antebellum brickmakers prior to the 1850 census: Anthony Toomer of Richmond, Peter Gaillard Stoney of Medway, and the Horlbecks of Boone Hall. Toomer's brick production for the three year-period between 1783 and 1785 totalled 195,900 bricks.36 Stoney's Medway plantation shipped 594,000 bricks in the ten-month period from 1852 to 1853,37 while the Horlbecks shipped 158,150 bricks during a single week in 1847.38 In fact, during the ten years between 1850 and 1860, Boone Hall produced over 24 million bricks valued at more than \$170,000.39 Examination of the 1850 census records (table 10.1) shows that the nine brickmakers listed in these two parishes were producing over nine million bricks in 1849 (year of data collection), valued at \$64,000. This production relied on a relatively small labor force of 288 slaves. 40

Stoney's Medway plantation day book for 1852 provides an indication of the level of effort involved in a major brickmaking operation. This book listed

a maximum of 18 hands a day in the brickyard. Usually the record indicated either 6 or 12 hands supporting 1 or 2 molding tables. Maximum production from these 2 tables appears to have been 10,000 bricks per day. Activities listed including molding, stowing the case (kiln), hauling wood, carting clay, and unloading the kiln. 41

Thus, brickmaking, while labor intensive, could be conducted at a high level of production using a limited number of slaves, probably on a seasonal basis at most brickyards. The value of the end product compared favorably to that of plantation cash crops in the lowcountry. For example, in 1850 rice sold at an average price of 3.4 cents per pound. This places the value of rice production in Christ Church Parish at \$32,803 in that year, compared to \$34,160 for bricks. In St. Thomas and St. Denis Parish, which produced a greater volume of rice, the value of the rice production in 1850 would have been \$119,041, while brick value was estimated at \$29,960.

The low level of technology, lack of mechanization, and heavy reliance on manual labor were important factors in the demise of brickmaking in the lowcountry. Brickmaking was conducted by slaves. The Civil War not only brought financial ruin and physical devastation to this region, it ended slave-based labor. Without this cheap labor source and without mechanization, brickmakers could not compete with brickmaking operations using machine molding and continuous kilns. Railroads even supplanted low-cost water transportation. After 1865, brickmaking was essentially abandoned in this region, shifting to the piedmont region of the state with its abundant, high-quality clay resources.

# **Brickmaking Process**

The craft of brickmaking as practiced before the Industrial Revolution began in the fall with digging the clay, which was allowed to weather over the winter. <sup>45</sup> The actual brickmaking generally began in late winter or early spring—a schedule which complemented that of agriculture. As Stoney remarks, planters in the brickmaking areas of the

		BRICKMAK	ERS LIS	TED IN	TABLE 10.1 BRICKMAKERS LISTED IN THE CHARLESTON DISTRICT CENSUS OF 1850	0.1 SSTON DIS	TRICT	CENSUS OF	1850	
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	Invested	Kind	Qty.	Valuc	Male	Male Female	Cost	Cost of Labor	S T T T T T T T T T T T T T T T T T T T	value
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Daniel Legare	\$7,000	pine	704	\$135	7	7	\$7	<del>8</del> 55	70.000	\$560
					(about 2	(about 2 months)				) }
John Horlbeck	\$75,000	poom	$3,500^{b}$	\$5,250	50	35	\$50	\$75	4,000,000	\$28,000
		coal	$200^a$	\$1,400	Ŋ	Ą	l		1	1
T. H. I. White	\$17,500	poom	<sub>0</sub> 009	\$900	13	17	\$91	\$60	700,000	\$5,600
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SI. THOMAS & ST. DENIS PARISH	ST. DENIS PA	RISH			(6 months)	nths)				
John Sanders	\$28,000	V.		1	15	15	\$105	\$75	700,000	\$4.900
John L. O'Hear	\$20,000	I)	1	1	11	11	\$77	\$55	580,000	\$4.060
John Marshall	\$45,000	Ų,	į	Ť	30	20	\$210	\$100	1,500,000	\$10,500
J. B. Gordon	\$30,000	1	ţ	Ť	15	12	\$105	\$60	000,009	\$4,200
J. Venning	\$30,000		1	Ŷ	13	10	\$91	\$50	600,000	\$4,200
G. Thompson	\$10,000	1	1	1	7	1	\$49	4	300,000	\$2,100
Totals	\$262,500		!	l	191	127	\$785	\$480	9,050,000	\$64,120

Nores: "Unit of measure: cords. <sup>b</sup>Unit of measure: tons. Source: U.S. Census 1850.

lowcountry "enjoyed a sound economic mixture of agriculture and industry by making rice while the weather was hot and brick when it was cold." 46

The weathered clay was mixed with sand and water to the desired consistency. <sup>47</sup> It was then carried to the molding table where the master brickmaker—in the lowcountry a slave—threw a large handful of clay into the sanded wood mold. Excess clay was scraped off and the filled mold was carried to the drying area where the bricks were removed from the mold. <sup>48</sup> A good brickmaker and his three or four helpers could mold as many as 5,000 bricks per day. <sup>49</sup>

After initial drying was completed, the bricks were stacked for further drying in a shed. <sup>50</sup> When sufficient bricks were accumulated, a kiln or clamp was constructed on a previously prepared surface, often consisting of a semipermanent brick floor and outer walls. The clamp was built up to form a series of arched firing chambers running the length of the kiln. The bricks in the kiln were carefully placed to allow space for the heat to pass between them and out the top of the clamp. After stacking, the kiln was sealed on the outside with clay and firing began. <sup>51</sup>

Firing lasted several days depending on the color of the kiln smoke. When the smoke changed from white to black, the kiln was fired for approximately 24 more hours. After firing was completed, the kiln was allowed to cool and was then disassembled.<sup>52</sup> The fired bricks were sorted by quality, based on color and hardness, and shipped to market.<sup>53</sup>

The most detailed contemporary description of an eighteenth-century brickyard is in an advertisement for the 1748 sale of the James and Deborah Fisher property:

To be Sold, a Plantation on Wando-River, near Cainhoy, containing 500 Acres of Land, proper for Corn, Rice and Indigo, with a Dwelling House, Barn and Out Houses, and at the Landing a Good Brick Yard (with 2 large Houses, near 100 feet in Length, and about 30 in Breadth each) and a good Brick case for burning them. About 45 feet in Length, near 20 in Breadth, and 9 in Height, with 12 arches, and a

Division in the Middle, a large quantity of Wood near at Hand, with other conveniences. Likewise a number of slaves, among whom are very good Coopers, several Sawyers and Brick Moulders; and also Household Furniture....<sup>54</sup>

# Brickyards and Landscape Archaeology

Landscape archaeology looks at why a site is occupied, how it is modified, and how these modifications affect the landscape. We have already determined why the brickyard sites were selected. Now we will examine the archaeological evidence to see how the landscape was modified to fit the brickmaker's goals and cultural patterns. This evidence of brickmaking consists of the kiln or its remains, clay pits, landings, clay and sand piles, and worker housing. As Noël Hume once pointed out, however, excavation of such sites may yield very few artifacts since they are primarily production sites, not occupation locations. <sup>55</sup>

Only a few brickyards have been documented archaeologically. The most useful information can be obtained from Harrington's Jamestown, Virginia, excavations and those of Atkinson and Elliott at the Nance's Ferry site in Alabama. These excavations clearly indicate that the primary archaeological feature at a brickyard site is the kiln itself. This feature normally contains an unmortared outer wall built on a prepared surface, a series of firing chambers—perhaps with the ash remains of the last firing, and the remains of benches used to support the green bricks. In some cases, kilns may contain poorly fired bricks abandoned by the operators after the last firing.

So far, 26 brickyards have been identified along the Wando and its tributaries; others probably exist but have not been confirmed by field examination (map 10.1). In most cases, the archaeological study at these sites has been limited to survey level data. These surveys have identified brickyards at Parker's Island,<sup>57</sup> Guerin and Old House Creeks in the Francis Marion Forest,<sup>58</sup> Boone Hall,<sup>59</sup> Darrell Creek,<sup>60</sup> Palmetto Grove (or Longpoint),<sup>61</sup> and four

brickyards within the Dunes West development.<sup>62</sup> Data recovery has been completed at Palmetto Grove, <sup>63</sup> the Lexington Kiln and Starvegut Hall sites at Dunes West, <sup>64</sup> and Boone Hall. <sup>65</sup> Other lowcountry brickyards have been recorded, but since they are not within the Wando River basin, they will not be addressed in this study. <sup>66</sup>

Although the remains excavated at the Jimmie Green site in Berkeley County, South Carolina, were interpreted as being those of a lime kiln, <sup>67</sup> examination of the plans indicates a strong resemblance to the brick kilns recorded at Jamestown and Nance's Ferry. Since this plantation also contained a documented brickyard, it is probable that this kiln represents reuse of a former brick kiln for lime burning, such as that which South found at Brunswick Town. <sup>68</sup> As the authors themselves note, the kiln's configuration is unlike that of other documented lime-making operations. <sup>69</sup>

The typical brickyard site examined in the Wando River basin consists of a brick rubble-covered shoreline or landing, one or more overgrown kiln mounds—sometimes with visible arches—sand or clay piles, and a series of extensive clay pits. <sup>70</sup> At least one site on Parker's Island contained an intact brick chimney, indicating the possible presence of a more sophisticated Cassel or updraft kiln. <sup>71</sup> Soak pits were tentatively identified at a brickyard site on Toomer Creek. <sup>72</sup>

As stated, 26 brickyard sites have been identified within the Wando River basin (map 10.1). Another dozen probably exist, based on examination of aerial photographs and topographic maps. On the aerial photographs, the primary site indicator is the regular-shaped, clustered wetlands which result from clay extraction. In at least two cases, at Boone Hall and at Nelliefield Creek, these clay pits have become large tidal lakes. A secondary indicator, not present at all sites, is shoreline modifications, particularly those which produced a pier or shoreline projection into the navigable stream.<sup>73</sup>

Identification of brickyard sites on topographic maps and from a boat relies on a similar set of signatures. In both cases, the key indicator is an area where the uplands meet navigable water with little

or no intervening marsh. Vegetation in such areas consists of upland species such as palms, oaks, pines, and particularly cedars. At low tide these areas are readily identifiable by the brick rubble along the shore. At least one site also contains timber shoreline stabilization.<sup>74</sup>

Location of sites by land is hampered by relatively thick vegetation and lack of road access in most locations. When a site is encountered, however, there is little doubt about its nature, due to the extensive brick rubble. Presently the kilns appear as mounds up to five or six feet in height and of varying outer dimensions. Close examination of these mounds sometimes reveals arched openings or outer walls. Areas adjacent to the mounds sometimes have flat, brick-covered work surfaces. 75

Site location seems to be correlated with deep water access, clay or loam soils, and ground which is higher than the marshes. It should be noted, however, that some of the kiln sites are on land which would not normally be considered desirable due to relative elevation. As a result, brickyards probably had networks of drainage ditches, in addition to the brick rubble used as fill. The distribution of brickyard sites appears to stop at the point at which the Wando River was able to support large-scale rice cultivation (map 10.1). This may indicate that where rice was profitable on the Wando, it was not necessary to diversify, although the nearby Cooper River brickyards coexisted with rice plantations.

The occurrence of all of the identified brickyard sites on deep water with shoreline modifications underscores the importance of being able to ship the product to a market. If these kilns had been established to provide bricks solely for the individual plantations, proximity to the planned structures would have been the major criteria, not proximity to water. In addition, these sites are much too large to have been used on a one-time basis. Examination of existing plantation structures or remains of previous structures indicates that the majority were not built of brick, except for the foundations. In fact, many of these foundations consist of broken or waster bricks, further evidence that the best products were sold rather than being used on site.

Historic maps (map 10.2) and surveys of six sites indicate that many brickyard complexes encompassed associated slave and/or overseer housing. <sup>76</sup> At least at Lexington Plantation, the long period of brickyard operation resulted in the encroachment of clay pits on two of these structures. <sup>77</sup> This complex also included the unusual 10-room structure which may have been used for temporary laborers at the brickyard.

The final issue to be considered is the effect of brickmaking on the natural landscape. Change began with clay extraction. The natural forest was cut down and clay and sand were excavated. This extraction resulted in large, steep-sided pits, often many feet in depth. In this low-lying land, the pits soon filled with water, forming lakes or ponds. Over time, natural succession vegetated these water bodies. If there is sufficient connection to a tidal river, the vegetation is typical of natural tidal marshes within the basin. More often, there is little or no connection to the river, and the wetlands support freshwater vegetation.

As brickmaking progressed, additional deforestation probably occurred to provide fuel for the kiln. This deforestation no doubt altered the natural vegetation patterns for long periods of time, although this cannot be documented from literature or from observation of existing sites.

In addition to deforestation, the topography was altered by the deposition of clay and sand piles and the construction of drainage ditches, as well as the kiln itself. These deposits are readily observable at most of the existing brickyard sites in the form of tree-covered mounds.

Once the bricks were made, the land was further changed through deposition of waster bricks and brick rubble as fill or surfacing. At this point, shoreline changes were made to facilitate shipping. These changes may have been limited to deposition of bricks along the natural shoreline, as at Boone Hall and along Darrell Creek, or they may have been more elaborate, including construction of wood, clay, and brick rubble landings, such as those at the Lexington and Toomer kiln sites. All of these shoreline changes affected the natural vegetation

and altered the topography. In some cases, channel dredging may have been undertaken to insure continued access to deep water. This was particularly true along the smaller creeks, such as Old House and Fogerty Creeks in Berkeley County.

After the brickyards were abandoned, alterations to the landscape remained as essentially permanent features. Although the kilns may have been leveled by later occupants, the brick surfacing or fill was often a foot or more thick. This deposit was rarely removed in its entirety, nor were the shoreline alterations changed. As Deetz would argue, this cultural landscape provides a statement of cultural identity for those who transformed the environment. <sup>78</sup> The brickmakers saw the land as a resource to be exploited and reshaped for profit. The extent of these alterations defines their level of success in these manufacturing ventures.

# Future Research Considerations

The clock is running for a large proportion of the brickyard sites in the South Carolina lowcountry. Growth and development in the Charleston area are increasing. The recently opened Mark Clark Expressway provides access to portions of Berkeley County which have been relatively inaccessible until now. Wando Neck in Charleston County is already experiencing rapid growth.

Although wetlands are the most pervasive feature of brickyard sites they are also the best protected. From an archaeological perspective, the adjacent uplands, which may contain industrial and domestic sites, are the most sensitive and threatened areas. Although I do not advocate broad-scale preservation of brickyards, certain protective steps should be taken.

First, an effort should be made to locate and record brickyards within the basin through an intensive archaeological survey. Second, these sites should be evaluated as a group in terms of significance and eligibility for the National Register of Historic Places. At that point, it may be appropriate to select a sample of the best-preserved sites for excavation in order to: 1) determine the types of

kiln and other processes utilized; 2) determine the size of the kiln in order to estimate production volume; 3) identify details of the operation such as type of wood used for firing, and the nature of associated structures; and 4) obtain sufficient and appropriate samples to use for technological analyses of the bricks in order to address questions concerning trade network patterns and brick sources for specific buildings.

The final objective centers on interpretation. Brickmaking was an important and vital industry in the lowcountry. Today it is a little-known industry. It would be appropriate to use a well-preserved brickyard site as an interpretative tool to inform the public about this industry's role in the region, as well as the role of the African Americans who actually produced the thousands of bricks. In addition, Charleston is a major center for historic tourism; the presence of a historic industrial site near the city could provide a source of funding for long-term management of the resource.

Development of an interpretative site would require archaeological study of the site as well as possible reconstruction of the facilities, particularly the kiln. Colonial Williamsburg has very successfully established a demonstration brickyard as one of its interpretative features. Such a living history demonstration is appropriate and could be very effective at a historic brickyard site in the Wando region.

The historical brickyards of the Wando River basin are an excellent example of a regional response to market demand. They reflect the diversity of the southern plantation system and provide strong evidence of close ties between the planters of this region and the nearby city of Charleston. They also provide an example of a culture's adaptive response to the environment and the effects of this adaptation on the landscape itself. They form a regional historical resource which should not be ignored or lost without being recorded, sampled, and selectively preserved.

## **Notes**

The quotation that forms the title of this essay is derived from a journalist with the Union army, 1864, cited in Perkerson 1952:101.

- 1. Cronon 1983:166.
- 2. Cronon 1983:169.
- 3. Scardaville 1985: 35-42; Wayne 1992:45.
- 4. South Carolina Gazette 1747.
- 5. Graham and Emery 1945:1.1,547.
- 6. Trindell 1968:486.
- 7. Trindell 1968:486.
- 8. Salley 1911:181.
- 9. Simons 1934:4.
- 10. South Carolina Gazette 1740.
- 11. Stoney and Staats n.d.:4.
- 12. Toomer 1783-85.
- 13. Toomer 1783–85; Wayne and Dickinson 1989:5-17 to 5-18.
- 14. Payne 1857.
- 15. Jones 1844; Diamond 1823.
- 16. Vanderhorst 1780.
- 17. Gurcke 1987:5; Graves 1854-55; Stoney 1938:48.
- 18. Irving 1932:23.

- 19. Wayne and Dickinson 1990:3-20 to 3-21.
- 20. Hollings 1978:89, 91.
- 21. Gregorie 1950:604.
- 22. Eaton 1966:372.
- 23. South Carolina Gazette 1770.
- 24. Capers and Huger 1849.
- 25. Capers and Huger 1849.
- South Carolina Gazette 1741–78; Commissioners of Fortifications 1755–70; Council of Safety 1903:18– 23; Hollings 1978; Simons n.d.; Simons 1934; Stoney and Staats n.d.; Hilligan 1790; McElligott 1989; Porcher 1944:160–64; Horlbeck Brothers 1770; Rauschenberg 1991:105, 110; Wayne and Dickinson 1989: 3-27 to 3-29.
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