

"Thousands of men had thought about flying machines and a few had even built machines, but these were guilty of almost everything except flying."

-Wilbur Wright



PRESERVING A PIECE OF AMERICA'S AVIATION HISTORY | Dayton, Ohio

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When Orville and Wilbur Wright began constructing the first of their two airplane manufacturing hangars in 1910, the property they found just 2.5 miles west of downtown Dayton, Ohio was nothing more than a farmer's field. In fact, the National Aviation Heritage Area (NAHA) – a local organization charged with preserving the aviation heritage of the region – proudly displays in its restored historic offices next-door to the Wright bicycle shop an early photograph of America's first airplane manufacturing facility standing amidst a field of recently-harvested corn with a lone horse looking on from beyond. Purchased in August 1910 for \$4,950, the 2.5-acre farm field would become home to The Wright Company, where the brothers researched and designed 13 different airplane models and eventually constructed about 120 planes.

Fast-forward 103 years and today you'll find the original hangars tucked in among more than 1.2 million square feet of an empty former Delphi manufacturing plant in the Arlington Heights neighborhood of Dayton. Shuttered in 2009, the current maze of 20 manufacturing buildings covers the majority of the 54-acre property and completely obscures the Wright hangars – along with three additional identical buildings built before General Motors (GM) acquired the property in 1919 – from public view. While the buildings are well-known among aviation enthusiasts across the country, the average citizen in Dayton has been largely unaware of their existence – until now.





From bicycles to airplanes...to brownfield

The Wright Cycle Company, the original bicycle business founded by the brothers, operated in five different locations in Dayton. Orville and Wilbur began their bicycle repair business as the Wright Cycle Exchange in 1892, and soon added rentals and sales. In 1896, they began manufacturing and selling bicycles of their

own design. They invented the self-oiling hub, and refined the process of machining the “crankarm” and pedal on the left side of the bike with left-hand threads to prevent the pedal from coming unscrewed while cycling.

Today, the site of the brothers’ fourth shop is the only building remaining as a testament to the Wright bicycle business in Dayton. It is also the shop in which their passive interest in flying turned to active research and development. Located on 22 South Williams Street, the site was designated a National Historic Landmark in 1990 and is part of the Dayton Aviation Heritage National Historical Park and the National Aviation Heritage Area.

As their hometown and a major manufacturing center at the time in the United States, Dayton became the “Birthplace of Aviation” when the Wright brothers used the profits from the Wright Cycle Company to finance their aviation experiments. Wilbur and Orville built their first experimental airplanes in the

back of their bicycle shop, but it wasn’t until they incorporated the Wright Company in New York on November 22, 1909, that the production process really took off in Dayton. While the permanent factory was under construction in 1910, the company built its first airplanes in rented space in the former Speedwell automobile factory on Essex Avenue (now Wisconsin Boulevard), which was later razed. Construction on the second hangar began in the summer of 1911 and full-time airplane production commenced at the new facility shortly thereafter.

The factory site itself never included a flying field. The Wright Company tested new designs and trained pilots on Huffman Prairie, which is now a part of Wright-Patterson Air Force Base in Greene County outside of Dayton, and also tested hydroplanes on the nearby Great Miami River.

Following Wilbur’s death in 1912 and Orville’s challenges in maintaining the business in a rapidly developing industry,

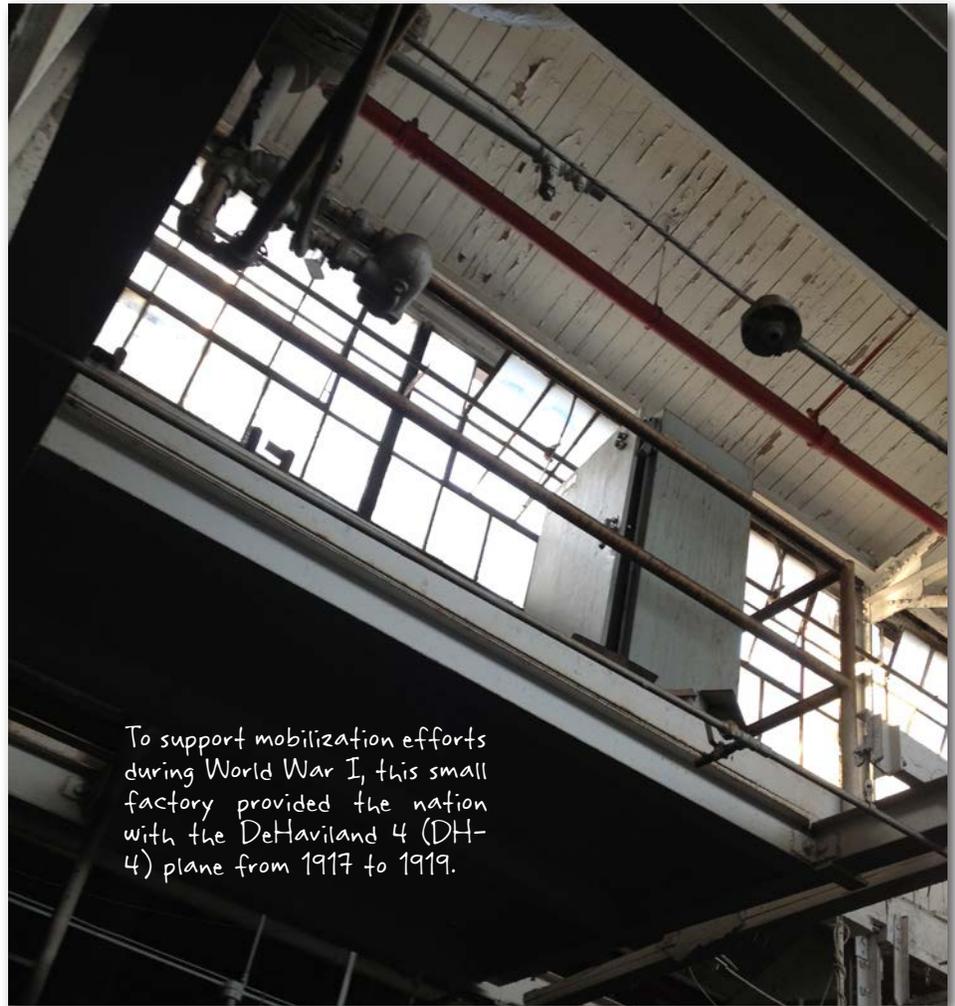


the Wright Company was sold in 1915 and renamed the Dayton-Wright Airplane Company. To support mobilization efforts during World War I, this small factory provided the nation with the DeHaviland 4 (DH-4) plane from 1917 to 1919. Three months after the factory began production on the aircraft, the first DH-4 was ready for flight. At the height of its production efforts, the Dayton factory would complete four DH-4s a day. The first DH-4s reached France in May 1918, a year after the United States entered the war. A total of 3,431 planes were delivered to the Air Service, most of them from the Dayton-Wright Airplane Company. These planes were the only American-built aircraft to see action overseas in World War I.

In 1919, the Dayton-Wright Airplane Company was purchased by General Motors Corporation, which continued operations as an airplane and automobile parts manufacturer. GM grew steadily, incorporating adjacent parcels and constructing additional manufacturing and administrative buildings. Over the next 80 years, GM operated the site primarily as an airplane and automobile parts manufacturing facility, playing a significant role in World War II by manufacturing military weapons, safety equipment, and tank components at the site from 1942 to 1945.

GM's Dayton operations were vital to the economic success of the city. At the end of World War II, GM employed 40,000 people at numerous plants in the Dayton metropolitan region. By the early 1960s, GM was Dayton's single-largest employer, and only behind Flint and Detroit, Michigan in being known as a "GM Town."

In 1999, the Delphi Automotive Systems division separated from General Motors to form a new company that was later renamed Delphi Corporation. In 2009,



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Delphi Corporation completed bankruptcy and emerged as a new company. The "old" Delphi was renamed DPH Holdings Corporation and took over as the site owner. The Home Avenue facility was promptly closed and the site has been vacant since 2009, leaving the community with a visual reminder of the jobs and economic prosperity that once existed at the plant.

Making history. Again.

Arlington Heights was built for working-class families who wanted to live near the major industrial center of the city. These families relied heavily on the jobs first provided by GM, and subsequently Delphi. In 1999, Delphi employed over 15,000 people in the Dayton area; today there are less than 200 Delphi employees in the region. This decline, combined with the country's general economic downturn, impacted this neighborhood significantly, with 27.3 percent of the residents in Arlington Heights currently living below the

poverty line.

In 2011, officials from the City of Dayton, DPH, and Hull & Associates, Inc., an Ohio-based project development, energy, and environmental company, began discussions on a deal to ultimately transfer ownership of and remediate the property.

Years of heavy manufacturing use onsite, coupled with a quick deterioration of the buildings following the facility's closing, yielded environmental conditions typical of a former automotive parts plant. The cleanup activities required to revitalize the site include asbestos abatement, demolition, soil remediation, backfilling, and underground storage tank closures. The remedy for the site targets contamination from asbestos, aroclor-1254, arsenic, benzo(a)pyrene, chloroform, lead, petroleum-saturated soils, polychlorinated biphenyls (PCBs), tetrachloroethene (PCE), and trichloroethene (TCE), and will bring the site into compliance with the applicable commercial and industrial standards of Ohio's Voluntary Action Program.

"Redevelopment of this property will be transformative for the area neighborhoods and potentially all of west Dayton."



Working cooperatively with the City of Dayton as its applicant, Hull created a development special purpose entity – Home Avenue Redevelopment, LLC – to acquire the property from DPH and successfully pursue \$3 million in Clean Ohio Revitalization Fund contributions to address cleanup at the site, which were awarded in May 2012. As part of the deal, Home Avenue Redevelopment also invested approximately \$260,000 in capital and DPH committed \$590,000 in private match, \$150,000 in donated property, and \$1 million in future investments to support the final acquisition and cleanup of the site.

"In December 2012, Home Avenue Redevelopment, LLC took title to this site and in doing so, took a major step forward in preserving a significant piece of Dayton's aviation history," said Brad White, a principal with Home Avenue Redevelopment and vice president of brownfields at Hull. "We're now beginning the next step in the process of restoring this brownfield property to a productive

economic reuse by demolishing the blighted buildings on-site and protecting the historic structures for the public."

White is currently working with NAHA and the U.S. National Park Service, who has committed to purchase 20 acres of property that include the historic Wright factory. The National Park Service was authorized by the U.S. Congress in 2009 to purchase the historic Wright Company factory buildings and the surrounding property. The site will become the seventh unit of the Dayton Aviation Heritage National Historic Park, a national park that preserves historical and cultural structures, districts, and artifacts that are associated with the Wright brothers, the invention and development of aviation, and the life and works of Paul Laurence Dunbar.

The National Park Service will make a substantial investment in the property by restoring the historic Wright Company factory buildings. Plans for the park also include incorporating significant greenspace that will be open to the public.

In 2011, 67,000 people visited the sites that comprise the Dayton Aviation Heritage National Historic Park, and the National Park Service estimates that the economic impact of the park to the City of Dayton is \$3,618,000 annually.

"The Wright Company sites are significant because they were the origins of the American aircraft industry. Every one of the major aerospace companies can trace its roots back to this site," said Dean Alexander, national park superintendent.

The site offers a wide range of opportunities to examine the lives of American workers in the first decade of aircraft manufacturing, Alexander said. "This is a place where we can talk about World War I and middle-class manufacturing jobs. It's a 100,000-square-foot blank canvas," he said.

While the two original Wright Company buildings will be dedicated to National Park use, the remaining three buildings offer opportunities for other institutions



Hull is currently overseeing the demolition and remediation work at the former Delphi Home Avenue facility, which began in May 2013 and is expected to be complete by the end of this year.



or companies to operate educational, research or commercial activities that complement the site's aviation heritage, said Tony Sculimbrene, NAHA's executive director.

"Imagine learning how to design, build and maintain aircraft in the very place where the industry began," Sculimbrene said.

The remaining 34 acres of property are being targeted by Home Avenue Redevelopment for advanced materials and manufacturing, aerospace research and development, and industrial

redevelopment. The City of Dayton is home to the state-designated "Ohio Aerospace Hub of Innovation and Opportunity" and continues to foster a strong aerospace industry based on the proximity of the Wright-Patterson Air Force Base. Dayton is also known for innovations in the development of advanced materials, including composites and nano-materials. The combination of these strengths has positioned Dayton at the forefront of research and development of unmanned aerial vehicles. There are already approximately 50 companies in the Dayton region supporting the development and manufacture of unmanned aerial vehicles, one of which is located on another former GM property – the Tech Town technology campus in downtown Dayton.

"Redevelopment of this property will be transformative for the area neighborhoods and potentially all of west Dayton," said Timothy Downs, Dayton's deputy director for economic development. "It will not only bring jobs to the neighborhood, but will also remove over 50 acres of vacant

industrial properties and provide a new public green space. In addition, a new national park unit will provide residents with a new source of neighborhood pride and vitality, while further strengthening the Dayton region's essential role in aviation and commercial history."

Hull is currently overseeing the demolition and remediation work at the former Delphi Home Avenue facility, which began in May 2013 and is expected to be complete by the end of this year. Where possible, scrap materials and asphalt will be recycled, with concrete being crushed and used as backfill on-site.

"These are exciting times and this is just the beginning," said White. "The Dayton region continues to be a leader in aviation and aerospace development, and we are extremely proud to be a part of transforming this deteriorated site into a real gem for the community."



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