

HONORING ADA LOVELACE IN HINCKLEY



Augusta Ada King, Countess of Lovelace — better known as “Ada Lovelace” — was born on December 10th, 1815. Her mother was Anne Isabella Milbanke, the only child of Sir Ralph Milbanke, 6th Baronet, and his wife, the Hon. Judith Noel. Her father was the infamous English romantic poet, George Gordon Byron, 6th Baron Byron.

Ada’s Mother left her husband, Lord Byron, five weeks after Ada was born, and returned to live with her parents at Kirkby Hall in Kirkby Mallory, Leicestershire, which is 5 miles outside the market town of Hinckley.

Ada’s Mother was a reformist, spending little time at Kirkby Mallory, leaving Ada in her grandmother’s care. Her grandmother managed the family estates, which stretched across the Midlands to Dudley. As a consequence, she made frequent visits to the bank in Hinckley and usually took Ada with her. It is recorded that Ada “loved Hinckley”. Indeed Ada loved her visits to Hinckley so much, that on occasions when she misbehaved, her grandmother would leave her at home as punishment.

Ada lived at Kirkby Hall until age 6, when in 1822, her Grandmother passed away. Kirkby Mallory Hall was demolished in 1952, but the substantial stable block remains and has been repurposed. A blue plaque commemorates Ada’s life there.



After her grandmother’s death, Ada’s Mother moved back to London, living at various addresses, during which time, Ada was tutored privately.

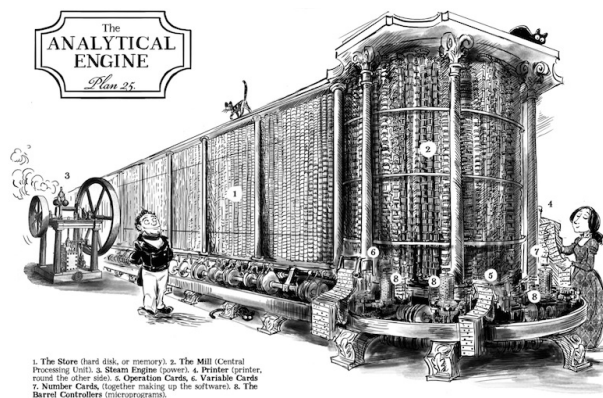
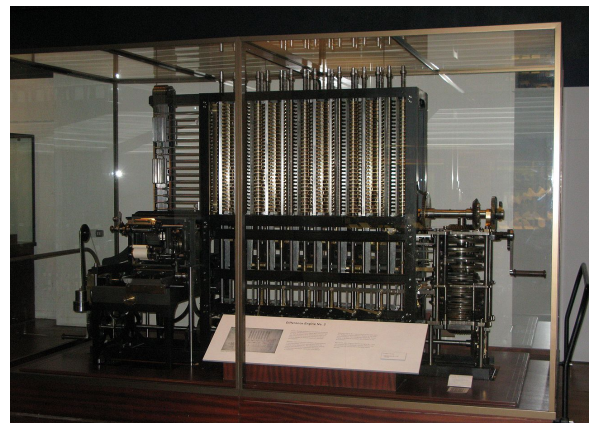
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Ada's Work and Groundbreaking Contribution to Early Computing

Ada showed an exceptional mathematical ability from a very young age. In her teens, she was introduced by her tutor, Mary Somerville, a leading scientist and mathematician in her own right, to Charles Babbage.

Babbage was the creator of the first calculating machine, the Difference Engine, intended to calculate and print logarithm tables error free. The machine fascinated Ada, resulting in a lifelong working relationship with Babbage.

The Difference Engine (right): Babbage had become frustrated by errors in logarithm tables and believed there had to be a better method of calculation. His engine eliminated calculating errors, copying errors, type setting errors and proof-reading errors. After setting up the machine, by turning the handle on the right of the engine 2 revolutions, it would impress the result into a plaster of Paris bed on the left. From the plaster of Paris mould, imprints or copies, totally accurate, could be printed — a revolutionary concept at the time. Based on Babbage's original design, a working machine was completed in 2002 and is now housed in London's Science Museum.



The Analytical Engine (left): This is only theoretical and has never been built. This is a cartoon impression of how it might appear, as large as a bus with a mechanical memory. Jacquard cards would act as the “programme”, feeding information into the “mill” (computer processing unit). It would require a steam engine to drive it, so heavy would be the mechanism be to operate.

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Babbage developed a second machine, naming it the “Analytical Engine”. It comprised the components of the electronic computer today, but in mechanical form. Babbage had lectured Italian mathematicians on its potential. They wrote to him in French, asking for an explanation of the theory behind it. Ada, fluent in French, was given this task by Babbage.

While working on this, Ada added her own explanatory notes. Note G is the best known of these supplemental notes, which included what is regarded as the very first computer “programme” — a set of computer instructions.

Ada envisioned the Analytical Engine had the capability to calculate values other than numbers, and surmised it might compose music and write poetry, thus foreseeing the possibilities of computerisation.

The engines Babbage designed were never built during their lifetimes, their work was almost entirely theoretical other than small sample proof of concept engines.

Ada's Legacy



In the 1930s, Alan Turing referred to Ada's work when developing the first electronic computer to crack the German Enigma code at speed.

In the 70s, the United States Department of Defence developed the first computer coding language and named it

in honor of Ada. The Military Standard reference manual was approved on December 10, 1980 (the anniversary of Ada's birthday), and given the number MIL-STD-1815 in honor of Ada's birth year in recognition of her work and vision.

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Only in the 80s was a working version of Babbage's Difference Engine built. The Science Museum in Kensington used Babbage's original design drawings, which had been donated many decades earlier. It functioned exactly as intended without modification, and stands at the entrance to the Museum's Mathematics Department today.



Remembering Ada

Ada was christened at Kirkby Mallory Parish Church by her uncle, the Parish Vicar. After her death, from cancer aged just 36, her Mother commissioned a large memorial to be built, standing on the perimeter of the church graveyard where it still stands today. The memorial was renovated by English Heritage at a cost of more than £35,000 in the 90s.

Upon her death, her wishes were that she should be buried next to her Father, in the family vault in Hucknall Parish Church. However, she never knew her Father, he left the country in April 1816, spending most of the rest

of his life in Greece. But, of the dozen homes Ada lived in during her lifetime, her Mother clearly believed a memorial in Kirkby Mallory's church graveyard was the most appropriate place as it was her childhood home.

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An Ada Lovelace Statue in Hinckley

We are proposing to honor Ada's groundbreaking contribution to STEM, with a permanent statue in Hinckley, the town she so loved.

The statue is inspired by the famous Margaret Sarah Carpenter portrait of Ada, which hung in Downing Street until recently. The celebrated painting is part of the Government Art Collection and is now on display at the National Portrait Gallery.



A full-size reproduction of this painting, was created for a temporary exhibition celebrating Ada Lovelace. The 2019 Ada Lovelace Exhibition held in the Gallery of the Atkins Building in Hinckley was the most successful exhibition ever held in our town.

This reproduction painting now hangs in the foyer of the Hinckley Campus of the North Warwickshire and Hinckley College, which is next door to the Atkins Building.

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Benefits to the Town

Hinckley was famous for stocking manufacture, stretching right back to the 1640s. However, the effects of globalization have meant that the industry it was once famous for has all but disappeared. This has left the town with somewhat of an identity crisis, and a need for renewal. Our aim is to celebrate Hinckley's embrace of technology, from the mechanisation of the hosiery industry to the cutting-edge technology of the Motor Industry Research Association, which is based in Hinckley and is pioneering the future of self-driving cars in the UK, with a statue honoring Ada.

Ada foresaw a technology, still evolving today with the advent of artificial intelligence. She lived longer at Kirkby Mallory than anywhere else during her short life, so it is only fitting that this exceptional lady, who is celebrated around the world, is finally honored in her childhood home town.

Due to her outstanding achievements, Ada was chosen to be the figurehead for Women in STEM (science, technology, engineering and maths). This movement was created to inspire women to consider STEM subjects as career choices. Founded in 2009, the movement is celebrated yearly with an international Ada Lovelace Day on the 2nd Tuesday in October.

By highlighting Ada's legacy, we hope it will inspire girls and boys to consider STEM careers in our town and borough. The HORIBA MIRA Technology Park, on the outskirts of Hinckley, have a strong desire to recruit locally. Furthermore, a statue will introduce a cultural element into

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Hinckley, encourage tourism, inspire added interest in local heritage, increase the prestige of our college and town, and in time, we hope Hinckley will become known as the “Home of Ada Lovelace” and a focus of the annual Ada Lovelace Day, which is now celebrated around the world.

The Statue

The bronze statue is 2.5 meters tall, weighing 500Kg. It will be mounted on a round Portland stone plinth 0.5 meters high.

The Ada Lovelace statue was originally commissioned by The Berkeley Group Ltd, property developers, to adorn a development in Westminster. After enquiring if another statue could be cast, the company agreed, due to our unique connection with Ada. Agreement was also needed from the artists, owners of the intellectual property rights, and we're happy to report they've given permission for another statue to be cast, due to the town's special connection with Ada.

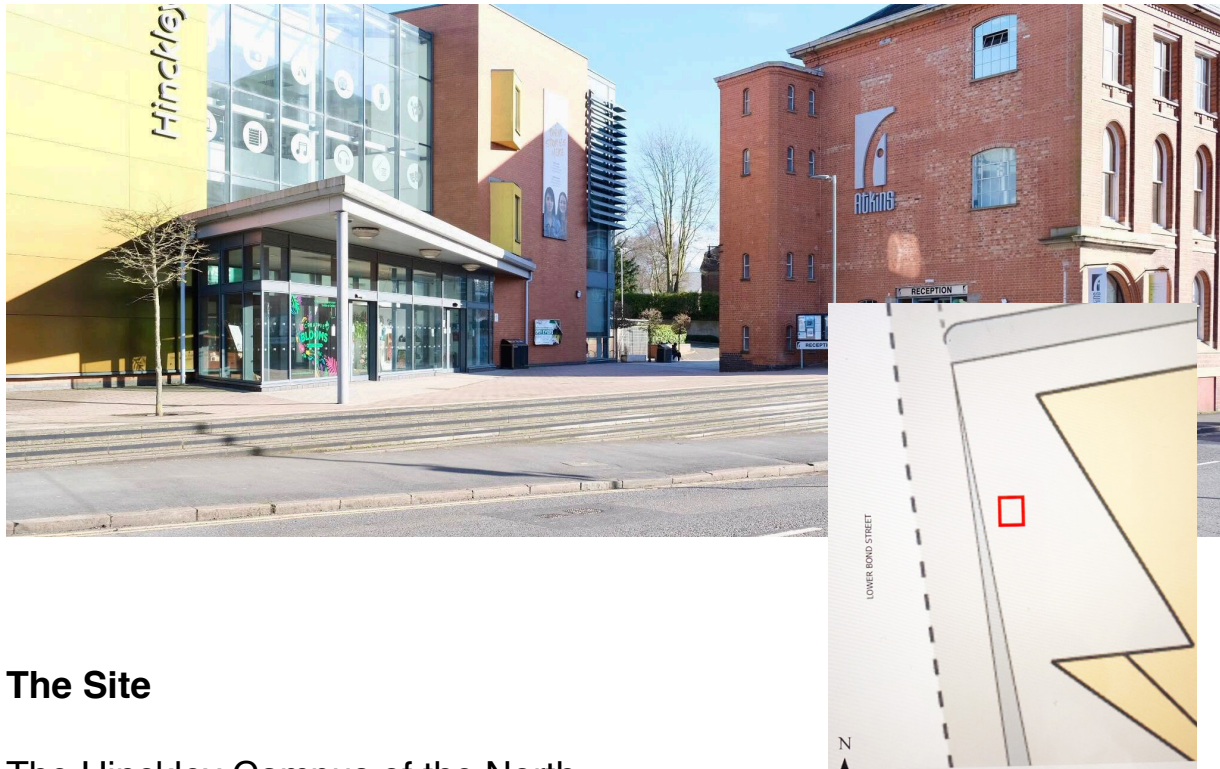


We are extremely fortunate to benefit from these circumstances, saving substantial artwork and mould costs.



Right: Schoolchildren hearing the Ada Lovelace story at the Ada Lovelace Exhibition held in Hinckley in 2019, the most successful exhibition held in Hinckley.

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The Site

The Hinckley Campus of the North Warwickshire and Hinckley College, located on Lower Bond Street in the heart of Hinckley, have offered a prominent site for the statue in the courtyard at front of their building. Locating the statue outside the Hinckley Campus seemed the obvious choice of site as Ada is the figurehead for Women in STEM. The College is the most senior place of learning in Hinckley.

Support

HBBC gave the project their support, as has our MP Dr Luke Evans, Shadow Parliamentary Secretary for Health and Social Care.

The heads of senior schools are delighted, as it supports their encouragement of young people to consider STEM subjects.

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