

Institut Européen des Jardins & Paysages

Inventory of Gardens and Designed Landscapes of England

Inventory of Great Britain

Landscape at Cummins Engine Factory, Darlington

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Name:	Landscape at Cummins Engine Factory, Darlington
District:	Darlington (Unitary Authority)
Parish:	Morton Palms
label.localisation:	Latitude: 54.518029 Longitude: -1.5105231 National Grid Reference: NZ3178413747 Map: Download a full scale map (PDF)
label.overview:	Heritage Category: Park and Garden Grade: II List Entry Number: 1467759 Date first listed: 18-Aug-2020 Statutory Address 1: Landscape at Former Cummins Engine Factory, Yarm Road, Morton Palms, Darlington, DL1 4PW

Historique de la conservation

The American industrialist Joseph Irwin Miller (1909-2004) was a noted patron of modern architecture and a leading figure in the Christian ecumenical and civil rights movements. Descended from a major banking and investment family, he studied at Yale and Balliol College, Oxford, before in 1934 (aged just 25) he took over a failing diesel company. This was Cummins Engines, which had been founded by mechanic Clessie Cummins with financial support from Miller's great-grandfather, William G Irwin, for whom he had been chauffeur. Cummins was Miller's best man at his wedding. In 2003, just before Miller's death, Cummins' sales touched \$6 billion.

The Millers were outstanding architectural patrons, working with Eiel Saarinen, and then Eero Saarinen and Charles Eames, who Miller was asked to look after when they were young office assistants. They became close friends and Eero designed a series of buildings for Cummins, Miller's other family businesses, his family and local community in his home town of Columbus, Indiana.

Cummins established its first manufacturing plant outside the United States in 1956 at Shotts in Lanarkshire, where the later plant by Ahrends, Burton & Koralek from the 1970s is listed Grade A. In 1963 - 1966 it opened two factories in Darlington on land that had been acquired by the county borough in the 1930s for an airport before a nearby RAF station was adapted instead. The first and largest factory was initially developed with Chrysler in 1963-1965 to the designs of James Cubitt & Partners, but became wholly owned by Cummins in 1968. It was followed in 1964-1966 by the slightly smaller engine plant, making components for the main factory, designed by Roche & Dinkeloo, who took over Eero Saarinen's practice after the latter's sudden death in 1961.

Eero Saarinen (1910-1961), with his father Eliel (1873-1950), was a pioneer of out-of-town office headquarters and manufacturing plants. He was born in Finland, where his father had a successful architectural practice with Herman Geselius and Armas Lindgren. They are perhaps best known for Helsinki Railway Station (1910-1914). The Saarinens and their two children moved to the United States in 1923, where Eliel joined the Cranbrook Educational Community, intended from 1925 to be an American equivalent to the Bauhaus devoted to the arts and industrial design. Eliel also designed the research headquarters

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of General Motors, at Warren, Michigan, which was a new form of industrial campus and the largest commission of his career, which Eero took over after his father's death in 1950.

Following Eero's sudden death, his practice was taken over by his assistant (Eamonn) Kevin Roche (1922-2019), working with a slightly older partner John Dinkeloo (1918-1981) in charge of technical matters so that the young Irishman could concentrate on design. Roche had become Eero's design assistant in 1950 and with John Dinkeloo completed 12 major buildings left unfinished by Saarinen before forming their own practice in 1966. The Cummins Engine Factory at Darlington was among the first schemes published under their own names. Like Saarinen, Roche worked in a great variety of materials and styles, but on a larger, often heroic scale. Though much of their best work was produced as Roche & Dinkeloo, it was Kevin Roche who took the plaudits, winning the Pritzker Architecture Prize in 1982 and AIA Gold Medal in 1993, the two highest awards for a living architect.

Dan Kiley (1912-2004) was born in Boston and became interested in landscape architecture as a schoolboy while working at weekends caddying at the local golf courses. He attended the Harvard University Graduate School of Design in 1936-1938 while working with the landscape architect Warren Manning (who had worked for Frederick Law Olmstead and founded the American Society of Landscape Architects): he found the course still bound up with what he called 'the dry symmetries of the Beaux-Arts', and he, James Rose and Garrett Eckbo produced a series of articles calling for a new, more functional landscape architecture. He then worked for the National Park service and the United States Housing Authority, where he met Louis Kahn, who advised him to set up his own practice. During the Second World War he served in the Office of Strategic Services where he met Eero Saarinen, who secured him a job as chief of design that enabled him to visit the great French C17 landscapes and to build the courthouse for the Nuremberg Trials. In 1947 he won a competition to design the landscape for the park surrounding Eero Saarinen's Gateway Arch in St Louis, Missouri, which brought them both to national attention (realised 1963-1965). In 1951 he established an office in Charlotte, Vermont, United States where he worked for some 50 years and he and his wife Anne raised eight children.

Considered the father of modern landscape architecture in the United States, Kiley combined modern design ideals with classical principles. His work was minimal and geometric, heavily structured with water, paths, trees and lawns. He worked extensively with Eero Saarinen, beginning in 1944 to 1947 when they collaborated at Antioch College, Ohio, a higher education campus. Kiley provided the landscape for the Irwin Union Trust Company in Columbus, Indiana (1950-1954); Miller's own house at Columbus (1953-1957, with Roche as an assistant), and the North Christian Church, Columbus (1959-1964). He also worked with Saarinen on the University of Michigan's campus at Ann Arbor (1951-1956); the Concordia Senior College at Fort Wayne, Indiana (1953-1958), and Dulles International Airport at Chantilly, Virginia (1958-1963).

Kiley's first essentially modern design was the geometric landscape of the Miller House. Kiley wrote that it was based on 'the transparency between interior and exterior space...The house/landscape construct is more about the flow of articulated space than about reaching a static destination. One of the first moves was to pull the floor plane into the landscape. I worked closely with Saarinen's associate, Kevin Roche, to configure a nine-inch plinth that extends twenty-five feet out from the house'. The same could be said on a simpler level of the Darlington work. Kiley's other major projects included the John F Kennedy Library in Boston, the Air Force Academy in Colorado, Rockefeller University in Manhattan, and Fountain Place in Dallas. Other works by Kiley in Europe include the landscaping of La Defence outside of Paris. Roche in turn considered Kiley 'the most distinguished landscape architect of the twentieth century'.

The Cummins Engine Factory was published in a number of architectural journals after its construction, illustrated with photographs and plans of the building and the site, which showed the layout of the building, car park, pool and trees. A colour photograph in the Architectural Forum in October 1966 shows the grass of the landscape studded with small yellow flowers. It was described as 'an open prairie-like landscape with the minimum of visual interruption...' (Made in Mid-Atlantic, Architectural Review, volume 142, number 845, July 1967, 14).

Details

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A minimal landscape of 1964 - 1966 by Dan Kiley, inset with a rectangular reservoir fronting the imposing Cummins Engine Factory (Roche & Dinkeloo, Grade II*) as seen from Yarm Road. On the east side is an integral car park. A fence (Grade II*) bounds the site, which at the front is sunk into a ha-ha behind a slightly raised embankment.

LOCATION, AREA, BOUNDARIES, LANDFORM, SETTING

The site is flat and open, as befits a location first intended to become an airfield, on the eastern edge of Darlington where an industrial belt has taken over much of the adjoining parish of Moreton Palms. The main road, Yarm Road, runs along the northern boundary of the Cummins site. A Cor-ten steel fence (Grade II*, List entry number 1335834) runs round the building. It is inset from the road to the north and the driveway to the west and sunk into a ha-ha. To the west of the site the driveway has a boundary row of poplars on its west side separating the former engine factory from the main Cummins complex; the poplars continue along the west side of the service yard to the south-west corner of the site, where they meet the south fence. The east and south boundaries are marked by the listed fence, with a row of poplars alongside the eastern fence. There is a long south spur containing the car park in the south-east corner, which is also marked by the fence, although it is now interrupted by a tarmac surface used by a driving test centre.

The Cummins Engine Factory site is approximately 10 acres (4.05 ha) and approximately rectangular save for the car park spur. A high water table means that the clay soils are sodden for much of the year, and it has risen much faster in the past decade, creating problems for the Cor-ten steel fencing. The reservoir and flooded ha-ha now contain Great Crested Newts.

ENTRANCES AND APPROACHES

The two entrances and only approach are from Yarm Road on the site's northern boundary. The main entrance is at the eastern end of the boundary, where a driveway leads to the car park, and beyond the landscaped area to the drive test centre. It is served by a single-storey, flat-roofed gatehouse of brindle brick and black steel-framed glazing (not part of Roche & Dinkeloo's design and not listed). A second driveway on the west side between the two factories allows large, articulated vehicles to reach the loading bays on the west side of the building.

VIEWS

There are views across open fields to the south, and to the west towards the (Chrysler) Cummins Factory. To the north of Yarm Road is the Yarm Industrial Estate, developed piecemeal since 2000 on the site of a rugby ground and a factory, obscured by thick planting, but which has caused the water table to rise since its construction.

PRINCIPAL BUILDING

The Grade II* Cummins Engine Factory and chimney is a classical temple of rusty brown steel and glass and one of Britain's great post-war buildings (List entry number 1185948). It features the first use in Britain of Cor-ten, a steel with a high manganese content that oxidises to form a hard, red-brown skin. Developed in the United States for railway trucks in the 1930s, it was adopted by Eero Saarinen for an office building for John Deere at Moline, Illinois, that was completed by Roche and Dinkeloo after his death. At Darlington the form of Cor-ten is Chromador, manufactured by Dorman Long in nearby Redcar. A frame of steel 'H' sections on a 60ft by 30ft grid is built on a flat plinth of blue brindle brick, and exploits the classical grammar of colonnade, capitals and entablature. The flat roof was designed to take heavy plant and equipment and presently (2020) has a rooftop air conditioning unit. The deep service deck beneath the roof projects to create a boldly sculptural profile and to shelter the steel from staining by the rain. It also shields the Glaverbel grey tinted glass, which is framed with neoprene gaskets from the car industry – first used by Saarinen and which first appeared in Britain here, ahead of being made fashionable by Norman Foster and Richard Rogers at the (demolished) Reliance Controls Factory in Swindon, Wiltshire.

The other feature that was innovative in the 1960s is that Roche and Dinkeloo made no differentiation externally between the offices at one end of the building and the factory floor – another first for Britain. All workers used the same entrance and internally the partitions of the offices, meeting rooms, canteen etc had the same details as the external glazing. The deep plan was artificially lit and fully air conditioned from the first. James Cubitt & Partners extended the building in 1980 by one 60ft bay, in identical style. The building was designed to be adaptable, the bays allowing for expansion and the interior space reconfigured to accommodate different uses, meaning it continues to be a flexible working space able to accommodate modern working methods.

LANDSCAPE

A line of poplars frame the site to the east and west, some of which on the west side have been removed.

The landscape to each side of the building has a different character:

The main landscape is to the north, between the building and Yarm Road. Yarm Road is screened by a double line of trees on a slightly raised bank by the side of the road and a broad footpath/cycle path. The bank drops down to a ha-ha in which is set the listed fence so as not to interrupt the flow of the grass, now standing in water due to the rising water table and surrounded by sedges and bulrushes. In the lawn to the front is an offset, rectangular pool or reservoir framed by blue brindle brick kerbstones (Grade II*, List entry number 1299427), echoing the rectangular building and reflecting the building and slender, square, Cor-ten chimney. The reservoir was originally used for the fire sprinkler systems at both buildings, with three standpipes in the grass (it no longer fulfills this purpose, having been superseded by water tanks on the adjoining factory site). Its margins are overgrown with sedges and bulrushes.

To the east side is the car park, which extends south of the rest of the site. The car park is laid out with lines of parking separated by straight rows of grass and trees (some missing) on the grid of the building. Narrow concrete kerbs are shielded by bands of shale. There is a wide walkway of blue brindle brick to the main entrance.

To the south the land is laid to rough meadow, divided by an extra piece of Cor-ten fencing towards the west end between the building and the south boundary.

To the west is the service yard and loading bay for large trucks, which is not of special interest. It is entered from the west driveway, with Cor-ten double gates and fencing on the north side enclosing the yard.

An article revisiting the site in 1992 says of the landscape 'It's all very simple, very pure and very effective' (Winter, J, Steel Appeal, Architects' Journal, volume 195, number 12, 25 March 1992, 40).

Summary

A minimal landscape of 1964 - 1966 by Dan Kiley, inset with a rectangular reservoir fronting the imposing Cummins Engine Factory (Roche & Dinkeloo, Grade II*) as seen from Yarm Road. On the east side is an integral car park. A fence (Grade II*) bounds the site, which at the front is sunk into a ha-ha behind a slightly raised embankment.

Legal

This garden or other land is registered under the Historic Buildings and Ancient Monuments Act 1953 within the Register of Historic Parks and Gardens by Historic England for its special historic interest.

Reasons for Designation

The post-war landscape designed by Dan Kiley and created in 1964 - 1966, in conjunction with the Cummins Engine Factory by Roche and Dinkeloo (1964-1965), is registered at Grade II for the following principal reasons:

Designer:

* Dan Kiley (1912-2004) was a highly influential American landscape architect who is considered to be the father of modern landscape architecture in the United States.

Design interest:

* a deceptively simple landscape, being a carefully considered exercise in design philosophy stripping back the three principal elements of all landscape design – trees, water and grass – to a minimalist and pure form;

* a design that strongly complements the main building, as do the limited materials used for the hard landscaping;

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* although more subtle than some of his better-known works in the United States, Kiley's trademark simple textures, materials and forms are used in a similar way to his seminal work at Miller House, Columbus, Indiana, 1955.

Historic interest:

* this is Kiley's only British landscape, designed for his great American patron, J I Miller of Cummins Engines.

Group value:

* the landscape benefits from Kiley's close working relationship with Kevin Roche of Roche & Dinkeloo, being an integral part of the original design for the Cummins Engine Factory, a carefully placed rectangular pool surrounded by kerbstones, and bounded by the contemporary Cor-ten steel fence, all listed at Grade II*.

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