The Architectural Review

Revisit: Penguin Pool in London, UK by Tecton

21 FEBRUARY 2022 | **BY** POLLY GOULD | REVISIT

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Credit: Grant Smith / VIEW / Alamy

A monument to captivity, Tecton's penguin enclosure at London Zoo failed to care for its confined occupants and live up to its utopian vision

This essay revisits the Penguin Pool and its current state today. Read the initial archive piece from July 1934 here

The Penguin Pool at London Zoo, designed in 1934 by Tecton in collaboration with structural engineers Ove Arup and Felix Samuely, is a major icon and important British example of the international modern movement. Just as we need to revisit the reinforced concrete of these icons to see where the cracks are showing, where metal fatigue in the armature threatens collapse, or where water ingress has caused decay, so must we revisit the structures of our critical methods to ensure that we are not perpetuating outmoded values when we critique modernist icons for failing to fulfil their intended purpose. Modernist framings are unstable under carboniferous capitalism that sets up an endgame of climate catastrophe. Modernist ontology predicated on a divide between human and nature is brought into question due to anthropogenic climate change.

The Penguin Pool was the second structure to be built by Tecton, a collaboration of designers led by Georgian-born Berthold Lubetkin. The first, the Gorilla House, also at London Zoo, had achieved considerable acclaim the previous year, with movable glass screens to display the gorillas to the human visitors but also to protect against cross-species infection. The Penguin Pool was groundbreaking in demonstrating the potential of reinforced concrete cast *in situ* to create innovative loadbearing forms under torsion. Interlaced ramps seem suspended in

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the air above volume of brilliant turquoise water contained within an oval-shaped enclosure bounded by a chest-high wall that children could peer over to view the penguins. The central ramps were constructed as two separate but interlocking spirals of reinforced concrete that are cantilevered and reach a height of 14 metres.

Visitors in the 1930s were allowed to freely enter the enclosure and feed the penguins
Credit: Fox Photos / Getty

By the 1950s, the enclosure was starting to look tired but was still structurally intact, able to to support zookeepers who followed penguins up and down its unending ramps
Credit: Stephens / Mirrorpix / Getty

The Penguin Pool's designers could experiment under otherwise strict planning conditions due to the intended function for zoo animals and its relative distance from other built structures. In the film by the artist László Moholy-Nagy *The New Architecture and the London Zoo* (1936), the titles make claims for the Penguin Pool's architectural achievements in 'no longer' housing the

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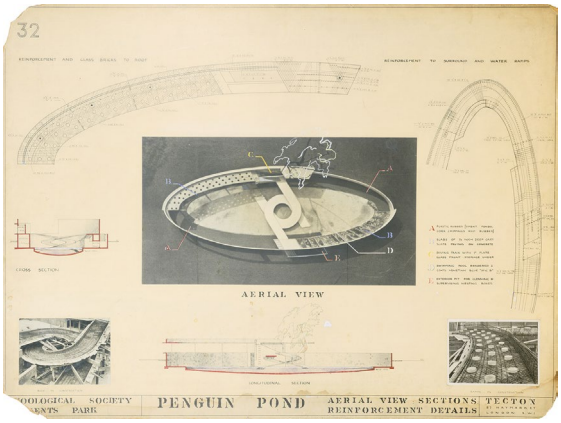
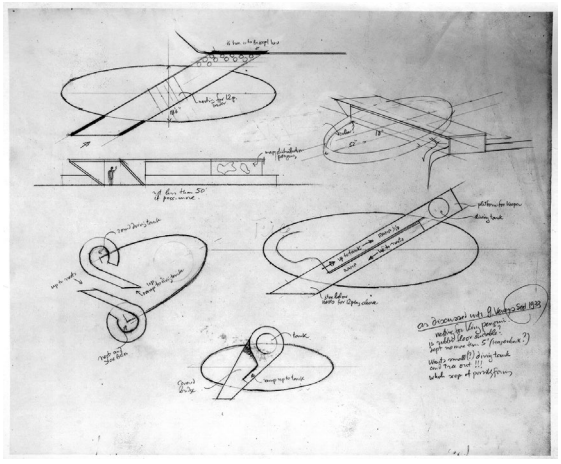
animals ‘in artificial reproductions of their natural surroundings’ but rather providing a ‘hygienic organic setting’ that ‘best displays the natural characteristics of the animals’.

The Antarctic environment had been interpreted into an experimental architectural form, not for the animals but for the visual pleasure of the human audience. The birds could ascend the paired concrete ramps to the platforms that looped them round to descending stairs. For the penguins, it was a stairway to nowhere. This commission allowed for innovations that were later applied to human habitation: as an architecture of animal display, were those involved also flexing design muscles towards making propositions for a better world?



Felix Samuely brought Berthold Lubetkin’s visions to life in reinforced concrete
Credit: RIBA Collections



Penguin Pool, London Zoo, Regent’s Park, London: early sketches
Credit: RIBA Collections

As part of the constructivist school, Lubetkin began his career in Soviet Russia believing in the potential of architectural design to generate new communities by pushing aside old hierarchies of class and gender. The social condenser – an architectural example par excellence of social engineering – was the name given to this spatial arrangement in which programmes of use overlap to allow otherwise separate constituencies to meet, with the effect of generating social change. The penguins were guinea pigs in the experimental construction methods of an architectural vision committed to social change. Before Lubetkin had the opportunity to build for humans, he built for other animals, and was able to try out the repertoire of materials that were to be applied in later projects: reinforced concrete, steel and glass.

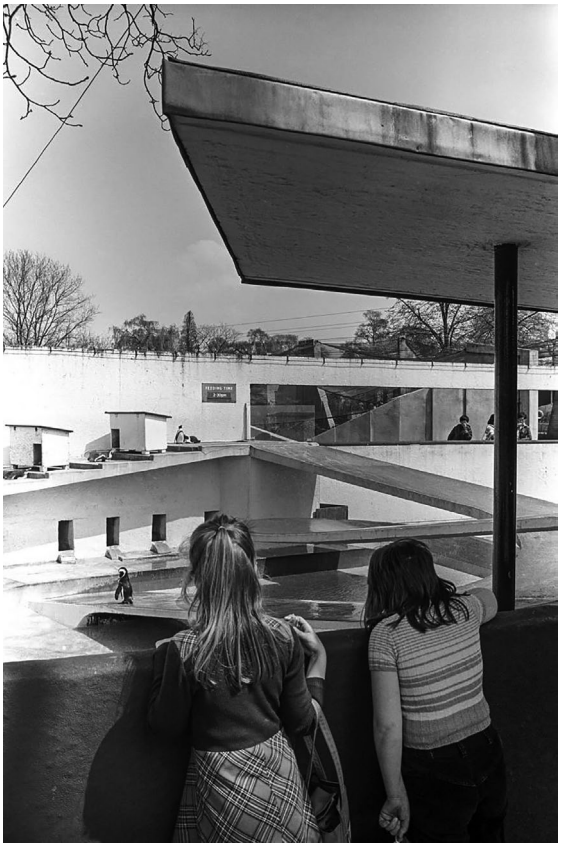
Other zoo projects followed: Tecton designed Whipsnade (1935) and Dudley Zoo (1937), then human habitation in the luxury apartment complex Highpoint (Tower 1, 1935 and Tower 2, 1938) that featured a children's paddling pool very reminiscent of the Penguin Pool. Painted white and turquoise, it included a pyramid of circles for a fountain reminiscent of the spiralling ramp and was made of reinforced concrete. Not only an architect of cages for captive animals and luxury apartments for the well-off, there were also social housing and local government commissions. An advocate of socially minded design, as attested to by Lubetkin's often cited motto 'nothing is too good for ordinary people', he was also a member of MARS, the Modern Architectural Research Group, which was founded in 1933 and pushed for municipally funded housing as an antidote to industrial capitalism.

'As an architecture of animal display,

were those involved also making propositions for a better world?’

The left-leaning local government of Finsbury in London was the source of a number of Lubetkin and Tecton’s commissions such as Finsbury Health Centre (1938), and, after Tecton disbanded in 1939, Lubetkin was involved in Spa Green Estate (1949) and Bevin Court (1954); the latter was originally intended to be named Lenin Court. The social condensing stairway in the centre of Bevin Court employed the ascending curved shapes that were also seen in the Penguin Pool’s spiralling ramps.

In 1970, the Penguin Pool, looking the worse for wear and under threat of demolition, was saved and given Grade I listed building status. Around that time, when interviewed by the *Architects’ Journal*, Lubetkin said ‘my personal interpretation is that these buildings cry out for a world which has never come into being’. The context for this statement was the somewhat personal and bitter disappointment that Lubetkin felt about the limits of his own professional achievements and also a comment upon the socialist utopia envisioned by the constructivists, the ideas of the social condenser, and its failure to arrive. The interwar years had provided Lubetkin with a context for these social housing ambitions that a return to conservatism in the UK put an end to. At the beginning of the Second World War, he had retreated with his family to a Gloucestershire cow farm where he also temporarily accommodated some evacuee animals from London Zoo.



Visitors in the 1970s could peer over the chest-high wall to see the penguins
Credit: Gillfoto / Wikimedia Commons

Today, visitors can still see into the Penguin Pool, but its occupants were moved to a more suitable enclosure in 2004
Credit: REUTERS / Alamy

Episodes of refurbishment may have been to the detriment of the Penguin Pool's original function as penguin housing and hastened its redundancy. The Penguin Pool was an unhappy place for its inhabitants; contributing factors were their painful joints and blistering known as bumblefoot from walking on concrete, inadequate depth for diving, as well as no provision for those

penguins naturally inclined to burrow rather than occupy a bird box. A rubber coated surface originally surrounded the pool and there were nesting boxes around the edge. Architect John Allan was involved in the 1980s restoration when the zoo replaced the original rubber poolside paving with concrete and a non-slip surface on the ramp for the keepers' convenience. He pointed out the original design had been intended for the Antarctic species of penguin for whom the boxes may have been more suited, but the zoo decided to change these for burrowing South American Humboldts. The penguins were moved out in 2004 and never returned.

The failure of the design to accommodate the change in species is not entirely resolved by reverting to the originally intended Antarctic species, due to the need for climate control. For Antarctica-dwelling Emperor and Adélie penguins, the upper temperature limit is -1°C. Above this temperature their physiology struggles, and they overheat. Current advice published in the Secretary of State's Standards of Modern Zoo Practice indicates that these birds are incompatible with Lubetkin's open-air display: 'Antarctic ice-dwelling penguin species need year-round cooling and require specialised closed environment exhibits with low temperatures, filtered air and high ventilation rates.' In Antarctica, rising temperatures put Adélie and Emperor penguins at risk in their natural habitat.

> 'The experimental architectural form is not for the animals but for the visual pleasure of the human

audience’

The architect’s eldest daughter, Sasha Lubetkin, recently brought up demolition in the *Camden New Journal*, saying: ‘It was designed as a showcase and playground of captive penguins, and I can’t see that it would be suited to anything else … perhaps it’s time to blow it to smithereens.’ While one response to the failure to realise those design intentions might be razing those structures to the ground, one might rethink where the pivotal focus of architectural design should be and support a shift towards retrofit and reuse, and towards unbuilding anticipated in original designs: all of these approaches can reduce carbon in construction. New thinking about zoo architecture focuses on short-term structures that can be modified with changing understanding. Another iconic listed zoo structure – Cedric Price’s Aviary – has undergone similar reappraisal with its original intended bird species moving out to be replaced by monkeys and an extensive revamp undertaken by Foster + Partners. Current government standards demand that ‘refuge areas must be provided for nervous animals to escape the permanent gaze of the public’, moving away from an emphasis on the display of animals. There is also a shift towards the role of zoos in conservation of populations beyond the boundaries of the zoo itself. A logical extension of this leads to all design considering shared living space with other species.

Penguins peer into a model of the pool which will

contain them as a captive spectacle
Credit: RIBA Collections

In the Penguin Pool animal display, the birds perform ‘naturalness’ for a human audience, and the reinforced concrete that this structure showcases now makes a huge contribution to carbon emissions due to its global dominance in the built environment. The destruction of habitat due to the climate crisis and the encroachment of humans is directly linked to increasing occurrence of zoonotic disease. This resonates with the likely non-human origins of Covid-19. Think of the images generated by Covid-induced rewilding of our cities, when lockdowns around the world saw wild animals occupy the urban spaces abandoned by humans. The division and relation between humans and other animals, and outmoded and unsustainable binaries, are called into question under anthropogenic climate change and pandemic conditions. New imaginations are required to achieve eco-social justice – for cohabitation with other species that transcends the reductive and exploitative relation humans have to other animals when holding them captive for spectacle.

If things go badly in the next few decades, the Penguin Pool could become an architectural memorial to extinction. Otherwise, perhaps it could be a site where species meet, targeting the hierarchy between human and non human: an eco social condenser for penguins and people. In its empty condition, the Penguin Pool, in an echo of Lubetkin’s lament, could be a cry out to a world that is yet to come: a call to a future in which the zoo is emptied of captive inhabitants in favour of its role in education and conservation; a call to a future in which we are no longer captive to capitalism, nor held hostage to climate catastrophe.