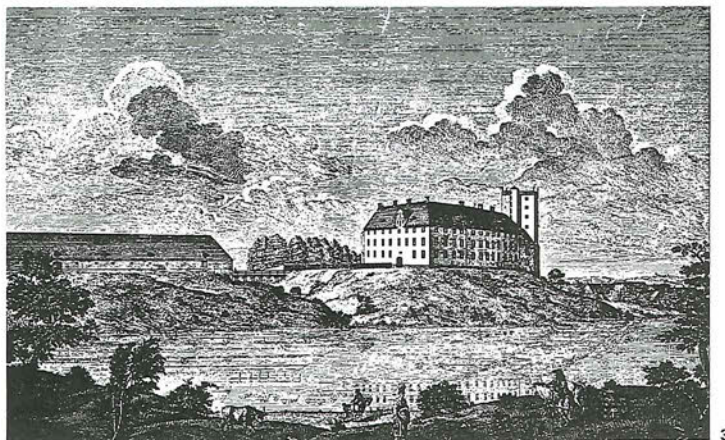
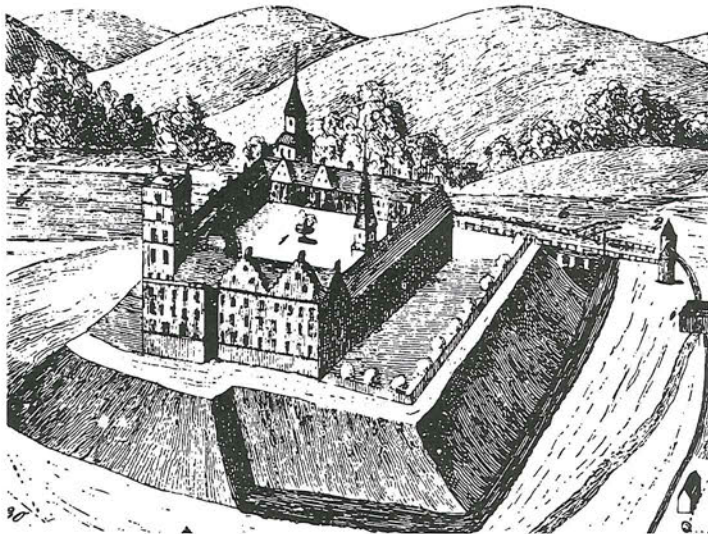


Koldinghus castle has been transformed many times since it was founded in the Middle Ages. For 20 years the Exners have worked on the castle, not to restore it to any of its former states, but to reinterpret what remains using twentieth-century technology and sensibility.

BORN AGAIN CHRISTIANS

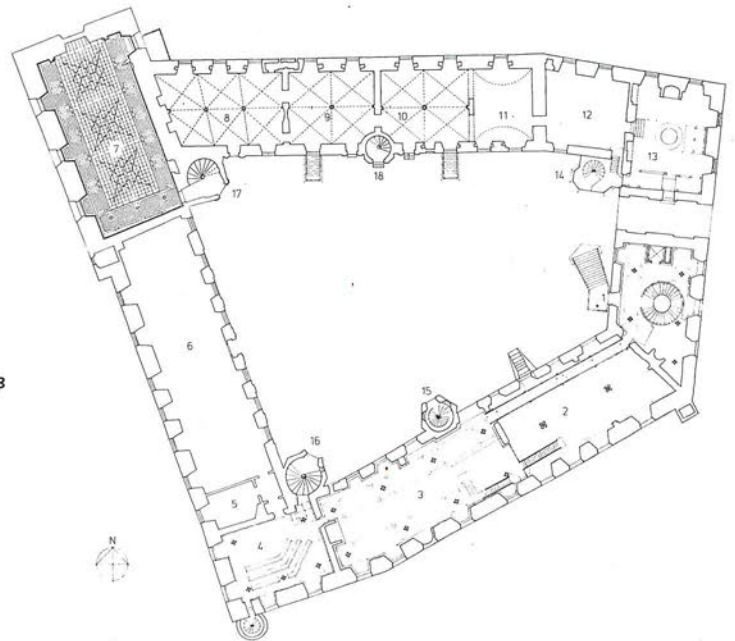


1
Koldinghus castle from the south in about 1585. The building has been made into a four winged Renaissance palace by Christian III.
2
Engraving from *Resens Atlas* 1677. Christian IV has rebuilt the north and south wings and erected the massive Warriors' Tower.
3
The palace in 1749. Frederik IV has imposed regular Baroque fenestration and made the building white.

The castle is on a hill dominating the little town of Koldinghus in southern Jutland, some 75 miles from the border with Germany. The royal seat of North Schleswig was founded in misty medieval times as an L-shaped stone building. In the sixteenth century, it was remodelled in brick round by Christian III as a Renaissance palace; he added two new wings to make it into a courtyard which was richly extended by Christian IV after a fire in 1597. In the eighteenth century, Frederik IV imposed a Baroque order, scraping off medieval and Renaissance ornament and irregularities, rendering all the walls white and radically

refenestrating them with regular rows of windows. In 1808, the castle's life as human habitation ended when Spanish mercenary troops burnt it down when trying to keep warm in a very cold winter. It continued as a picturesque ruin for over 150 years, with various attempts at patching up and repair (for instance, the great tower on the west facade was rebuilt by Viggo Norn in the 1930s).

But no comprehensive scheme for re-using the castle was made until the 1960s when the government set up a committee to decide on whether to leave the place as it stood, to rebuild it, or to do something in between. Local



first level plan (scale approx 1:850)

- 1 main entrance, lift and stairs
- 2 great hall
- 3 special exhibitions
- 4 Christian III's chapel
- 5 stores
- 6 exhibitions
- 7 Christian IV's chapel
- 8-11 museum
- 12 cloakroom
- 13 booking office and bookshop
- 14 Queen's Tower
- 15 King's Tower
- 16 Crown Prince's Tower
- 17 Trumpet Tower
- 18 belfry

4
The castle from the west in the 1890s. The fire had destroyed much of the building, and the townfolk had used it as a quarry.

5
The south wing with its hanging timber wall clad in oak shingles.

6
Trumpet Tower in court. The top is new and built to protect the old work below without copying it. Glass pane protects stone doorcase.

7
The Queen's Tower is new. Made of tombak and glass, it is intended to protect the old wall and give access to upper levels.



people were divided between those who loved the castle as a romantic ruin and those who believed that it was a public eyesore.

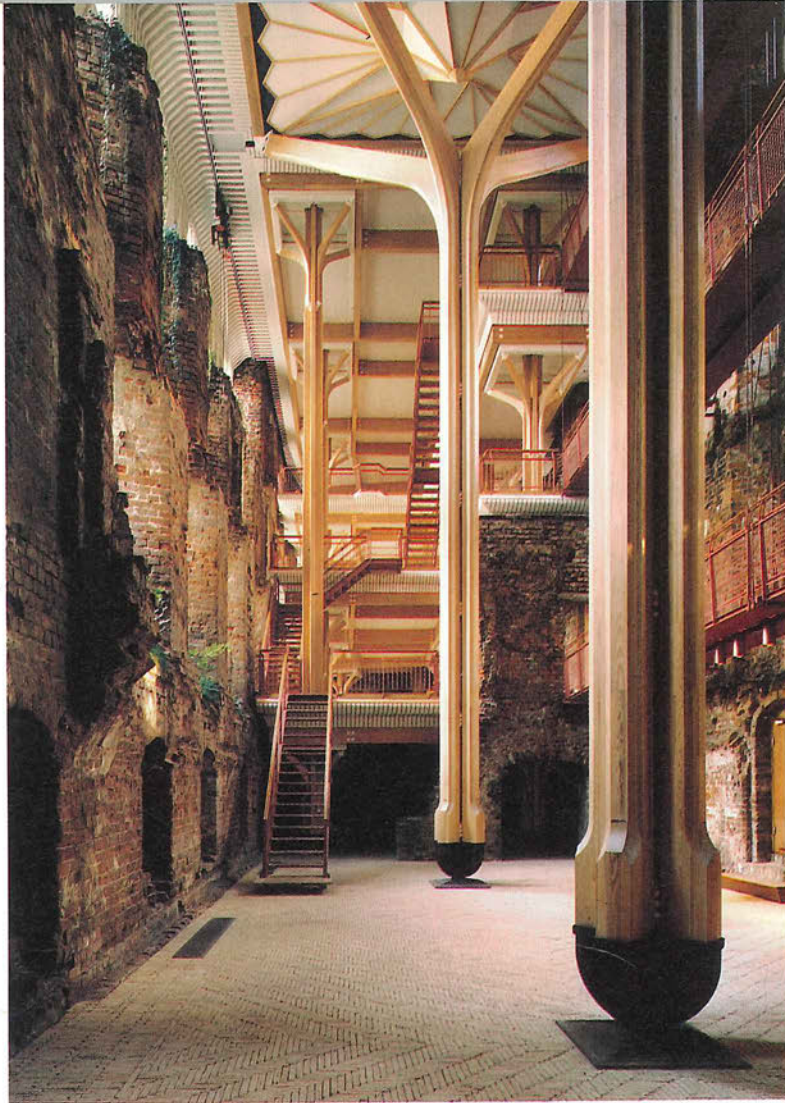
In 1972, Inger and Johannes Exner were appointed as architects and decided that 'the question in the [committee's] report about whether to recommend "either ruins or rebuilding" should be resolved as "both ruins and rebuilding"'.¹ They proposed a simple structure

which would protect the ruins with roof and walls, otherwise leaving them untouched. But local opposition was strong, and a compromise was arrived at whereby the exterior would be given a general form similar to that of the Baroque palace before the fire, while the inside would be preserved as far as possible as ruins, made weathertight by new construction. In their detailed survey, the Exners had found that there were important traces of all

the different periods in the fabric, which was a palimpsest of the place's history. So they resisted any temptation to render the walls as they would have been in the eighteenth century, and were determined that the story should be allowed to tell itself through the exposed brickwork.

Their approach to working with old buildings, which draws very strongly on the philosophy of William Morris and the Society for the Protection of Ancient

Buildings (SPAB) is beautifully expressed by Johannes Exner: 'Buildings are like human beings. They are born and develop; they become ill and they are cured; they grow old, waste away and die. They show the influence of events, people and adversities. They change from the freshness of youth through maturity, sometimes attaining beauty in their old age. Thus their identity is not only the one that was given to them at birth by the architects and



8

8 The great hall in the south wing with the ruined masonry preserved inside the timber wall (left) which hangs from the tree-like columns, as do the steel galleries (right).

**Castle reinterpretation,
Koldinghus, Denmark**
Architects
Inger and Johannes Exner

9 Spiral stair in east wing is made as open as possible to allow the ruins to be seen.



9



section through south wing

artists who created them; it also reflects all the changes, additions and influences that they have experienced during their life. If that life has been historically eventful, it is a serious matter to remove or obliterate the impressions the building has received in order to restore it to its appearance at birth or to stop the historical process in any way'.² The Exners have gradually worked on the castle for more than 20 years – and continue

today. They have always been motivated by the SPAB principle that old work should be old, and that new work should be clearly new.

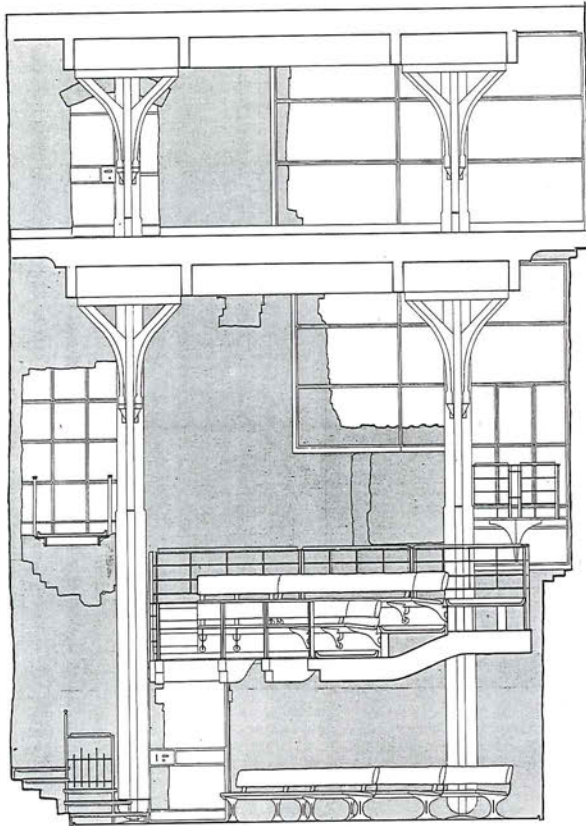
One of the first difficulties to be sorted out was how to deal with the badly ruined south wing, the outer wall of which was in a precarious state. Instead of trying to rebuild it in brick, the architects stabilised the existing masonry, and enclosed the original volume with a timber curtain wall clad in

oak shingles with window openings approximating to those shown on eighteenth-century prints. This wall, circulation bridges and the new hipped roof covered in tiles are supported on a timber structure that is independent of the old masonry.

Laminated timber columns are formed of four elements that curve outwards at the top like branches. The bases are cast-iron hemispheres forming movement joints so that the new structure

can flex differently to the old. The effect of the new structure is particularly powerful at the east end of the wing, where two large columns rise uninterrupted for the full height of the building, creating a huge hall, within which the ruined walls are preserved. The structure of the west end of the wing is in essence the same, but here, timber platforms have been inserted at the floor levels of Frederik IV's reconstruction.

One of the most potent spaces



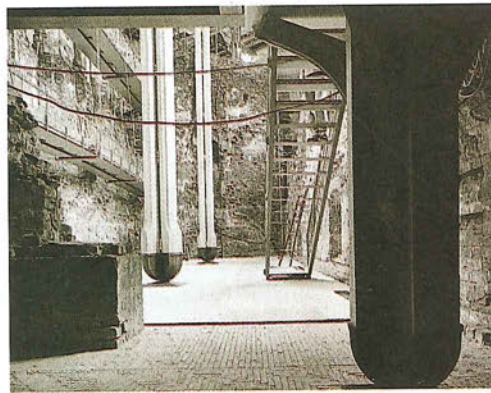
section through Christian III's chapel



10



11



12



13

in the building is the chapel made by Christian III in the south-west corner. This was the first protestant place of worship in Denmark. It did not last long. Christian IV turned it into a bakery, and Frederik IV took the space over as a residence. Then it was ruined until the Exners came along. Using their cruciform laminated columns, they roofed it over, and created an auditorium with a cantilevered gallery that floats on sweeping laminated beams which transfer their loads

to the columns through primary members. To prevent the cantilevered beams toppling forward into the space, their back ends are anchored to the walls with cast anchors specially designed to fit the Renaissance. These are some of the few impacts that the new work has on the old, and the story of the space can be seen in the traces left by each age in the rough masonry, which is offset by the smooth, light modern construction.

The other main religious space

in the castle is Christian IV's church, a much bigger affair in the north-west corner. This had been roofed in by Viggo Norn in the 1930s, and here, the Exners limited their contribution to providing electricity, putting in new windows, and laying a new floor. Slightly raised wooden strips on each side of a Swedish limestone centre show the difference between the old nave and aisles. What at first appear to be wilful chandeliers sketch out the lines of the destroyed ribbed

vaults of the nave; cast-iron standard lamps indicate where the columns stood.

There were originally five towers in the courtyard, but only four partially survived the fire. These have been given new tops in brickwork by the Exners. As in other places where new masonry has been used, they have made no attempt to conceal the fact that the work is of the late twentieth century. The old brickwork has been repointed, but the tops are in modern

**Castle reinterpretation,
Koldinghus, Denmark**
Architects
Inger and Johannes Exner



14



15



16

10
Christian III's chapel, now converted into a little auditorium.

11
New structure is virtually independent of old in Christian III's chapel, but anchors to brickwork are needed to prevent cantilevered beams toppling forward.

12
Laminated pine columns in chapel are similar to those in great hall and have same cast iron bases.

13
The smoothness of the new work contrasts with old masonry where every attempt was made to keep the traces of changes made over centuries.

14
Christian IV's chapel at base of Warriors' Tower. Norn's roof is concrete slab. The Exners made light fittings to show shape of original vaults; standard lights indicate column positions.

15,16
As much of the new construction as possible was prefabricated and touches old work as little as possible.

standardised bricks and make a termination against the sky that is appropriate without trying to copy old forms.

The Queen's Tower, the missing one in the north-east corner of the courtyard, has been completely rebuilt with cladding of glass and *tombak* (copper with about 10 per cent zinc). This traditional material has been used in a new way, as a series of hats piled on one another to make the spiral stair and the traces of the old tower weatherproof (the glass

wall caresses the old brickwork with a brush-like gasket).

Connections between the stair and the different levels of the north wing are by little prefabricated bridges, suspended from the new structure. The device is used extensively elsewhere to great effect. There is an astonishing complexity of spatial devices: high and low, light and dark, solid and transparent, rough old and smooth new are collaged together in a way that allows each visitor to make an

individual story of the history of the castle and its presence today. This is a Post-Modern treatment (in the proper, literary sense) of an ancient monument.

Yet the Exners, although their studies have been profound and their interventions often radical, remain modest. As Johannes says, 'We have preserved what remains, but nothing has been done to hinder the building from developing or changing. If that happens some time in the future, it will be a continuation of the

castle's history, to which we have made our individual contribution; and that seems to us infinitely preferable to those attempts either to put back or to arrest a building in time'.³ HENRY MILES

Footnotes

1 Johannes Exner 'Koldinghus: the conversion of an old Danish castle' in *Momentum*, December 1984, p286.

2 *Ibid.*

3 *Ibid.*, p298.

Architects

Inger and Johannes Exner with Thomas Meedom-Bæch, Erik Schmidt, Finn Larsen
Consulting engineers
Møller Pedersen & Holm Christensen