
Give us your views on this proposal

Historic Environment Scotland consult with parties who are directly affected by designation proposals – including owners, occupiers and tenants – and with the planning authority.

We also welcome views from interested persons or groups.

This designation case is open for comment until 09/07/2019

We are primarily concerned with views that relate to the cultural significance of the site or place. We also consider comments on the purpose and implications of designation.

How we handle your information

We are committed to protecting personal data and privacy and will process your personal information in line with the General Data Protection Regulation 2016/679 and the Data Protection Act 2018. You can view our privacy notice [online](#).

The data we collect will be used only by staff in HES designations to inform our decision on this case. Where relevant, comments may be summarised in our report of handling which will be published on our online portal.

We will hold the information for a maximum period of 2 years. You have the right to access your data, receive a copy of it, request corrections or removal and object to the processing of your data.

How to give your views

To give us your views please contact Designations Team.

Email: designations@hes.scot.

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If you have any further questions you can also telephone 0131 668 8914.



Case information

Case ID	300031891
File Reference	HGH/B/HH/98
Name of Site	Drochaid Ceasaig, Inbhir Nis / Kessock Bridge, Inverness
Postcode (if any)	IV1 3YE

Local Authority	Highland Council
National Grid Reference	NH 66514 47614
Designation Type	Listed Building
Designation No. and category of listing (if any)	N/A
Case Type	Designation

Received/Start Date	15/10/2018
Decision Date	Pending

1. Decision

Previous Statutory Listing Address	N/A	Previous category of listing	N/A
New Statutory Listing Address	Drochaid Ceasaig, Inbhir Nis / Kessock Bridge, Inverness	New category of listing	B

An assessment using the selection guidance shows that the building meets the criteria of special architectural or historic interest. The decision is to list the structure at category B.

2. Designation Background and Development Proposals

2.1 Designation Background

There is no previous review of this bridge for listing.

2.2 Development Proposals

There are no known development proposals.

3. Assessment

3.1 Assessment information

Drochaid Ceasaig / Kessock Bridge was visited on 30/05/2019.

3.2 Assessment of special architectural or historic interest

The bridge was found to meet the criteria for listing.

An assessment using the selection guidance to decide whether a site or place is of special architectural or historic interest was carried out. See **Annex A**.

The listing criteria and selection guidance for listed buildings are published in Designation Policy and Selection Guidance (2019), Annex 2, pp. 11-13, <https://www.historicenvironment.scot/designation-policy>.

4. Consultation

4.1 Consultation information

Consultation period: 18/06/2019 to 09/07/2019.

We have consulted the owner and the planning authority.

The consultation report of handling is published on our portal for comment from interested parties.

4.2 Consultation summary

N/A

Elizabeth McCrone

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ANNEX A

Assessment of special architectural or historic interest

1. Building or site name

Drochaid Ceasaig, Inbhir Nis / Kessock Bridge, Inverness

2. Description and historical development

2.1 Description

Drochaid Ceasaig / Kessock Bridge, dating from 1976 to 1982, is a cable-stayed dual carriageway road bridge, the first of its type in the United Kingdom, carrying the A9 over the Beaully Firth between Inverness-shire and Ross and Cromarty.

The bridge was designed and built for the Scottish Development Department (SDD) by the designers Dr Hellmut Homberg (super-structure) and Trafalgar House Engineering Services Ltd (sub-structure), Ove Arup & Partners and Crouch & Hogg as joint engineering consultants and the Cleveland Bridge and Engineering Company and Redpath Dorman Long Ltd, as joint contractors.

The bridge has a total length of 1056 metres with a main navigation span of 240 metres. There are seven smaller spans to the south and five to the north, all ranging between 60 and 80 metres in length. The deck is made of steel and is supported from four steel towers with groups of eight steel cables arranged in a twin 'harp' shape configuration. The supporting piers are concrete. To protect against seismic and geological movement in the Great Glen Fault, the bridge includes buffers at the north abutment near the line of the fault. Each buffer weighs about 2.5 tons.

2.2 Historical development

By the late 1960s, it was decided that a bridge over the Beaully Firth was needed to replace the historic ferry crossing between North Kessock and Inverness in order to connect Scotland's northern most city more directly with the towns and communities in the Highlands. This initiative led to a feasibility study by the Scottish Development Department (SDD) in 1970. Practicality, cost efficiency and structural soundness were the primary design concerns. Extreme weather conditions as well as potential seismic movement along the Great Glen Geological Fault were taken into consideration as part of the design process.

The initial design by Alasdair Cullen Wallace of Crouch and Hogg was for a multi-cable stayed bridge with an innovative A-frame tower offset towards the south side of the bridge. Excessively high estimated costings for the proposal led the SDD to change course and initiate, in 1976, the first design-and-construct competition for a

major bridge project in the United Kingdom. 'The least risk in safety, time and money' was central to the design brief (Knox, 1984).

Six designs were shortlisted in March 1977. The winning bridge by the German bridge designer Hellmut Homberg was projected to be the least expensive of the six, at around 17 million pounds (Clements, 1981). Work started on site in April 1978. The completed bridge opened to traffic in July 1982.

A 2013/2014 refurbishment programme included the installation of platforms and ladders at various locations along the underside of the bridge for ease of future maintenance, as well as resurfacing the carriageway, re-stressing of the cables, and the replacement of lighting columns and safety barriers. The general appearance of the bridge has not changed from the date it was completed (2019).

3. Assessment of special architectural or historic interest

To be listed a building must be of 'special architectural or historic interest' as set out in the [Planning \(Listed Buildings and Conservation Areas\) \(Scotland\) Act 1997](#). To decide if a building is of special interest for listing we assess its cultural significance using selection guidance which has two main headings – architectural interest and historic interest (see Designation Policy and Selection Guidance, 2019, Annex 2, pp. 11-13).

The selection guidance provides a framework within which judgement is exercised in reaching individual decisions. The special architectural or historic interest of a building can be demonstrated in one or more of the following ways.

3.1 Architectural interest

The architectural interest of a building may include its design, designer, materials, setting and the extent to which these characteristics survive. These factors are grouped under two headings:

3.1.1 Design

Drochaid Ceasaig / Kessock Bridge was the first multi-cable-stayed bridge in the United Kingdom and the largest (total length, weight and height) in Europe at the time of its completion in 1982.

It was designed to withstand extreme weather and geological conditions. The robustness of the structure is evident in the thick, girder-like appearance of its steel towers and deck, and its substantial concrete piers and spread footings. An unusual combined welding and bolting system was used, meaning that a maximum amount of welding could be carried out in the factory (Wallace, 1984).

An innovative feature is its hydraulic protective system to allow for seismic and geological movement in the Great Glen Geological Fault. There are two piston-like

hydraulic buffers at the north abutment. Under slowly applied loads the buffers are extended or retracted, so that during an earth tremor or other type of shock event, the buffers create a stabilising resistance to movement. The Kessock Bridge was among the first bridges in Europe to apply this technology.

Drochaid Ceasaig / Kessock Bridge was designed by Hellmut Homberg (1909-1990), a leading post-war German bridge engineer involved in the design and construction of many important early multi-cable-stayed road bridges (see 3.2.1 - Age and Rarity). Homberg had a major influence in establishing this type of bridge internationally, with many of his key employees going on to start their own consultancies.

Drochaid Ceasaig / Kessock Bridge won the combined design and construction Saltire Award in 1983, the year after it opened to traffic. The structural form and appearance of the bridge has not been altered since then.

3.1.2 Setting

The bridge is located between Inverness and North Kessock, at the narrowest point where the Moray Firth meets the Beauly Firth, and is a major coastal landmark due to its scale. The four towers are prominent on the skyline, and the bridge is a significant foreground feature when viewed from the shore at Kessock and Inverness, particularly when illuminated at night.

The bridge is visible from Thomas Telford's early 19th century ferry pier (LB13464, category C) at North Kessock. The contextual relationship also adds to the interest. The wide, estuarial setting, with low hills to the north and south of the bridge, has not changed substantially since the bridge opened in 1982.

3.2 Historic interest

Historic interest is in such things as a building's age, rarity, social historical interest and associations with people or events that have had a significant impact on Scotland's cultural heritage. Historic interest is assessed under three headings:

3.2.1 Age and rarity

Cable-stayed bridges, in their modern form, were pioneered during the late 1950s. This was largely a European phenomenon, with much early innovation taking place in Germany during the 1960s. The technology allows spans of 200 metres or more to be traversed without the super-structural cost associated with large suspension bridges.

The earliest examples used single or *mono* cable stays to support the bridge superstructure. The Theodor Heuss Bridge (1953-57) on the Rhine, Düsseldorf indicated the potential of this new cable-stayed technology, initiating a run of significant designs throughout the world in the decades to follow (Gimsing, 2009).

The North Elbe Bridge in Hamburg (1962, by Hellmut Homberg) was the first mono-cable-stayed road bridges to align its cables on a single plane along the central axis of the bridge. This hugely influential type of design was used on a much larger scale for the Erskine Bridge (1967-71, LB52482, Category A), the first cable-stayed road bridge in Scotland. The Erskine Bridge over the River Clyde and the Wye Bridge (1966, listed Grade II) over the Severn estuary between England and Wales have been recognised as the most significant early cable-stayed bridges in the United Kingdom.

During the 1960s Hellmut Homberg (1909-1990) spearheaded the development of multi-cable-stayed bridge designs, usually in *fan* or *harp*-shape cable configurations. The Friedrich Ebert Bridge, Bonn (1964-67 by Hellmut Homberg) was the first road bridge of this type. The second, the Rees-Kalker Bridge (1965-67, also by Homberg) has paired towers with multiple cables in a parallel *harp* arrangement similar to Homberg's winning design for Kessock Bridge. By modelling Kessock Bridge on a successful earlier design, Homberg may have increased his chance of winning the competition, particularly as a low risk solution was part of the design brief. Homberg's largest multi-cable-stay bridge in Britain is the Queen Elizabeth II Bridge, Dartford, completed in 1991 shortly after his death.

By 1985 around 150 cable-stayed road bridges had been constructed worldwide, rising to over 1000 bridges by 2014 (Svensson, 2014). Almost all large-scale cable-stay road bridges built after 1985 use multi-cable-stay systems. This is due in part to increased stability, relative ease of assembly, and that individual cables can be replaced cost-effectively without compromising the strength of the structure. The Queensferry Crossing over the Firth of Forth (2017) is the most recent example of this bridge type in Scotland (2019).

While 20th century road bridges are not a rare building type, Drochaid Ceasaig / Kessock Bridge (1976-82) is a major example of its type. It was the first multi-cable-stayed road bridge in the United Kingdom and the largest (total length, weight and height) in Europe at the time of its completion in 1982. It was designed by a pioneering and influential bridge designer, and built at a time when large multi-cable-stayed road bridges were still relatively rare internationally. These factors contribute to its special interest.

3.2.2 Social historical interest

Drochaid Ceasaig / Kessock Bridge has historical, social, economic and cultural associations as an important part of Scotland's civil engineering and bridge-building heritage.

Before the Industrial Revolution the Highlands of Scotland had a busy network of communication routes along its coastline and numerous inland waterways. The north underwent numerous far-ranging and comprehensive improvement schemes during the 19th century, using bridges, canals and roads to connect remote areas with the main centres of population and industry.

After the Second World War, increasing reliance on the motor car saw major infrastructural investment in the new road and motorway networks across the United Kingdom. An integrated road network was seen as a priority in and near Scotland's largest areas of population where the use of private cars and the need for commercial road transport was most pressing. Many new bridges spanning rivers, lochs and glens were required as a result of these changes. Among them the Forth Road Bridge (1958-64, LB47778) which, when opened, was the longest suspension bridge outside of the United States of America; and the Erskine Bridge (1967-71, LB52482) which remains the longest mono-cable-stayed bridge in Britain. Drochaid Ceasaig / Kessock Bridge is the most southerly of three firth crossings on the A9 trunk road into the Highlands, the others being the Cromarty Firth Bridge (1979, not listed) and the Dornoch Firth Bridge (1991, not listed).

The replacement of ferries with road bridges in many locations across Scotland has had a significant social and economic impact on more traditional ways of life. Kessock Bridge is a good example of how a major civil engineering work can affect the economy and way of life of rural communities. Before 1982, journeying north of Inverness meant crossing the Beauly Firth via the historic (reportedly 15th century) ferry between South and North Kessock (see LB13464) or travelling more than 20 miles around the Firth. Construction of the bridge made the ferry service redundant, significantly reducing journey times between Inverness and the far northeast. The bridge also brought communities within the Black Isle area to the north of the Beauly Firth within commuting and shopping distance of Inverness. These factors have contributed to the significant growth of the city since 1982.

As the largest multi-cable-stayed bridge in Europe when it opened, Kessock Bridge (1976-82) is a significant contribution to Scotland's bridge-building heritage.

3.2.3 Association with people or events of national importance

There is no association with a person or event of national importance.

4. Summary of assessment

Drochaid Ceasaig / Kessock Bridge (1976-82) was the first multi-cable-stayed bridge in the United Kingdom, and the largest in Europe at the time of its completion in 1982. Built at a time when bridges of this type were still rare internationally, it is a major example of 20th century bridge engineering in Scotland. The award-winning design, by one of the world's leading cable-stayed bridge engineers of the period, makes innovative use of hydraulic buffers at its north end to allow for geological movement in the Great Glen Fault. It was also the first major bridge project in the UK to use a competitive 'design-and-construct' tendering process to ensure cost-efficiency.

In our current state of knowledge Drochaid Ceasaig / Kessock Bridge meets the criteria of special architectural or historic interest.

5. Category of listing

Once a building is found to be of special architectural or historic interest, it is then classified under one of three categories (A, B or C) according to its relative importance. While the listing itself has legal weight and gives statutory protection, the categories have no legal status and are advisory. They affect how a building is managed in the planning system.

Category definitions are found at Annex 2 of Designation Policy and Selection Guidance (2019) <https://www.historicenvironment.scot/designation-policy>.

5.1 Level of importance

Kessock Bridge's level of importance is category B.

Buildings listed at category B are defined as 'buildings of special architectural or historic interest which are major examples of a particular period, style or type.

Taking into account the interest of the building type and its relationship to other examples of this bridge type in Scotland (including the Erskine Bridge) and the degree of design interest, category B is considered to be the most appropriate level of listing.

6. Other Information

N/A

7. References

Canmore: <http://canmore.org.uk/> CANMORE ID 68591

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Structurae: International Database and Gallery of Structure: *Hellmut Homberg* at <https://structurae.net/persons/hellmut-homberg> [Accessed, 2019]

8. Images

Images proposed for inclusion in online Listed Building Record if building becomes listed or if an existing listed building record is amended or removed.



Type: Standard

Title: Kessock Bridge, aerial view looking north.



Type: Standard

Alternative Text: Kessock Bridge, aerial view looking north on sunny day.

Date taken: 2006

Photographer: RCAHMS

Copyright: © Historic Environment Scotland

Title: Kessock Bridge, general view looking north.

Alternative Text: Kessock Bridge, general view looking north on a cloudy day.

Date taken: 30/05/2019

Photographer: HES

Copyright: © Historic Environment Scotland

9. Indicative Map

A map of the proposed listed building is attached separately.