



THE SCOTTISH OFFICE  
Roads Directorate

# THE SKYE CROSSING



MILLER/DYWIDAG  
JOINT VENTURE





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This is the third attempt to provide a bridge to Skye in the last 60 years. The first attempt was in 1938 but faltered with the onset of the Second World War. The second occasion was in the 1960s when even then it was investigated as a tolled bridge. In 1985 Highland Regional Council (HRC) commissioned a feasibility study to investigate the engineering options for a fixed crossing. The study reported in favour of a fixed crossing and put forward a preferred line for a road and bridge scheme routed to the west of the existing ferry passage. On the basis of the conclusions contained in the study, HRC decided to press for a fixed crossing.

Further studies by The Scottish Office indicated that a fixed crossing could be a better use of resources than continuing with the ferry service. However, there was no prospect that such a scheme could be funded in any public programme until well into the next century. Accordingly, a scheme has been prepared which will allow the bridge to be built and financed by private enterprise in return for the right to levy agreed tolls for a limited period. These tolls will be no higher than the ferry charges at the time of opening and increases will be restricted in line with inflation. Concessionary tolls, similar to those currently offered on the ferry, will be available to regular users.

The judgement of the Regional, District and most Community Councils was that a toll bridge with a guaranteed limited toll duration would be acceptable, taking all the circumstances into account, in order to gain the benefits of the bridge sooner rather than later. In October 1989, the Regional Council asked the Secretary of State to undertake the project on this basis. It was also understood that once the bridge was paid for the user would cross free, which presumably would not be the case with a continuing ferry service.

The road orders were published on 1st November 1991 and were accompanied by an environmental statement which has been produced in accordance with European and Scottish legislation and is designed to ensure that the likely effects of the development on the environment are fully understood and that any potential adverse effects are avoided or reduced to acceptable levels.

It is proposed that construction of the bridge will begin in early summer 1992 with a view to completion in winter 1994 or spring 1995.

### The Background

Kyle of Lochalsh has developed since the end of the nineteenth century when the railway terminal, linking it to Inverness, was built. The development of Kyleakin followed that of Kyle and was related to developments in the ferry service. Improved road links, and with them further improvements to the ferry service, have contributed greatly to the economy, employment and development of both communities.

The ferry service, operated by Caledonian MacBrayne, is the main link between Skye, the Outer Isles and the mainland. Although adequate in the low season, there has been increasing dissatisfaction with the lengthy queues which frequently occur over the peak season despite the recent introduction of larger vessels. Both townships are dominated in peak summer periods by visitors going to and coming from Skye, with serious congestion and long traffic queues on the mainland and on Skye.

The inconvenience for travellers during these peak periods is also a major disruption within the two communities and in the case of Kyle of Lochalsh, is viewed as an inhibition to local trade. Kyleakin, on the other hand, is dependent, to some extent, on passing tourist trade.

### The Project

In response to the steady increase in tourism during the 1980s and the pressure that put on the Kyle to Kyleakin ferry, Highland Regional Council commissioned the 1985 study into the feasibility and socio-economic effects of building a bridge to Skye. The study concluded that there was substantial local support for such a scheme and that it would have economic and social benefits for the local population.

Several routes were examined and two (a central route directly from Kyle to Kyleakin and a western route from the Plock of Kyle to the promontory west of Kyle House) were considered to be worth further consideration. The central route was more expensive and, supported by a comparison of the environmental impacts, the western bridge route was recommended as the preferred replacement for the existing ferry service.

An outline brief was prepared and an invitation to submit proposals was published in the Official Journal of the European Communities. Over 50 companies expressed an interest in tendering for Scotland's first package scheme to "design, build, finance and operate" a new road and ten proposals were received from six consortia including five European companies. The choice of route and form of fixed crossing had been left open but all submissions proposed a bridge on the western alignment.

## THE PROPOSALS



▲ Looking south west from the viewpoint on the Plock showing the bridge with the toll plaza in the foreground.

### Noise

There will be varying degrees of noise associated with the construction of the approach road along the Plock from Kyle, but the noisiest period will be mainly limited to the initial nine months of rock blasting and excavation and will be largely confined to the western end of the town. After construction, noise from traffic at the western end of Kyle will be slightly more than is presently experienced from the ferries but Kyleakin will be significantly quieter.

The developer intends to transport materials by sea, wherever practicable, from the site compound area west of Kyleakin to the bridge construction areas. This will limit the extent of disturbance on the Kyle community over the construction period of approximately two and a half years.

### Ecology and Landscape

The geology and climate of the region has a significant impact on the land uses, vegetation and associated ecological communities. The durability of the sandstone which underlies the area has given the landscape its characteristic ruggedness with many outcrops of bare rock. Soils are impoverished, largely due to the heavy rainfall, and this, along with high winds and infrequent sunshine, restricts growth. The influence of the Gulf Stream reduces the number of frosts which would normally be experienced at this latitude.

Specialist reports have been prepared to describe the important features of the existing environment and to make recommendations to minimise damage and disturbance.

A rare liverwort has been identified at several sites but these are not on the road line and precautions will be taken to safeguard them during construction.

The area is extensively used by otters and the main features of their habitat have been identified, together with mitigation and habitat replacement proposals, with a view to minimising disturbance and reducing the risks of road mortality.

### Visual Effects

The area affected is of international importance being the point from which many visitors to the Highlands of Scotland experience their first view of Skye and the Cuillins.

The impact of the bridge will be significant within this landscape setting. Its greatest impact will be on Kyleakin and a number of specific locations around Kyle, with more limited and distant views from the A87 approach road. Many distant views of the bridge will be available from high ground but the effect will be less significant and it is more likely to be viewed as a landmark rather than an intrusion.

The proposed bridge design is at the forefront of existing technology. There is one slightly longer bridge of similar construction in the southern hemisphere but it is more than twice the width of this proposal and therefore technically less advanced.

In developing the bridge design, Dywidag considered various alternative solutions and concluded that a design which was elegant and did not attempt to compete with the high quality landscape was most appropriate for the setting. Aesthetic quality is a subjective issue, however, and as with any scheme of such visual importance, the bridge inevitably will have both admirers and critics.

The approach roads, although designed for safety, take account in their alignment and finishes of the local context and will be landscaped to minimise their intrusion and to give them the character of a traditional Highland road.



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### The Proposed Route



An assessment was made of these submissions and three were selected for further development. In February 1990, the Miller/Dywidag joint venture, the Morrison Construction Group and Trafalgar House Offshore and Structure Limited were invited to prepare tenders. A detailed performance brief was prepared by JMP Consultants Limited in consultation with The Scottish Office and Highland Regional Council and distributed to the shortlisted consortia. This brief, in addition to technical, contractual and financial matters, directed attention to the need for the proposed crossing to be designed with priority given to any environmental effects it might have on the exceptional location in which it would be built. During the tender period, consultations were held with environmental bodies, The Royal Fine Art Commission for Scotland, The National Trust for Scotland and The Countryside Commission for Scotland in addition to local Community Councils, Skye and Lochalsh District Council and HRC. The comments received from these consultations assisted the tenderers in developing further their proposals.

Tenders were formally submitted in November 1990 and the views of The Royal Fine Art Commission for Scotland, The Countryside Commission for Scotland and The National Trust for Scotland among others, were again sought through several presentations and discussions before, in April 1991, the Miller/Dywidag submission was announced as the preferred scheme. The draft road orders to allow work to commence were published on 1st November 1991.

The design team for the project is: Dykerhoff & Widmann A.G., bridge designers; Ove Arup & partners, civil engineers; and Holford Associates, landscape and environmental consultants. Miller Construction Limited are the contractors.



Aerial view to the south west with Kyle of Lochalsh in the foreground and the Cuillins in the distance.





◀ Looking east along the proposed road line below Lochalsh road before and after construction



◀ The seabed on the bridge line at a depth of 20 metres



▼ and at a depth of 5.5 metres

A survey of marine and shoreline biology revealed that although there are some attractive aspects of marine ecology within and adjacent to the area of construction, there is nothing rare and similar species are to be found nearby. The survey also concluded that, with limited disruption proposed for the sea bed and shorelines, the marine ecology would re-establish relatively quickly. Recommendations have been made regarding phasing the works to limit the risk of silt being carried to the shellfish farms north-west of the proposed crossing.

The existing vegetation is dominated by heather, gorse and bracken with scrub woodland on the mainland and on the islands. There are two prominent stands of Scots pine, in Kyle behind Lochalsh Hotel and at the Kyle House woodland garden. The former will be severely affected while the edge of the latter will be lost. The semi-natural birch woodland which forms the western edge of Kyle House woodland will be completely lost with the construction works for the road on Skye but it is recommended that this be replanted.

The landscaping proposals aim to minimise the visual intrusion of the approach roads and any disturbance of the local population and plant communities both during and after construction. The methods recommended include the following:

- Retention of existing vegetation wherever possible
- Minimum disturbance of important habitats
- Re-use of existing vegetation wherever unavoidably disturbed
- Use of trees and shrubs of a local provenance or ecologically appropriate for the area.
- Restricted construction corridor.
- Road alignments that limit the extent of engineering work required.
- Embankment and cutting profiles and treatment which reduce their visual impact and provision for planting thereon.
- Stone dykes to obscure views of traffic and the road.

Existing plants and animals will be at greatest risk during construction and detailed proposals have been prepared to ensure that all reasonable precautions are taken to restrict noise, dust, pollution and encroachment into adjoining habitats from the restricted construction corridor.

Proposals for monitoring the construction are being prepared to ensure that disturbance is minimised and that any unexpected effects can be quickly addressed. A maintenance scheme is being prepared to encourage the establishment of replacement and new planting.

## Communities

Three properties in Kyle will have to be demolished: the butcher's shop at the top of the ferry marshalling area; the Lochalsh Hotel staff bungalow; and the lock-ups beside the accommodation block.

Both Kyle and Kyleakin communities suffer from congestion and reduced amenity because of traffic queues in the summer and further developments in Kyle have long been seriously restricted by a lack of suitable development land. Kyleakin has no such concern, having an abundance of suitable ground. Environmental benefits will be experienced in both communities with the termination of the vehicular ferry service. Kyle's economy and employment are largely based within the community and although some fall-off in stopping traffic may affect accommodation and retail services, this could be reversed by the development programme currently being pursued which will improve parking, increase facilities for visitors and improve sub-standard areas.

A number of people from Kyleakin are employed on the ferry and their jobs will cease once the bridge has been opened and the ferry removed although some may be required to operate the bridge toll system. In addition, passing trade is important to the local economy and this will be significantly diminished when the township is by-passed. Priority should be given to the provision of funding from other sources for alternative attractions, with special attention given to the needs of the community.