

APPLICATION FOR SCHEDULED MONUMENT CONSENT  
PROPOSED WORK AT: PONT-CYSYLLTE AQUEDUCT, LLANGOLLEN RURAL, WREXHAM

ANNEX A: ADVICE OF CADW'S INSPECTORATE OF ANCIENT MONUMENTS APPENDED  
TO THE LETTER ON BEHALF OF THE NATIONAL ASSEMBLY FOR WALES DATED:  
29 FEBRUARY 2000

PRESENT STATE OF THE MONUMENT

Pont-Cysyllte Aqueduct is a monument of outstanding international importance which has remained in use since it was constructed two centuries ago. The condition of the structure is generally excellent. However there are some concerns about possible corrosion of the wrought iron bolts which hold the plates together, the appearance of the trough, and the condition of the handrail, ribs, joint seals and masonry corbels. The trial contract on one span of the aqueduct has been devised to investigate the condition of various items in more detail and to test the practicality of methods for a wholesale restoration.

ASSESSMENT OF EFFECTS OF THE WORK ON THE MONUMENT

Various works to the monument are proposed, which will have different effects upon the fabric. Some of these works are deemed to be permitted under Class Consent.

1. Erection of slung scaffolding: this will be devised to high safety standards and should minimise possible effects on the original structure. Class Consent applies.
2. Investigation of bolts connecting cast iron trough segments: it is deemed necessary to remove a systematic sample of bolts from different parts of the trial span. This will be beneficial in providing information about the condition of the structure, but there is a danger that removing corroded bolts could cause damage to the surrounding plates and flanges. The use of non-invasive ultrasonic or x-ray techniques to test the bolts appears not to have been considered.
3. Painting of the iron components: this involves a material change in the appearance of the structure and its physical condition, and requires prior grit blasting. There are concerns that the removal of the existing patina of the cast iron could accelerate corrosion and that painting could cause preferential corrosion in vulnerable areas. No analysis has been carried out of the existing treatment of the iron surfaces to determine whether paints have been used in the past. In these circumstances, there is no certainty that painting of the type devised is an appropriate approach, and there is reason to believe that it could harm the metallurgical and aesthetic integrity of the span affected in the long term. Once completed, the previous treatment of the structure could not be re-instated.
4. Repairs to fascia panels and ribs in an outer arch girder: these are minor repairs of benefit to the structure. Class Consent applies.
5. Refilling of joint seals with new materials: it is proposed to dig out the original joint filler material near the surface and replace it with a modern chemical sealant. This will materially change the integrity of the historic structure and is not reversible, but where specific joints are failing it may be regarded as valuable.
6. Parapet repairs: filling around the heads of ballusters is considered necessary for the stability of the parapet. Renewal of the expansion joints will help to prevent fracturing which appears to have been accelerated by inappropriate maintenance. The new bolts will use existing holes and will be fixed into the modern plate at towpath level. Class Consent applies.

7. Masonry repairs: these are reasonable and of benefit to the monument.

#### ADVICE

Class Consent applies to items 1, 4 and 6 above. Consent should be granted for the other items, subject to standard conditions on notification, access and variations, plus the following specific conditions:

1. An annotated photographic record will be maintained of the condition of the monument before, during and after the works, and copies of this will be deposited with the NMR, the SMR and Cadw.
2. Removal of bolts from the trough plates shall not commence until and unless a detailed method statement has been agreed in writing with Cadw which will avoid any damage to surrounding plates and flanges.
3. Painting and prior preparation shall not commence until and unless a detailed method statement has been agreed in writing with Cadw which either a) specifies that only small sample areas of the span for the purpose of testing application methods will be affected, or b) is informed by the professional investigations and recommendations of an approved specialist in the painting of historic metalwork.
4. Repairs to joint seals in the trough shall not commence until and unless a detailed method statement has been agreed in writing with Cadw for sampling the existing joint filling and minimising the number and depth of joints affected.
5. Masonry repairs shall be carried out in accordance with Cadw's guidance notes on the repair of masonry.
6. The RCAHMW shall be afforded access to the works in order to record particular aspects of the trough design not normally visible.

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PROPOSED WORKS AT: PONT-CYSYLLTE AQUEDUCT, LLANGOLLEN  
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ANNEX B: ADVICE OF CADW'S REGIONAL CONSERVATION ARCHITECT  
APPENDED TO THE LETTER ON BEHALF OF THE NATIONAL ASSEMBLY  
FOR WALES DATED 21 FEBRUARY 2000

PRESENT STATE OF MONUMENT

The monument appears to be in a reasonable condition, but is in need of repair. Further investigation will reveal just how much.

ASSESSMENT OF EFFECT OF WORKS ON MONUMENT

The repairs will be beneficial.

ADVICE

Most of the works are covered by class consent. The question of paint needs further investigation and the other aspects such as removal of bolts and repairs to seals should not commence until detailed method statements are approved by Cadw.

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