

Notice of proposal to cause, carry out or permit an operation requiring Natural England's consent on a site of special scientific interest (SSSI)

Name of SSSI: River Wye/ Afon Gwy

Name and address of owner or occupier of the SSSI:

Gloucestershire County Council
Shire Hall, 6th Floor,
Bearland,
Gloucester,
GL1 2TH

Email address: Carys.Rhys-Jones@atkinsglobal.com

Phone number: 01454 662 497 / 07501 002 370

[I/We] give notice to Natural England under Section 28E(1)(a) of the Wildlife and Countryside Act 1981 (as amended and inserted by section 75 and Schedule 9 of the Countryside and Rights of Way Act 2000) of [my/our] proposal to carry out, cause or permit to be carried out the operations specified below on the land specified below.

Operation and land details

Continue separate sheet if necessary or attach additional information or documents.

Specified operations (summary of proposal):

Tintern Wireworks bridge will be fully refurbished on site to return the bridge to full working capacity while retaining its historical listed status (Grade II listed structure). On site refurbishment methods and new design elements will be utilised to ensure ongoing longevity in a sustainable manner.

Standard operations such as encapsulation, grit blasting and re-painting will take place which are common methods and procedures for bridge refurbishments and have been in the industry for many years. All precautions will be taken to ensure there are no adverse effects towards the SSSI or the heritage status.

Details of proposed operations:

The proposed operations for Tintern Wireworks bridge entail the full refurbishment and structural improvement of the bridge. This includes the following likely operations and associated works.

Details of proposed operations:

The proposed operations for Tintern Wireworks bridge entail the full refurbishment and strengthening of the bridge. This includes the following operations and associated works.

1. Mobilisation - Set up of site including welfare provision

Set up of the site compounds and welfare provisions will include a small office, associated welfare facilities (i.e., canteen, lavatories, clean down unit), a small lay down areas for material (suitable fenced off to prevent unauthorised access) and parking for the workforce.

The welfare facilities are proposed to be placed in the Wireworks car park off of Forge Road, and the areas to the ingress/egress points of the bridge. The compounds will be placed on existing hard surfaces, set back at least 10m from the River Wye, posing minimal impact to the SSSI.

For reference locations of the site compounds, refer to *Tintern Wireworks Bridge Site Location Plan* attached.

2. Enabling works - Excavation of West abutment for strengthening operations

Excavation of the West abutment (Monmouthshire side of the bridge) will be undertaken utilising careful methods of digging via hand digging and a small excavator in areas where possible. The works will be confined between the existing wing walls and abutment as seen in Figures 1 and 2. As such, the material will be removed within a very controlled environment to a licensed disposal facility with minimal risk of any debris egressing the surrounding environment.

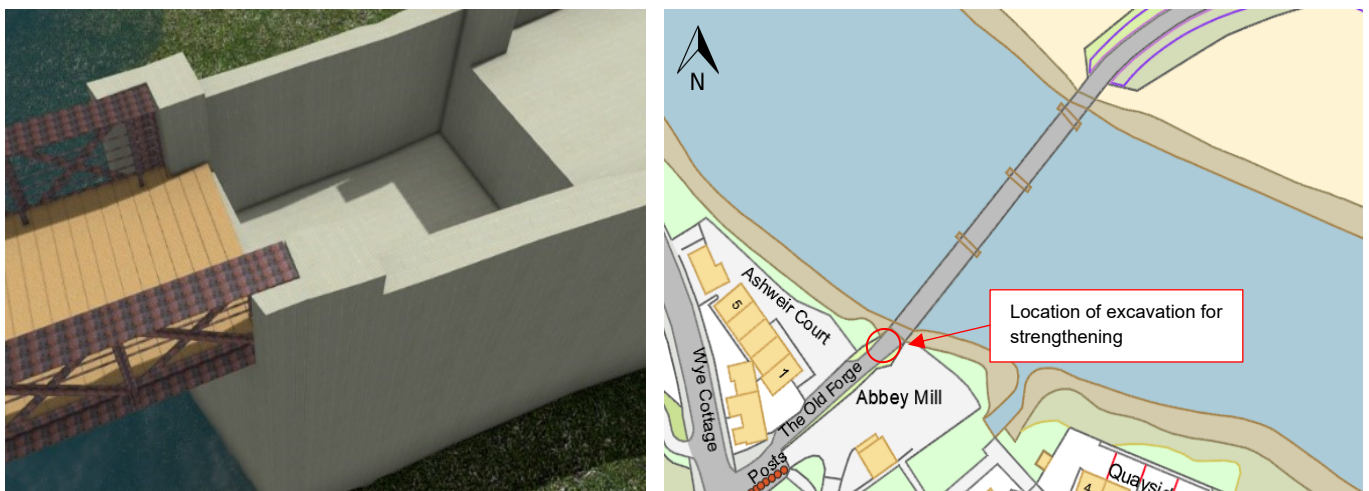


Figure 1 and 2 – Indicative visualisation of excavation for strengthening (left) and plan outlining proposed excavation location (right).

Vehicles, removing the material from site will be managed using standard industry practices such as sheeting lorries to prevent egress of materials to the local environment as shown in Figure 3.



Figure 3 – Example of sheeting on lorries for removal of excavation material.

3. Enabling works - Backfill of West abutment with designed backfill materials

Back fill material for the abutment is proposed to be mass concrete which will enable the work to be undertaken simply and effectively while giving a long whole life solution for the future. This will be delivered using offsite cement mixer lorries (see examples in Figure 4) which will discharge carefully and directly into the excavation. The excavation is confined within the wingwalls and abutment wall and will be checked to ensure that it is secure, and that material cannot breach any nearby watercourse or adjacent land.



Figure 4 – Example of cement mixer lorries expected to be used.

4. Installation of pattress plate/rod system through the wingwalls and abutment

Installation of pattress plate/rod system in this location is proposed to take place from either side of the west wingwalls and abutment fixed in place and then the concrete backfilled.

It is expected that access to the pattress plates (see Figure 5) will be by rope access or via temporary works platform if required. This would be placed on either side of the wing walls and abutment (both north and south of the west end of the structure) to facilitate access and

or drilling for the pattress plate system to be placed (see Figure 6).

Any material exposed will be contained, bagged, and removed from site to licenced waste disposal.



Figure 5 and 6 – Proposed visualisation of the pattress plate system (left- pattress plates are not shown) and examples of proposed method of works (right)

5. Installation of access arrangements for the bridge to the full width, including a suspended temporary works platform

Access to the deck will be via a full access solution so that the whole deck can be accessed from below thereby allowing a full encapsulation of work areas protecting the local environment from the necessary operations.

Using a suspended access system is proposed to ensure that no access is required from the watercourse or on adjacent land.

All efforts to localise the access arrangements to ensure materials are kept within the confines of the bridge plan area will be taken.

6. Encapsulation of the bridge from the access deck to enable grit blasting and painting of the deck to prevent any material entering the SSSI

Works to be carried out over water, especially in the case of such a sensitive area, we will protect the environment with full encapsulation where we are undertaking blasting and painting operations.

Encapsulation is an operation that is standard practise within the industry, and examples of its use can be seen in Figure 7 and 8. To note, in the case of the proposed works on Wireworks Bridge, the temporary works are not proposed to enter the watercourse.



Figure 7 and 8 – Examples of encapsulation of a bridge over a watercourse.

7. Removal of existing timber bridge deck

The existing timber deck will be removed from the bridge, ensuring all movements will be in the confines of the structure and removed off site.

8. Grit blasting of existing steel work

All operations of this nature will be encapsulated as shown in section 6 above, detailing encapsulation and the protection of all operatives. Air fed helmets will be worn and comply with CE respiratory standard EN 271:1995. Blasting gauntlets to comply with EU safety standard CE0120, disposable overalls and safety footwear will also be worn.

A Respiratory protective equipment (RPE) check sheet will be completed on a weekly basis and the work front encapsulation will also be checked before each start of shift to ensure nothing emanates from the working area.

All personnel will suitably decontaminate and clean in units provided for that purpose.

9. Re-painting of existing steelwork

In the same way that blasting of steel work is controlled, painting will also be controlled to ensure that no paint material will be ejected from the working area into the local environment.

Again, this will be controlled by ensuring that all relevant working areas are fully encapsulated as shown in the pictures above.

10. Installation of new bridge bearings to support the longitudinal beams

This operation is within the confines of the bridge and will be undertaken from the suspended temporary access platform. The bearings are not significant in terms of weight or potential to contaminate and are therefore, minimal in terms of measures needed to control their installation. It is proposed that localised cutting of the piers/abutment to accommodate the beams as per detailed design sketches.

There remains some level of work required to fix the bearings to the piers and the abutments, but this will be contained by the access decking in place. The piers may require alteration works including some level of stone repair and removal and replacement. This will be carried out on site using appropriate means. Any dust emanating from this operation will be controlled at source and within the confines of the access deck arrangements.

11. Installation of the new longitudinal beams

The beams are suggested to be installed via a conventional launching method or temporary system proposed by the appointed contractor. Both methods will utilise the encapsulation system to ensure no material enters the surrounding environment, and importantly the SSSI.

12. Delivery by lorry of steel bridge beams including unloading

Due to the nature of the longitudinal beams, they will need to be delivered to site. This will be by a lorry; an example can be seen in Figure 9.



Figure 9 – Examples of lorry used to transport such beams.

Vehicles are only expected to be located at the approach of the structure (from the west), therefore mitigating against any impact to the local environment or SSSI.

13. Welding of bridge beams to form continuous steel bridge beams

There will be a requirement for welding on site to connect the longitudinal beams sections together.

This will be undertaken within the confines of the access deck/encapsulation, mitigating against any impact to the SSSI.

14. *Installation of permanent deck plates and timber decking*

Once again, the installation of the deck plates will be carried out within the confines of the access platform and will not present an issue for the local environment or SSSI. Hot works are not anticipated with bolted connections being used. Any timber will be pre-treated (i.e., off site).

15. *Tidy and snag site works and demobilise site offices*

Once the refurbishment works are complete the site will be demobilised, and any area worked on returned to its original form including making good any disturbed soil and or surface where materials or cabins have sat.

All waste materials will be returned to the contractor's premises, recycled, or disposed of to a licenced waste unit.

For further details, see the following attached documents:

- Tintern Wireworks Bridge OS Map
- Tintern Wireworks Bridge – Water Framework Directive Assessment
- Tintern Wireworks Bridge HRA
- Tintern Wireworks Bridge_PEA
- Tintern Wireworks Bridge Site Location Plan
- Tintern Wireworks Bridge_NRW MW Application_Method Statement 7a
- Tintern Wireworks Bridge_NRW MW Application_Method Statement 7c
- Tintern Wireworks Bridge – Construction Programme
- Tintern Wireworks Bridge_Detailed Design Drawings

End date of proposed operations:

31st December 2022

Timing of proposed operations (including avoidance of certain weather conditions):

Proposed for May 2022 for up to 8 months.

Land on which operations would be carried out (include map):

National Ordnance Survey grid reference: 353011E, 200296N

For reference locations of the site compounds, refer to *Tintern Wireworks Bridge Site Location Plan* attached.

Storage and disposal of materials:

All materials will be stored above highwater levels on an area of hard standing, within site compound at Wireworks Carpark on Forge Road, approximately 0.5km from the SSSI, the

River Wye. Immediate compounds on the egress/ingress of the structure will be utilised for minimal material storage required for daily activities. Equipment will be stored inside a locked storage container located within the main site compound area at Wireworks Carpark. COSHH related products will be stored inside a COSHH site box until required on site. All waste will be removed from site directly for proper disposal to a licensed tip.

Precise routing of operations and vehicles:

The contractor will be responsible for planning the Operational Team routes. This will ensure that the journey is planned before it commences and will take into account the following: Road Restrictions / Constraints on vehicle size, banned routes, preferred route options, alternatives in the event of any unforeseen events, journey length, rest breaks, access to welfare, fees & tolls, peak traffic flow. Routing and scheduling will mean fuel savings, environmental impacts are reduced, and inappropriate routes are avoided. All plant will access the site via public highway.

Frequency of access:

Site compound (refer to *Tintern Wireworks Bridge Site Location Plan* attached.) will be accessed during the site hours. The works site (temporary works platform and the bridge itself) will be accessed by work personnel only and secure to avoid any unauthorised access from the public.

The provenance and chemical nature of imported materials:

Paint: recommended paint system to be chosen in accordance with the Specification for Highway Works (MCHW).

Electric generators will be used where possible which will reduce the risk of pollution and noise.

Type and ground-pressure of vehicles to be deployed:

N/a (all plants [if any] and welfare units to stay on hardstanding surfaces)

Mitigation measures:

Noise - No excessive noise will be carried out (outside of the vicinity of the site). The structure is to be fully encapsulated, and noise levels will be monitored by conducting sound testing. Works will be carried out during daytime hours to ensure we are compliant with The Control of Noise at Work Regulations 2005. Regular liaison with local residents will be held to ensure the noise is acceptable. Through the use of electric generators, noise will be reduced.

Vibration - All handheld power tools which subjects operatives to Hand-Arm Vibration require individual assessments completed in line with HSE guidance to ensure all personnel using the tools are aware of maximum exposure limits. This is recorded daily by all operatives. The excessive use of power tools on site is not envisaged due to the nature of works.

Nuisance - Equipment is maintained on a regular basis to ensure plant is running efficiently and safely. Dust will be collected by using dust extraction units, which are emptied daily and managed by the operatives as part of strict site procedure. These units will be situated as far away from watercourse as possible and the ducting will be efficiently run to the areas of works. Waste will be removed from site via a licenced disposal waste unit. Disruption to residents will be managed by working hours.

Pollution - Where possible, battery operated machinery/equipment will be used. When this is not possible, refuelling, compressors and generators will be located off site within the compound area (20m away from watercourse) and situated on top of spill trays/plant mats to ensure any waste is captured during the refuelling process. Waste collected in the filters/hoppers will then be WAC analysed and disposed of accordingly.

Carbon and energy - Ensure journeys are planned before they commence and consider the following: Road Restrictions/Constraints on vehicle size, banned routes, rest breaks, peak traffic flow etc. Routing and scheduling will mean; fuel savings, environmental impacts are reduced, and inappropriate routes are avoided. Where possible local workforce will be used to minimise, miles travelled.

For mitigation measures to protect designated sites, habitats, and protected species please refer to the attached:

- Tintern Wireworks Bridge HRA
- Tintern Wireworks Bridge_PEA
- Tintern Wireworks Bridge_NRW MW Application_Method Statement 7a
- Tintern Wireworks Bridge_NRW MW Application_Method Statement 7c

Signed by, or for, owner or occupier:



Carys Rhys-Jones (on behalf of Gloucestershire County Council)

Date: 17th January 2022

Using and sharing your information

The Data Controller is Natural England. For further information on how we process your personal information please see the sites of special scientific interest (SSSI) privacy notice at www.gov.uk/government/publications/natural-england-privacy-notice.