

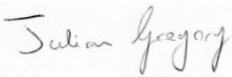
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Appendix A

Carmarthen Swing Bridge

Biosecurity Method Statement



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1. INTRODUCTION

1.1 OVERVIEW

- 1.1.1 This Biosecurity Management Plan & Risk Assessment identifies the biosecurity risks associated with the Carmarthen Swing Bridge - Fender Removal works. It identifies potential biosecurity sources, pathways and receptors.
- 1.1.2 Key risks are:
- ◆ Release of Invasive non-native plant species (Terrestrial and Marine);
 - ◆ And release or propagation waterborne diseases and fungus;
- 1.1.3 This document supports the Habitat Regulations Assessment (HRA), Water Framework Directive (WFD). These documents have been submitted to Natural Resources Wales as part of the necessary Marine License Application to sanction works with the protected designated sites and estuary environment.

1.2 PROJECT BACKGROUND

- 1.2.1 Known as the White Railway Bridge, the rail structure is a standard metallic pier support rail bridge in combination with a Bascule component situated on the western shore of the Tywi. Up and down stream of the structure are now redundant timber constructed fenders. Once important as an additional defence and navigation aide during periods of high vessel traffic along the Tywi.
- 1.2.2 These fenders are no longer required and present a navigational hazard and potential constriction point for debris flowing from upstream sections of the Tywi. Dyer & Butler Rail Division, working with Kaymac have been commissioned by Network Rail to remove the fenders at the earliest opportunity.

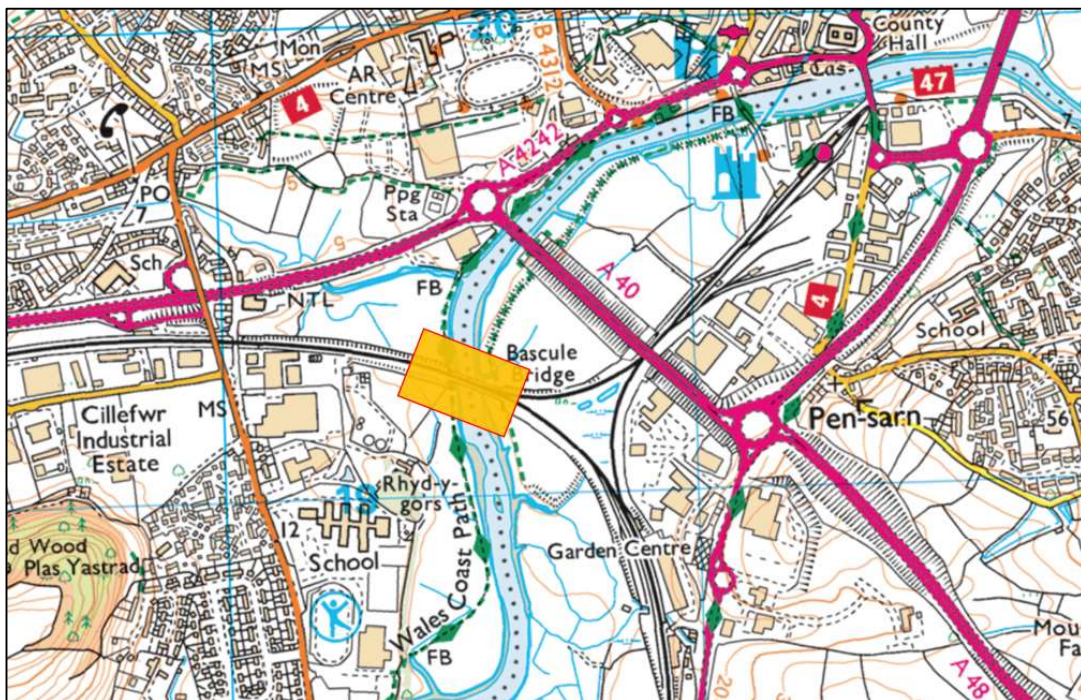


Figure 1: Project Location.



1.3 VESSELS OR VEHICLES TO BE USED DURING THE PROJECT

1.3.1 Two types of vessels are currently envisaged to be used during this project.

Table 1: Vehicle or Vessel to be used.

Machine or Vessel Description	Operator	Figure
Small-powered vessel	Bullo Marine Ltd Transported to site via road.	
Self Powered Spid Barge	Bullo Marine Ltd Will sail to site from Newham on Severn.	

1.4 INVASIVE SPECIES – SUMMARY

- 1.4.1 Invasive, non-native, alien or exotic species (INNS), are species that have been released into an environment outside of their native bio-geographic range or habitat either by accident or intentionally.
- 1.4.2 Consequently, some species are more resilient or aggressive in the new environment to their native counterparts, out-competing and ultimately having a detrimental impact on native habitats as a whole.
- 1.4.3 Within the marine environment, INNS can be spread via a number of natural and anthropogenic pathways including ocean currents, aquatic debris, aquaculture, biofouling of marine vessels, exchange of ballast water and or even intentional introductions.
- 1.4.4 The general stages describing the encroachment of a new INNS is summarised below:
- ◆ **Introduction** – this is most frequently due to human activity e.g. shipping, aquaculture, poor biosecurity controls.
 - ◆ **Establishment** – having arrived in the new habitat, a species will begin to compete with a niche.
 - ◆ **Expansion** – once established, the species will expand and occupy as much space as possible, reducing available resources or directly attacking native species.
 - ◆ **Persistence** – successful expansion can lead to long term establishment of that species in an area, with an increasing difficulty to control the spread. Additionally, the further the expansion the higher the likelihood of a species being introduced in other areas, continuing a vicious cycle.



1.5 PRIORITY MONITORING AND SURVEILLANCE LIST FOR WALES

- 1.5.1 NRW have produced a list of invasive species identified as High, Medium and Low Risk for Wales in the Marine environment. This is referenced to in Appendix A - Marine Invasive Non-native Species Priority Monitoring and Surveillance List for Wales.
- 1.5.2 Currently there is no data originating from the Newham on sea or within this area that highlighted marine INNS presence. There is significant data related to terrestrial INNS flower species and areas of Japanese Knotweed appear in the general records and have been observed along the bank of the Tywi.
- 1.5.3 To date, these species have not been identified within the specific working locations around the fenders.
- 1.5.4 The table below will be used to highlight any marine INNS that may be identified at the sea wall during works.

Table 2: Known Invasive Marine Species.

	Carmarthen Swing Bridge or Newham on Severn	
Marine Non-native species known to be present		

1.6 CHARACTERISTICS OF KNOWN INNS

- 1.6.1 The example table below are extracts from Appendix A - Marine Invasive Non-native Species Priority Monitoring and Surveillance List for Wales. This illustrates the level of risks posed by the species, likely pathway, impact and current management actions.

Table 3: Summary of Marine INNS characteristics - Example.

Species and Group	Risk Assessment Score	Justification	Primary Introduction Pathway	Impact Summary	Management Action
Austrominius modestus Crustacean	Low / unknown risk Risk assessment not available	NA	Recorded in Wales	More data required	Record sightings



1.7 TERRESTRIAL INNS

- 1.7.1 There is currently one identified terrestrial INNS adjacent to the working footprint. Should any additional species be identified, then this information will be added to the table below.

Table 4: Terrestrial INNS in proximity to the project.

INNS Name	Information
Japanese Knotweed	 Stands are present along the upper western bank of the Tywi, below and downstream of the swing bridge. No stands are in proposed working areas however.
Himalayan Balsam	Identified within the WWBIC data search up and downstream of the Swing Bridge, however, no stands in proximity to the works have been identified to date.



2. BIOSECURITY RISK ASSESSMENT & MANAGEMENT

2.1 SUMMARY OF THE RISKS OF INNS SPREAD AS A RESULT FROM PROJECT ACTIVITIES AND PREVENTATIVE MANAGEMENT MEASURES

2.1.1 The following aspect register formulates the assessed risk by multiplying the likelihood of an event or encountering a species (L), by the severity implicated by that event/encounter (S). This quantified the assessed risk of the impact (R).

2.1.2 (L) & (S) are measured between Negligible (1), moderate (2) & high (3) to create the final value.

Activity	Pathway/Vector	Risk Assessment			Preventative Measures	Risk of spread following mitigation		
		L	S	R		L	S	R
Use of small powered vessel to manoeuvre unpowered plastic modular pontoon.	Transfer of INNS via biofouling	1	3	4	All support vessels is to be transported via road to Monmouthshire from the compound/storage unit of origin, while the spid barge will sail from Newham on Severn (Monmouthshire). Prior to departure, recorded pre checks and cleaning will be undertaken before loading for transport. Vessels will be allowed to dry for a minimum period of 48hrs or will be treated with a marine/aquatic disinfectant such as Virkon S prior to being put to water. All vessels to adhere to the Ballast Water Management Convention and Merchant Shipping (Anti-Fouling Systems) Regulations 2009. Minimise the movement of vessels into/out of the licensed area. Vessels which can be removed from the water, when not in use during the project will within the secure temporary compound. Regular inspection of vessels, equipment, and artificial structures for biofouling in accordance with IMO Biofouling Guidance Wash off the anchor and chain before stowing when leaving portage.			



Activity	Pathway/Vector	Risk Assessment			Preventative Measures	Risk of spread following mitigation		
		L	S	R		L	S	R
Import/removal/disposal of materials	Transfer of INNS on materials	1	1	2	No importation of loose material is to occur.	0	0	0
Introduction of manmade structures	Increased availability of artificial hard surfaces available for colonisation by INNS	1	1	2	No new manmade structure will be introduced to the watercourse.	0	0	0
Disturbance of INNS present	Dispersal of INNS released into the water during demolition activities	2	2	4	There are no records of Aquatic species within proximity to the structure. However, the contractor will remain vigilant and will report the sightings of any species attached to the structure of found attached to equipment to the Environmental Clerk of Works (ECOW). The knotweed identified along the bank of the Tywi will be left in-situ and not interfered with.	1	1	2
Use of plant machines and support vehicles during project.	Transfer of INNS from previous sites				The plant machine and Argocat transport will be checked ahead of any usage on site. Should the vehicle fail this inspection it will be returned to the nearest yard or yard of origin for further decontamination before being allowed to return to site. All site personnel and site visitors will be informed if any INNS are known to be present on site and that they are jointly responsible for preventing their spread/impacts. They will be made aware of what these species look like so they can avoid it where possible and take appropriate actions. All site personnel and visitors will be inducted in good biosecurity practices. This will include adoption of the CHECK-CLEAN-DRY campaign (NNSS, 2015).			



Activity	Pathway/Vector	Risk Assessment			Preventative Measures	Risk of spread following mitigation		
		L	S	R		L	S	R
					The CHECK-CLEAN-DRY poster will be displayed in the site office as a reminder of good biosecurity practices: - http://www.nonnativespecies.org/checkcleandry/ The spread of waterborne diseases will be limited through the adoption of the CHECK-CLEAN-DRY campaign. This would entail the use of a suitable disinfectant e.g. Virkon® S Aquatic to decontaminate all machinery and PPE prior to it entering site for the first and upon leaving site, either at the end of the phase or if being sent to a different project/off hired. Following application of a suitable disinfectant, machinery and PPE will be allowed to fully dry for at least 72 hours before being used near another aquatic site.			
Personnel transferring between roles and different sites.	Transfer of terrestrial INNS	1	3	4	Personal and Company vehicles will likely visit other sites as part of the normal role of a given employee. A disinfection station will be set up at the entrance to the compounds to disinfect wheels and boots/wellies, using an aquatic disinfectant such as Virkon S. All equipment, tools, vehicles and personal protective equipment (PPE) used on site will be checked for seeds originating from any identified INNS before leaving the area. If seeds from identified invasive species are identified, the items will be cleaned and removed seeds will be destroyed.	1	1	2



3. MONITORING AND CORRECTIVE ACTION

3.1 INNS MONITORING

- 3.1.1 Monitoring for non-native species will continue during the demolition process.
- 3.1.2 Implementation of a monitoring programme for non-native species would include toolbox talks with site personnel on INNS identification. This information could then be shared with NRW to improve knowledge of INNS whereabouts in this specific portion of the Tywi.
- 3.1.3 The ongoing requirement for vigilance and reporting of instances of INNS identification.
- 3.1.4 Should terrestrial INNS be encountered near working areas or along access and egress points that cannot be segregated from these areas. Then a be-spoke INNS Management Plan will be required.
- 3.1.5 Inspections and cleaning should be undertaken periodically as a means of routine surveillance but may be specifically appropriate before and after any planned period of machine inactivity.

3.2 CORRECTIVE MEASURES SHOULD NON-COMPLIANCE OCCUR

- 3.2.1 Corrective measures will be implemented in the event of a machine or individual found breaching biosecurity protocol, for example a plant machine being allowed to arrive at the structure but on arrival found to have significant biofouling or a vehicle coming into contact with terrestrial INNS and entering the vicinity of the estuary without prior biosecurity measures being implemented.
- 3.2.2 Corrective actions could include:
 - ◆ Inform relevant authorities where appropriate i.e. for non-compliant vessels or machines.
 - ◆ Remove offending machine back to local yard or nearest compound.
 - ◆ Undertake appropriate measures to clean the machine while minimising any further risks e.g. cleaning in situ within secure compound.
 - ◆ Investigate the cause of the incident and implement measures to avoid such events from occurring again.



4. CONCLUSION

- 4.1.1 The assessment has considered the individual project activities and specific known marine and terrestrial non-native species present within the works footprint and access routes.
- 4.1.2 Consequently, implementation of the management measures will ensure the risk of INNS spreading in this section of the Tywi as a result of the scour protection project will remain low.
- 4.1.3 This document will be reviewed in 6 months to ensure any new data is added to assessment to ensure it is always robust and reflects all available data.