

F Regional Biosecurity Plan for the Bristol Channel (and Celtic Sea) Region

BMAPA

Regional Biosecurity Plan

Bristol Channel (and Celtic Sea) Region



August 2018

1 Document Information			
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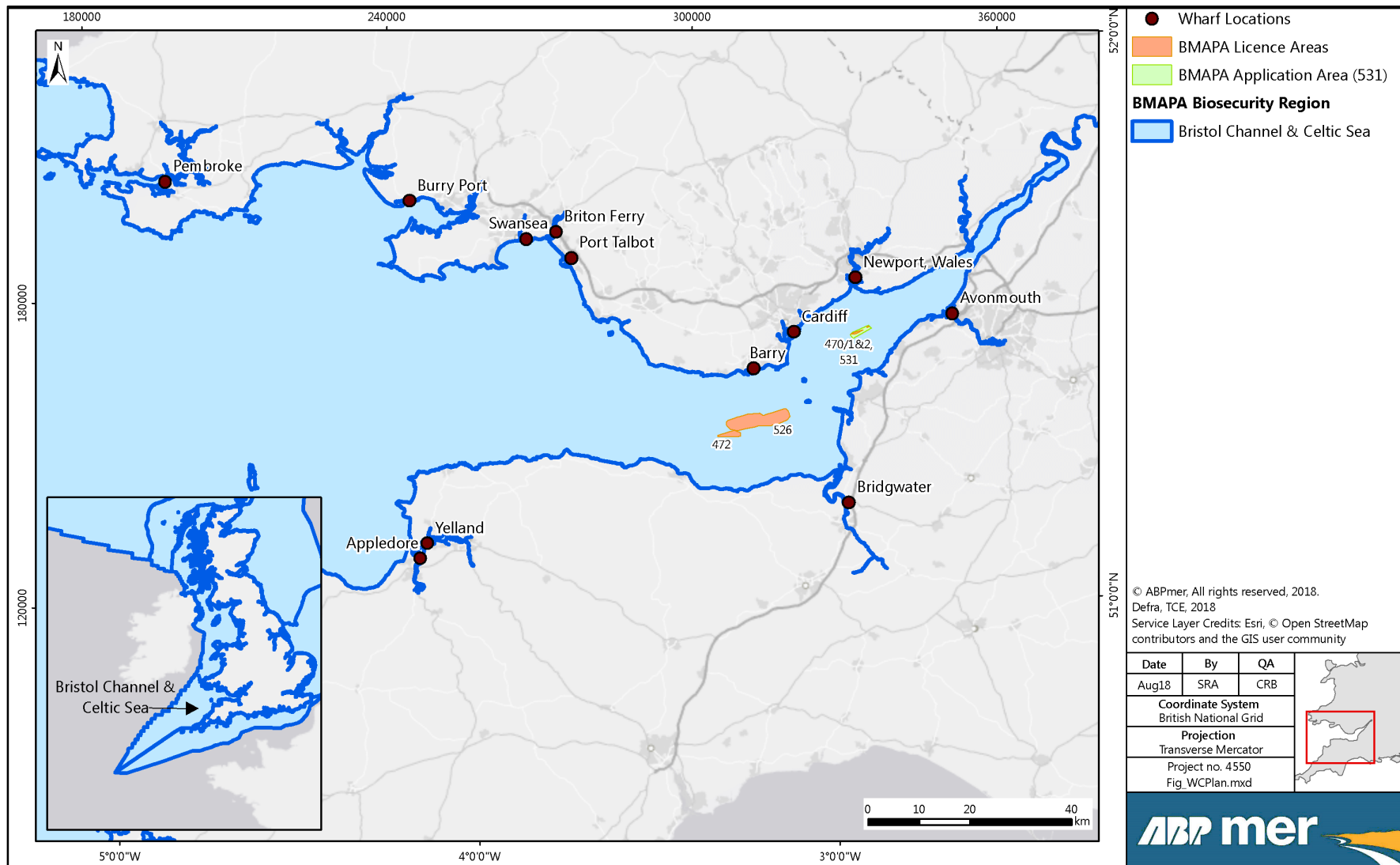


Figure 1. Bristol Channel region, also showing applicable aggregates dredging areas and ports / wharves

2 Activity Information																																																	
Description of Activity																																																	
Aggregate Dredging in the following existing Licence Areas: • 'North Bristol Deep' (Area 470/1-2); • 'Culver Sands' (Area 472). Proposed dredging in: • 'Culver Sand Extension' (Area 526). Delivery of aggregate to wharves within the Bristol Channel region.																																																	
Activity Period	Licence periods: 470/1-2: 2015-2020 472: 2008-2023 526: 2018-2033 531: under application (would replace Area 470, if licence is granted)																																																
Dredge Locations		Point Location Coordinates (Latitude/Longitude) (coordinates referenced to WGS 1984 in DDM)																																															
Area 526 'Culver Sands Extension'		<table> <tr> <th colspan="2">Welsh Waters</th><th colspan="2">English Waters</th></tr> <tr> <th>Latitude</th><th>Longitude</th><th>Latitude</th><th>Longitude</th></tr> <tr> <td>51° 18.4667' N</td><td>03°13.8189' W</td><td>51° 19.1064' N</td><td>03° 9.7118' W</td></tr> <tr> <td>51° 17.7432' N</td><td>03°14.5937' W</td><td>51° 18.7559' N</td><td>03°9.5384' W</td></tr> <tr> <td>51° 17.7076' N</td><td>03°14.828' W</td><td>51° 18.41' N</td><td>03°10.002' W</td></tr> <tr> <td>51° 17.1765' N</td><td>03°18.3767' W</td><td>51° 17.8293' N</td><td>03°12.1342' W</td></tr> <tr> <td>51° 17.3156' N</td><td>03°19.5837' W</td><td>51° 17.8502' N</td><td>03°12.5474' W</td></tr> <tr> <td>51° 17.7507' N</td><td>03°19.3118' W</td><td>51° 17.7262' N</td><td>03°12.7955' W</td></tr> <tr> <td>51° 18.302' N</td><td>03°16.6201' W</td><td>51° 17.7076' N</td><td>03°14.828' W</td></tr> <tr> <td colspan="2" rowspan="4"></td><td>51° 17.7432' N</td><td>03°14.5937' W</td></tr> <tr> <td>51° 18.4667' N</td><td>03°13.8189' W</td></tr> <tr> <td>51° 18.5352' N</td><td>03°12.6538' W</td></tr> <tr> <td>51° 19.0787' N</td><td>03°10.2283' W</td></tr> </table>		Welsh Waters		English Waters		Latitude	Longitude	Latitude	Longitude	51° 18.4667' N	03°13.8189' W	51° 19.1064' N	03° 9.7118' W	51° 17.7432' N	03°14.5937' W	51° 18.7559' N	03°9.5384' W	51° 17.7076' N	03°14.828' W	51° 18.41' N	03°10.002' W	51° 17.1765' N	03°18.3767' W	51° 17.8293' N	03°12.1342' W	51° 17.3156' N	03°19.5837' W	51° 17.8502' N	03°12.5474' W	51° 17.7507' N	03°19.3118' W	51° 17.7262' N	03°12.7955' W	51° 18.302' N	03°16.6201' W	51° 17.7076' N	03°14.828' W			51° 17.7432' N	03°14.5937' W	51° 18.4667' N	03°13.8189' W	51° 18.5352' N	03°12.6538' W	51° 19.0787' N	03°10.2283' W
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Dredge Locations		Point Location Coordinates (Latitude/Longitude) (coordinates referenced to WGS 1984 in DDM)			
Area 470/1-2 North Bristol Deep	Eastern Area (470A)		Western Area (470B)		
	Latitude	Longitude	Latitude	Longitude	
	51°28.3025' N	02°56.7450' W	51°27.5922' N	02°59.4288' W	
	51°28.4088' N	02°56.7458' W	51°27.8089' N	02°58.8622' W	
	51°28.4271' N	02°56.3780' W	51°28.0697' N	02°57.4222' W	
			51°27.6728' N	02°58.5911' W	
Application Area 531 North Bristol Deep		Latitude	Longitude		
		51°27.5822'N	02°59.4391'W		
		51°27.7889'N	02°59.2515'W		
		51°28.5119'N	02°56.4863'W		
		51°28.2015'N	02°56.1004'W		
		51°27.1927'N	02°59.0641'W		
		51°27.5822'N	02°59.4391'W		
Area 472 Culver Sands		Latitude	Longitude		
		51°16.6246' N	03°21.7680' W		
		51°17.2272' N	03°18.9158' W		
		51°16.9470' N	03°17.9291' W		
		51°16.5491' N	03°17.9187' W		
		51°16.4712' N	03°21.7590' W		
Wharf Locations		Point Location Coordinates (Latitude/Longitude) (coordinates referenced to WGS 1984 in DDM)			
Wharf Name	Latitude	Longitude			
Appledore	51° 2.7861' N	04° 11.40642' W			
Avonmouth	51° 29.9318' N	02° 42.22368' W			
Barry	51° 23.8151' N	03° 15.86688' W			

Wharf Name	Latitude	Longitude			
Bridgwater	51° 9.7293' N	02° 59.36718' W			
Britton Ferry	51° 37.8508' N	03° 49.88844' W			
Burry Port	51° 40.7042' N	04° 15.03672' W			
Cardiff	51° 27.7541' N	03° 9.15744' W			
Newport, Wales	51° 33.6233' N	02° 58.81416' W			
Pembroke	51° 41.8077' N	04° 56.89176' W			
Port Talbot	51° 35.1265' N	03° 47.22474' W			
Swansea	51° 37.016' N	03° 54.927' W			
Yelland	51° 4.42062' N	04° 10.28676' W			
Other deposit locations	Point Location Coordinates (Latitude/Longitude) (coordinates referenced to WGS 1984 in DDM)				
There are no spoilt cargo disposal sites in the region.	Not applicable				
Hopper washing to take place over the licenced dredge areas so not required to be assessed separately.	See coordinates for the licenced dredge areas, above				
Regional Dredge Activities					
A summary of the activities carried out in the Bristol Channel biosecurity plan region within the past five years is provided below:					
Year	Quantity Dredged	Quantity Exported Outside of Region	Quantity Imported from Outside Region	Other Regions Visited	Comments
2012	1.1 mt	0 mt	0.01 mt	Irish Sea	All Irish Sea imports were landed at the Welsh ports, equating to approximately 4/5 cargoes per year.
2013	1 mt	0 mt	0.01 mt	Irish Sea	
2014	1.1 mt	<0.01 mt	0.01 mt	Irish Sea	
2015	1.13 mt	<0.01 mt	<0.01 mt	Eastern Channel (export) / Irish Sea (import)	
2016	1.18 mt	<0.01 mt	<0.01 mt	South Coast, Southern North Sea (export) / Irish Sea (import)	
Data source: BMAPA and TCE Annual Reports; 2016 version available at: http://www.bmapa.org/documents/BMAPA_19th_Annual_Report.pdf .					

3 Record of Marine Invasive Non-Native Species	
3.1 Record of Marine Invasive Non-Native Species – dredging, deposit and hopper washing locations	
Dredge Location (Source Environment)	
INNS present at location*	INNS likely to be present near location*
Impact (Confidence)**	Impact (Confidence)**
None known.	High Impact: Slipper Limpet (M) ; Asian Shore Crab (M) ; Chinese Mitten Crab (M) ; Devil's Tongue Weed (M). Medium: Pacific Oyster (M) ; Low: Wireweed (M); Australasian Barnacle (H), Unknown: Jenkins' Spire Snail (M); Sand Gaper Clam (M);
Deposit location (Spoilt cargoes)	
Not applicable	Not applicable
Hopper washing location	
Hopper washing would take place over the dredge site, so the list of INNS present at the dredge locations should be referred to.	See list of INNS present near the licenced dredge locations.
* Species in blue are considered to be conspicuous INNS that are readily identifiable without the need for an expert taxonomist. ** Confidence level is based on the following conditions: (L) Low – presence predicted based on modelled data, with unconfirmed record of species presence (M) Medium – Multiple confirmed records of presence, but dating back to more than five years ago, OR, single confirmed record in past five years (H) High – Multiple confirmed records of presence in last five years	

3.2 Record of Marine Invasive Non-Native Species – Wharves		
INNS present at location*		INNS likely to be present near location*
Wharves (Receiving Environment)	Impact (Confidence)**	Impact (Confidence)**
Appledore	No record of INNS at the wharf, potential for species listed as 'near site' to be present.	High Impact: Chinese Mitten Crab recorded at Westleigh (M); Slipper Limpet (M); Australian Tube Worm (M); American Lobster (L); Common Cord-grass (M); Devil's Tongue Weed (M); Jack knife clam (M); Red-rust bryozoan (M); Compass Sea Squirt (M); Striped barnacle (M); <i>Hesperibalanus fallax</i> barnacle (L). Medium: Pacific Oyster (M); Japanese Skeleton Shrimp (L); Low: Wireweed (M); Australasian Barnacle (H); Unknown: Green Sea Fingers (L); Harpoon Weed (M); Orange Tipped Sea Squirt (M); Jenkins' Spire Snail (M).
Avonmouth	High Impact: Common Cord-grass (M). Also potential for species listed as 'near site' to be present.	High Impact: Chinese Mitten Crab recorded at Westleigh (M); Slipper Limpet (M); Australian Tube Worm (M); American Lobster (L); Common Cord-grass (M); Devil's Tongue Weed (M); Jack knife clam (M); Red-rust bryozoan (M); Compass Sea Squirt (M); Medium: Pacific Oyster (M); Japanese Skeleton Shrimp (L); Low: Wireweed (M); Australasian Barnacle (H); Unknown: Green Sea Fingers (L); Orange Tipped Sea Squirt (M); Jenkins' Spire Snail (M).
Barry	High Impact: Asian Shore Crab (M). Also potential for species listed as 'near site' to be present.	High Impact: Slipper Limpet (M); Australian Tube Worm (M); American Lobster (L); Common Cord-grass (M); Devil's Tongue Weed (M); Jack knife clam (M); Red-rust bryozoan (M); Compass Sea Squirt (M); Medium: Pacific Oyster (M); Japanese Skeleton Shrimp (L); Low: Wireweed (M); Australasian Barnacle (H); Unknown: Green Sea Fingers (L); Orange Tipped Sea Squirt (M); Jenkins' Spire Snail (M); Sand Gaper Clam (M).

3.2 Record of Marine Invasive Non-Native Species – Wharves		
Bridgwater	No record of INNS at the wharf, potential for species listed as 'near site' to be present.	High Impact: Slipper Limpet (M) ; Australian Tube Worm (M) ; American Lobster (L) ; Common Cord-grass (M) ; Devil's Tongue Weed (M); Jack knife clam (M) ; Red-rust bryozoan (M); Compass Sea Squirt (M); Medium: Pacific Oyster (M) ; Japanese Skeleton Shrimp (L); Low: Wireweed (M); Australasian Barnacle (H); Unknown: Green Sea Fingers (L); Orange Tipped Sea Squirt (M); Jenkins' Spire Snail (M).
Briton Ferry	No record of INNS at the wharf, potential for species listed as 'near site' to be present.	High Impact: Slipper Limpet (M) ; Australian Tube Worm (M) ; American Lobster (L) ; Common Cord-grass (M) ; Devil's Tongue Weed (M); Jack knife clam (M) ; Red-rust bryozoan (M); Compass Sea Squirt (M); Medium: Pacific Oyster (M) ; Japanese Skeleton Shrimp (L); Orange-striped sea anemone (M); Low: Wireweed (M); Australasian Barnacle (H); Unknown: Green Sea Fingers (L); Orange Tipped Sea Squirt (M); Jenkins' Spire Snail (M).
Burry Port	High Impact: Slipper Limpet (M) ; Medium: Orange-striped sea anemone (M);; Low: Australasian Barnacle (H). Also potential for species listed as 'near site' to be present.	High Impact: Slipper Limpet (M) ; Australian Tube Worm (M) ; American Lobster (L) ; Common Cord-grass (M) ; Leathery Sea Squirt (M) ; Devil's Tongue Weed (M); Jack knife clam (M) ; Red-rust bryozoan (M); Compass Sea Squirt (M) Medium: Pacific Oyster (M) ; Japanese Skeleton Shrimp (L) Low: Wireweed (M) ; Australasian Barnacle (H) Unknown: Green Sea Fingers (L); Harpoon Weed (M); Orange Tipped Sea Squirt (M); Jenkins' Spire Snail (M); Sand Gaper Clam (M)
Cardiff	Medium Impact: Orange-striped sea anemone (M). Also potential for species listed as 'near site' to be present.	High Impact: Slipper Limpet (M) ; Australian Tube Worm (M) ; American Lobster (L) ; Common Cord-grass (M) ; Devil's Tongue Weed (M); Jack knife clam (M) ; Red-rust bryozoan (M); Compass Sea Squirt (M); Medium: Pacific Oyster (M) ; Japanese Skeleton Shrimp (L); Low: Wireweed (M); Australasian Barnacle (H); Unknown: Green Sea Fingers (L); Harpoon Weed (M); Orange Tipped Sea Squirt (M); Jenkins' Spire Snail (M).

3.2 Record of Marine Invasive Non-Native Species – Wharves		
Newport	No record of INNS at the wharf, potential for species listed as 'near site' to be present.	High Impact: Slipper Limpet (M) ; Australian Tube Worm (M) ; American Lobster (L) ; Common Cord-grass (M) ; Devil's Tongue Weed (M); Jack knife clam (M) ; Red-rust bryozoan (M); Compass Sea Squirt (M); Medium: Pacific Oyster (M) ; Japanese Skeleton Shrimp (L); Orange-striped sea anemone (M); Low: Wireweed (M); Australasian Barnacle (H); Unknown: Green Sea Fingers (L); Harpoon Weed (M); Jenkins' Spire Snail (M).
Pembroke	High Impact: Slipper Limpet (H) ; Unknown: Green Sea Fingers (M); Devil's Tongue Weed (M); Orange Tipped Sea Squirt (M); Japanese Kelp (M) . Also potential for species listed as 'near site' to be present.	High Impact: Slipper Limpet (M) ; Australian Tube Worm (M) ; American Lobster (L) ; Common Cord-grass (M) ; Leathery Sea Squirt (M) ; Devil's Tongue Weed (M); Jack knife clam (M) ; Red-rust bryozoan (M); Compass Sea Squirt (M); Striped barnacle (M); Medium: Pacific Oyster at Milford Haven (H); Japanese Skeleton Shrimp (L); Orange-striped sea anemone (M); Low: Wireweed (M); Australasian Barnacle (H); Unknown: Devil's tongue weed at Milford Haven (H); Green Sea Fingers (M); Harpoon Weed (M); Orange Tipped sea squirt at Milford Haven (M); Jenkins' Spire Snail (M); Sand Gaper Clam (M).
Port Talbot	No record of INNS at the wharf, potential for species listed as 'near site' to be present.	High Impact: Slipper Limpet (M) ; Australian Tube Worm (M) ; American Lobster (L) ; Common Cord-grass (M) ; Leathery Sea Squirt (M) ; Devil's Tongue Weed (M); Jack knife clam (M) ; Red-rust bryozoan (M); Compass Sea Squirt (M); Medium: Pacific Oyster (M) ; Japanese Skeleton Shrimp (L); Orange-striped sea anemone (M); Low: Wireweed (M); Australasian Barnacle (H); Unknown: Green Sea Fingers (L); Orange Tipped Sea Squirt (M); Jenkins' Spire Snail (M).

3.2 Record of Marine Invasive Non-Native Species – Wharves		
Swansea	High Impact: Australian Tube Worm (H) ; Medium: Orange-striped sea anemone (M). Also potential for species listed as 'near site' to be present.	High Impact: Chinese Mitten Crab (M) ; Australian Tube Worm (H) ; American Lobster (L) ; Common Cord-grass (M) ; Leathery Sea Squirt (M) ; Devil's Tongue Weed (M); Jack knife clam (M) ; Red-rust bryozoan (M); Compass Sea Squirt (M); Medium: Pacific Oyster (M) ; Japanese Skeleton Shrimp (L); Low: Wireweed (M); Australasian Barnacle (H); Unknown: Green Sea Fingers (L); Orange Tipped Sea Squirt (M); Jenkins' Spire Snail (M).
Yelland	No record of INNS at the wharf, potential for species listed as 'near site' to be present.	High Impact: Chinese Mitten Crab recorded at Westleigh (M); Slipper Limpet (M) ; Australian Tube Worm (M) ; American Lobster (L) ; Common Cord-grass (M) ; Devil's Tongue Weed (M); Jack knife clam (M) ; Red-rust bryozoan (M); Compass Sea Squirt (M); Striped barnacle (M); <i>Hesperibalanus fallax</i> barnacle (L). Medium: Pacific Oyster (M) ; Japanese Skeleton Shrimp (L); Low: Wireweed (M); Australasian Barnacle (H); Unknown: Green Sea Fingers (L); Harpoon Weed (M); Orange Tipped Sea Squirt (M); Jenkins' Spire Snail (M).
* Species in blue are considered to be conspicuous INNS that are readily identifiable without the need for an expert taxonomist. ** Confidence level is based on the following conditions: (L) Low – presence predicted based on modelled data, with unconfirmed record of species presence (M) Medium – Multiple confirmed records of presence, but dating back to more than five years ago, OR, single confirmed record in past five years (H) High – Multiple confirmed records of presence in last five years		

4 Risk Assessment				
4.1 Vessel activities confined to Biosecurity Plan Region only				
Source	Pathway	Inherent Risk	Biosecurity Control Measures	Residual Risk
Ballast Water	Discharge to water	Medium	1. Limit ballast water exchanges to minimum necessary; 2. Refresh ballast water as far offshore as safe and practicable to do so; OR 3. Use an approved ballast water treatment system (BWTS) ¹	Low
Hopper Water	Discharge to water	Medium	1. Limit hopper water discharges to minimum necessary; 2. Hopper water will be displaced by marine aggregate at the dredge location, which is generally the furthest point offshore in the vessel's journey and, therefore, the lowest risk location (within region); or 3. With respect to vessels using Pembroke Dock, there are some INNS known to exist in Milford Haven which have not been documented in the Severn Estuary. Therefore, 'best practice' for vessels leaving the Haven would be to take precautionary measures, to fill or exchange hopper water away from the wharf, whilst still within the Haven, where it is safe and reasonably practicable to do so.	Low
Ballast Sediment	Discharge during docking	Medium	1. Discharge of ballast sediments should be to a shore-side reception facility	Low
Biofouling (inc. hull, auxiliary equipment and inlets/sea chest)	Transfer in water	Medium	1. Certified anti-foul coating or system, with an international Anti-fouling System Certificate renewed at least every three years	Low
Residual Cargo	Transfer in water	Medium	1. Sand and gravel is free flowing and residual cargo is flushed out of the gear as it is raised to deck (after loading); 2. Discharge all cargo before sailing from wharf to dredge area (after discharge) as much as is safe and practicable; 3. Photograph and report any obvious new INNS to Biosecurity Manager	Low

¹ Use of a ballast water treatment system as a biosecurity control measure should be qualified as an option available only after the relevant vessel is required to comply with the D2 standard of the IMO Ballast Water Management Convention.
[http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Control-and-Management-of-Ships'-Ballast-Water-and-Sediments-\(BWM\).aspx](http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Control-and-Management-of-Ships'-Ballast-Water-and-Sediments-(BWM).aspx)

4 Risk Assessment				
4.1 Vessel activities confined to Biosecurity Plan Region only				
Source	Pathway	Inherent Risk	Biosecurity Control Measures	Residual Risk
Hopper Washing	Discharge to water	Medium	1. Hopper washing to be conducted in accordance with marine licence requirements	Low
Spoilt Cargoes	Discharge to water	Medium	1. Spoilt cargoes to be deposited in accordance with any licence requirements	Low

4.2 Vessel activities taking place in UK Waters only				
Source	Pathway	Inherent Risk	Biosecurity Control Measures	Residual Risk
Ballast Water	Discharge to water	High	1. Limit ballast water exchanges to minimum necessary; 2. Refresh ballast water as far offshore as safe and practicable to do so; OR 3. Use an approved BWTS ²	Low
Hopper Water	Discharge to water	High	1. Limit hopper water discharges to minimum necessary; 2. Before entering new region, replace hopper water as far offshore as safe and practicable to do so.	Low
Ballast Sediment	Discharge during docking	Medium	1. Discharge of ballast sediments should be to a shore-side reception facility	Low
Biofouling (inc. hull, auxiliary equipment and inlets/sea chest)	Transfer in water	High	1. Certified anti-foul coating or system, with an international Anti-fouling System Certificate renewed at least every three years	Low

² Use of a ballast water treatment system as a biosecurity control measure should be qualified as an option available only after the relevant vessel is required to comply with the D2 standard of the IMO Ballast Water Management Convention.
[http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Control-and-Management-of-Ships'-Ballast-Water-and-Sediments-\(BWM\).aspx](http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Control-and-Management-of-Ships'-Ballast-Water-and-Sediments-(BWM).aspx)

4.2 Vessel activities taking place in UK Waters only				
Source	Pathway	Inherent Risk	Biosecurity Control Measures	Residual Risk
Residual Cargo	Discharge to water	High	1. Sand and gravel is free flowing and residual cargo is flushed out of the gear as it is raised to deck (after loading) (raise gear within 1 km of licence area boundary); 2. Discharge all cargo before sailing from wharf to dredge area (after discharge) as much as is safe and practicable; 3. Photograph and report any obvious new INNS to Biosecurity Manager	Low
Hopper Washing	Discharge to water	High	1. Hopper washing to be conducted in accordance with marine licence requirements.	Low
Spoilt Cargoes	Discharge to water	Medium	1. Spoilt cargoes to be deposited in accordance with any licence requirements	Low

4.3 Vessel activities taking place beyond UK Waters				
Source	Pathway	Inherent Risk	Biosecurity Control Measures	Residual Risk
Ballast Water	Discharge to water	High	1. Conduct operations in compliance with the Ballast Water Management Plan	Low
Hopper Water	Discharge to water	High	1. Conduct operations in compliance with the Ballast Water Management Plan	Low
Ballast Sediment	Discharge during docking	Medium	1. In accordance with BWMC, discharge of ballast sediments should be to be to a shore-side sediment reception facility	Low
Biofouling (inc. hull, auxiliary equipment and inlets/sea chest)	Transfer in water	High	1. Certified anti-foul coating or system, with an international Anti-fouling System Certificate renewed at least every three years	Low
Hopper Washing	Discharge to water	High	1. Hopper washing to be conducted in accordance with marine licence requirements.	Low
Spoilt Cargoes	Discharge to water	Medium	1. Spoilt cargoes to be deposited in accordance with any licence requirements	Low

4.4 Wharf activities				
Source	Pathway	Inherent Risk	Biosecurity Control Measures	Residual Risk
Marine Structures	Transfer in water / transfer to other mobile structures	Medium	1. Surveillance of wharf structures where safe and practical and reporting of INNS; 2. Control measures applied to vessels that visit the wharf will help to prevent the further spread of INNS from the wharf onwards	Low

5 Instructions for Contractors/Site Users/Staff			
5.1 Vessel activities confined to Biosecurity Plan Region only			
Who	What	Where	When
Master	Provide biosecurity briefing to relevant contractors (e.g. inspecting or cleaning the hull and external equipment) and agency workers	On-board vessel	As required
Master	Uptake of clean hopper water	As far offshore as safe and practicable	When leaving wharf
Master	Milford Haven: uptake of clean hopper water	Fill or exchange hopper water away from the wharf, whilst still within the Haven, where it is safe and reasonably practicable to do so	Away from wharf
Master	Limit ballast water exchanges to minimum necessary; refresh ballast water as far offshore as safe and practicable to do so; OR use an approved BWTS	As far offshore as safe and practicable	As required
Master	Ensure hopper is as empty of cargo as possible before sailing to dredge area	At wharf	After landing aggregate
Master	Maintain records in Biosecurity Logbook. Information recorded in the Ballast Water Record Book does not need to be duplicated.	On-board vessel	As required
Chief engineer	Ensure anti-foul systems maintained in all areas e.g. hull, auxiliary equipment, sea inlets and chest	At any location	At least every three years
All vessel crew	Photograph and report suspect INNS to Master / Biosecurity Manager	At any location	As required
Biosecurity Manager	Identify reported suspect INNS and report to GB NNS Secretariat / MBA	At any location	As required

5.2 Vessel activities taking place in UK Waters only			
Who	What	Where	When
Master	Provide biosecurity briefing to relevant contractors (e.g. when inspecting/cleaning/repairing external equipment) and agency workers/temporary staff	On-board vessel	As required
Master	Uptake of clean hopper water	As far offshore as safe and practicable	When leaving wharf
Master	Limit ballast water exchanges to minimum necessary; refresh ballast water as far offshore as safe and practicable to do so; OR use an approved BWTS	As far offshore as safe and practicable	As required
Master	Ensure hopper is as empty of cargo as possible before sailing to dredge area	At wharf	After landing aggregate
Master	Maintain records in Biosecurity Logbook. Information recorded in the Ballast Water Record Book does not need to be duplicated.	On-board vessel	As required
Chief Engineer	Ensure anti-foul systems maintained in all areas e.g. hull, auxiliary equipment, sea inlets and chest	At any location	At least every three years
All vessel crew	Photograph and report suspect INNS to biosecurity manager	At any location	As required
Biosecurity Manager	Identify reported suspect INNS and report to GB NNS Secretariat / MBA	At any location	As required

5.3 Vessel activities taking place beyond UK Waters			
Who	What	Where	When
Master	Provide biosecurity briefing to relevant contractors (e.g. when inspecting/cleaning/repairing external equipment) and agency workers/temporary staff	On-board vessel	As required
Master	Conduct operations in compliance with the Ballast Water Management Plan	In accordance with BWMC location requirements	At any time when ballast water exchange / hopper water refresh is required
Master	Uptake of clean hopper water	As far offshore as safe and practicable	When leaving wharf
Master	Ensure draghead and other dredge equipment is clean of residual cargo	Within licence area	After loading aggregate
Master	Ensure hopper is as empty of cargo as possible before sailing to dredge area	At wharf	After landing aggregate
Master	Maintain records in Biosecurity Logbook. Information recorded in the Ballast Water Record Book does not need to be duplicated.	On-board vessel	As required
Chief engineer	Ensure anti-foul systems maintained in all areas e.g. hull, auxiliary equipment, sea inlets and chest	At any location	At least every three years
All vessel crew	Photograph and report suspect INNS to biosecurity manager	At any location	As required
Biosecurity Manager	Identify reported suspect INNS and report to GB NNS Secretariat / MBA	At any location	As required

5.4 Wharf activities			
Who	What	Where	When
Wharf Manager	Provide biosecurity briefing to relevant contractors (e.g. when inspecting/cleaning/repairing marine structures) and agency workers/temporary staff	At wharf	As required
Wharf Manager	Maintain records in Biosecurity Logbook	At wharf	As required
All wharf staff	Report suspect INNS to biosecurity manager	At any location	As required

6 Surveillance, Monitoring and Reporting Procedure		
Surveillance/Monitoring/Reporting Measure	Responsible Person	Report To
Log any inter-regional ballast/hopper water exchange (within UK waters) in biosecurity log	Master	N/A
Log any Milford Haven hopper water exchange (for journeys within Bristol Channel region) in biosecurity log	Master	N/A
Surveillance for new conspicuous INNS on board vessel	All crew	Master and Biosecurity Manager
Provision of material on board vessel/at wharves to support identification of conspicuous INNS	Biosecurity Manager	N/A
Surveillance of wharves for any new conspicuous INNS	Wharf manager	Biosecurity Manager
Photograph and log any new conspicuous INNS on board vessel	All crew	Master and Biosecurity Manager
Photograph and log any new conspicuous INNS at wharf	Wharf staff	Wharf Manager and Biosecurity Manager
Report any confirmed INNS	Biosecurity Manager	GB NNS Secretariat / MBA
Update biosecurity plan to account for any confirmed INNS and re-circulate plan	Biosecurity Manager	Master/Wharf Manager
Contact details to report suspect/confirmed INNS occurrences		
Biosecurity Manager Rob Langman MarineSpace 02380 381 945; rob.langman@marinespace.co.uk	Marine Biological Association 01752 426493; recording@mba.ac.uk The Marine Biological Association of the United Kingdom The Laboratory, Citadel Hill, Plymouth, PL1 2PB	
GB Non-Native Species Secretariat nnss@apha.gsi.gov.uk GB Non-native Species Secretariat Animal and Plant Health Agency Sand Hutton, York, YO41 1LZ	If 'high risk' species on Welsh list (see Section 5.3 of Guidance Note for link and Appendix A of Guidance Note for current species), also notify NRW enquiries@naturalresourceswales.gov.uk Natural Resources Wales c/o Customer Care Centre 29 Newport Rd, Cardiff, CF24 0TP	

7 Contingency Plan	Checklist if plan is required to be implemented	
	Responsible Person	Date Actioned
Provision of identification aides for conspicuous INNS to assist staff in the event of a suspected sighting	Biosecurity Manager	
General staff awareness to report suspected conspicuous INNS to Biosecurity Manager	All staff	
Make photographic record of the conspicuous INNS, preferably with a scale reference item	All staff	
Complete biosecurity log on event of discovery, including details of location, operation, weather conditions, sea state	Vessel Master/Biosecurity Manager	
Report any sightings to the GB non-native species secretariat, with a photograph and location details to nnss@apha.gsi.gov.uk	Biosecurity Manager	
If INNS discovered on-board the vessel, refer to NNSS factsheet to check whether species can be discharged back into the seawater.	Biosecurity Manager	
If new wharf / port approached within biosecurity region (but not on list in Table 2), inform NRW and MMO that this has taken place, and ensure that wharf / port is listed in next Plan iteration (relevant company to inform Biosecurity Manager).	Biosecurity Manager	