Proposed dredge of Faversham Creek Basin: a WFD compliance assessment case study

Jan Brooke
Director
Jan Brooke Environmental Consultant Ltd.
Demonstrating WFD compliance of dredging projects in England

- **Clearing the waters**, Environment Agency’s WFD compliance assessment methodology for marine dredging and disposal, developed 2009
- Methodology intended for use by developers and regulators to determine WFD compliance *inter alia* in applying for a ‘Marine Licence’
- Revised and updated 2012
- Now being further developed into compliance tool for all types of physical modification in coastal and transitional water bodies
Faversham Creek Basin

- Used regularly by vessels until around 30 years ago
- Little or no freshwater flow
- Tidal creek, but water exchange limited by presence of gates
- Fine sediment has accumulated in Basin over many years, eventually becoming vegetated in places
The Swale transitional water body

• Faversham Creek Basin: small part of very large (29km$^2$) transitional water body - The Swale
The Swale connecting Basin to main water body is c.5km in length.
The Swale transitional water body

- Faversham Creek Basin: small part of very large (29km²) transitional water body - The Swale
- Designated heavily modified, but not for navigation
- Several water-dependent protected areas including The Swale Natura site, and Swale East and Swale Central Shellfish Waters
- 2013 data indicate The Swale fails to achieve good ecological status (potential) for dissolved inorganic nitrogen and hydromorphological supporting elements
- Also fails to meet chemical status objectives for mercury, tributyl tin (TBT) and benzo(a)pyrene
Faversham Creek Basin Project

- Urban regeneration project to restore navigation to Faversham Creek Basin enabling community enterprise to flourish; bringing alive the Basin’s maritime heritage
- Regenerating physical infrastructure will allow access by traditional vessels (e.g. Thames sailing barges) to be repaired at the newly formed shipwright’s training school
- Access and mooring of these vessels requires the restoration of navigability to the Basin, notably deepening an area upstream of Brents Swing Bridge
Proposed dredge area
Dredging requirements

- Thames sailing barges draw 1.0 - 2.0m
- Accumulated silt levels therefore need to be reduced by around one metre over 0.4ha; remove 4,000m$^3$
- Small water injection dredger to carry out these works
- Dredger capacity: up to 50m$^3$ per two-hour tide
- Dredging requires a Marine Licence from the Marine Management Organisation
- Marine Licence application must be accompanied by a WFD compliance assessment
- No EIA required (but some local issues...
Water injection dredger
Table 1: Applying the Clearing the Waters ‘new project’ process to the proposed dredging in Faversham Creek Basin

<table>
<thead>
<tr>
<th>WFD parameters</th>
<th>Discussion of potential effects on status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphology: depth variation</td>
<td>According to the Clearing the Waters criteria tables, further assessment of the depth variation is required if more than 5% of the water body would be affected by the dredging or disposal. The proposed dredging will result in a local, long-term increase in depth by approximately 1 m over part of the Basin. However, this increase will be insignificant at water body level, affecting around 0.01% of the total area. No effects on the WFD ecological status of the Swale water body are therefore anticipated.</td>
</tr>
<tr>
<td>Morphology: bed structure, substrate</td>
<td>According to the Clearing the Waters criteria tables, further assessment of the bed substrate is required if more than 5% of the water body could be affected by the dredging or disposal. Whilst the proposed dredging will temporarily affect the sublittoral structure and substrate locally within the Basin, this will be insignificant at water body level affecting around 0.01% of the total area. Further, the characteristics of the substrate in this area are such that there will be no long-term change. No effects on the ecological status of the Swale water body are therefore anticipated.</td>
</tr>
<tr>
<td>Morphology: intertidal zone structure</td>
<td>The Clearing the Waters criteria tables highlight the need for further consideration to be given to dredging taking place within intertidal areas. Thus, less than 1% of mean low water spring tide level. In this regard, it is clear that the proposed dredging will change the intertidal zone structure and substrate locally within the Basin (i.e. the currently vegetated area). This increase will, however, be insignificant at water body level, affecting around 0.01% of the total area. No effects on the ecological status of the Swale water body are therefore anticipated.</td>
</tr>
<tr>
<td>Tidal regime: freshwater flow</td>
<td>The Basin comprises the upstream limit of the wider tidal system of the Swale water body. Freshwater flow into the basin (from the Stonebridge Fen, fed by the West horizon stream) is extremely limited and is typically only of any significance during periods of high rainfall. The proposed dredging will not adversely affect flow within the basin. Indeed a wider and deeper channel may assist with local flood conveyance. At water body level, the dredging will have no impact on freshwater flow. No effects on the ecological status of the Swale water body are therefore anticipated.</td>
</tr>
</tbody>
</table>

- **Mitigation measures assessment:**
  - The Swale water body is designated as a highly modified water body for flood defence but not for navigation reasons. The ecological status (i.e. potential) of the WFD can sometimes be improved without detriment to the designated use or uses by implementing mitigation measures. Where technically feasible and not disproportionately costly, mitigation measures are not already in place, the water body is deemed to be failing to meet its potential.
  - The 2009 Medway Swale Estuary operational catchment economic appraisal and environmental assessment at catchment level (Environment Agency, 2014) allows various possible mitigation measures, including the removal or assessment of barriers to fish migration, improvement in the condition of channels and/or banks and shorelines; and changes to the operation and maintenance of structures. However, according to the Environment Agency (personal communication, 2010) the 2015 tidal basin management plan will not identify any ‘in situ’ mitigation measures for the Swale water body. This is because none of the measures highlighted as potentially helpful to improving the hydromorphology of the water body - and hence contribute to meeting the ‘good ecological potential’ objective - proved to be sustainable.
  - Instead as this assessment is concerned, it can therefore be concluded that the proposed dredging will not affect the ecological status of the Swale water body to meet good ecological potential. If there are no in-situ measures, the dredging will neither compromise the ability of the water body to meet its objectives in this respect, nor will there be improvement opportunities to which the proposed dredging might contribute.

- **Physico-chemical elements:**
  - **Transparency:** Water injection dredging results in mobilising sediment in a density current that moves by gravity until it is dispersed by natural currents. As with any form of aggradation dredging, some reduction in transparency is therefore inevitable consequence of the use of this technique. As material is dispersed, a plume of suspended sediment may be visible depending on the prevailing conditions. However, the nature of the activity (i.e. the mobilisation and dispersion of the material) is such that any effects are both local and temporary.
  - Translucency is a WFD supporting element in the Directive because certain species are sensitive to elevated suspended sediment concentrations. However, there is no evidence to suggest that this
Applying ‘Clearing the waters’ (1)

**Depth variation**... this increase will be insignificant at water body level, affecting around 0.014% of the total area. No effects on the WFD ecological status of the Swale water body are therefore anticipated.
Applying ‘Clearing the waters’ (1)

Bed structure ... insignificant at water body level affecting around 0.007% of the total area. Further, the characteristics of the substrate in the area are such that there will be no long-term change. No effects on the ecological status of the Swale water body are therefore anticipated.
Applying ‘Clearing the waters’ (1)

Table 1: Applying the Clearing the Waters ‘new projects’ process to the proposed dredging in Faversham Creek Basin

<table>
<thead>
<tr>
<th>WFD parameter</th>
<th>Discussion of potential effects on status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Transparency ... WFD assessment concerned with potential non-temporary effects that affect status at water body level. Given small capacity of dredger and local, intermittent and short-term nature of the proposed water injection dredging in context of 29 km² water body, no effect on the status of the Swale water body in respect of transparency is therefore anticipated.

At water body level, the dredging will have no impact on freshwater flora. No effects on the ecological status of the Swale water body are therefore anticipated.
Oxygenation ... no evidence to indicate water injection dredging causes or contributes to any local issues. However, to avoid any local downstream accumulation of masses of vegetation and root mat, this will be disposed to land. Given small capacity of dredger and its limited operation (two hours following high tide) no local issues with dissolved oxygen levels are anticipated. Further, no mechanism has been identified by which the dredging of such a small area could affect the oxygenation status at the level of the water body (i.e. at the scale of concern to the WFD).
The Swale

The Swale Creek connecting Basin to main water body is c.5km in length.
Applying ‘Clearing the waters’ (2)

**Specific pollutants** ... material to be dredged is characteristic of sediments in wider system. According to 2013 WFD strategic level compliance assessment, the Swale is characterised by sediment with slightly elevated levels of certain metals and polyaromatic hydrocarbons, including in so-called ‘receiving environment’ i.e. areas where suspended sediments might be expected to deposit. Therefore concluded that proposed water injection dredging will not affect the status of the Swale water body insofar as relevant specific pollutants are concerned.
Faversham Creek Basin sediment quality data

<table>
<thead>
<tr>
<th>Substance</th>
<th>Sample 1</th>
<th>Sample 2</th>
<th>Action Level 1</th>
<th>Action Level 2*</th>
<th>Range from recent sampling in Swale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy metals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>21.70</td>
<td>18.10</td>
<td>20.00</td>
<td>100.00</td>
<td>11.00 – 30.90</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.47</td>
<td>0.40</td>
<td>0.40</td>
<td>5.00</td>
<td>0.10 – 1.00</td>
</tr>
<tr>
<td>Chromium</td>
<td>69.19</td>
<td>60.59</td>
<td>40.00</td>
<td>400.00</td>
<td>26.00 – 203.00</td>
</tr>
<tr>
<td>Copper</td>
<td>65.15</td>
<td>54.75</td>
<td>40.00</td>
<td>400.00</td>
<td>34.00 – 215.00</td>
</tr>
<tr>
<td>Lead</td>
<td>88.39</td>
<td>74.01</td>
<td>50.00</td>
<td>500.00</td>
<td>31.00 – 480.00</td>
</tr>
<tr>
<td>Mercury</td>
<td>0.53</td>
<td>0.41</td>
<td>0.30</td>
<td>3.00</td>
<td>0.23 – 2.30</td>
</tr>
<tr>
<td>Nickel</td>
<td>43.07</td>
<td>35.73</td>
<td>20.00</td>
<td>200.00</td>
<td>20.00 – 99.00</td>
</tr>
<tr>
<td>Zinc</td>
<td>206.23</td>
<td>175.28</td>
<td>130.00</td>
<td>800.00</td>
<td>114.00 – 330.00</td>
</tr>
<tr>
<td>Organic pollutants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TBT</td>
<td>0.057</td>
<td>0.055</td>
<td>0.100</td>
<td>1.000</td>
<td>0.005 – 0.040</td>
</tr>
<tr>
<td>DBT</td>
<td>0.024</td>
<td>&lt;LOD</td>
<td>0.100</td>
<td>1.000</td>
<td>0.006 – 0.028</td>
</tr>
<tr>
<td>Polyaromatic Hydrocarbons (PAH)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acenaphthene</td>
<td>0.024</td>
<td>0.025</td>
<td>0.100</td>
<td>0.0889</td>
<td>0.009 – 0.148</td>
</tr>
<tr>
<td>Acenaphthylene</td>
<td>0.027</td>
<td>0.028</td>
<td>0.100</td>
<td>0.1280</td>
<td>0.013 – 0.151</td>
</tr>
<tr>
<td>Anthracene</td>
<td>0.054</td>
<td>0.060</td>
<td>0.100</td>
<td>0.2450</td>
<td>0.017 – 0.801</td>
</tr>
<tr>
<td>Benzo(a)anthracene</td>
<td>0.275</td>
<td>0.287</td>
<td>0.100</td>
<td>0.6930</td>
<td>0.065 – 1.380</td>
</tr>
<tr>
<td>Benzo(a)fluoranthene</td>
<td>0.100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benzo(a)pyrene</td>
<td>0.403</td>
<td>0.431</td>
<td>0.100</td>
<td>0.7630</td>
<td>0.050 – 1.620</td>
</tr>
<tr>
<td>Benzo(g,h,i)perylene</td>
<td>0.354</td>
<td>0.355</td>
<td>0.100</td>
<td></td>
<td>0.050 – 0.818</td>
</tr>
<tr>
<td>Benzo(g)perylene</td>
<td>0.100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benzo(k)fluoranthene</td>
<td>0.265</td>
<td>0.274</td>
<td>0.100</td>
<td></td>
<td>0.049 – 0.842</td>
</tr>
<tr>
<td>C1-Naphthalene</td>
<td>0.165</td>
<td>0.190</td>
<td>0.100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Applying ‘Clearing the waters’ (3)

Other aquatic flora ... ecological Technical Note confirms dredging will cause loss of 0.2 ha of low diversity habitat with a superabundance of sedge ... 0.007% of the overall area of the Swale water body (or 0.003% of the area of marsh covered by the relevant SSSI designation) ... not a key part of marsh habitat within estuary. Note also highlights that area is located in a heavily urbanised and disturbed environment, already fragmented ... therefore concluded that dredging will not affect status of aquatic flora at the level of the water body (i.e. the scale of concern to the WFD).

Technical Note confirms dredging will cause loss of 0.2 ha of low diversity habitat with a superabundance of sedge ... 0.007% of the overall area of the Swale water body (or 0.003% of the area of marsh covered by the relevant SSSI designation) ... not a key part of marsh habitat within estuary. Note also highlights that area is located in a heavily urbanised and disturbed environment, already fragmented ... therefore concluded that dredging will not affect status of aquatic flora at the level of the water body (i.e. the scale of concern to the WFD).

The Technical Note (RH-DHV, 2015) confirms that the proposed dredging will cause the loss of approximately 0.2 ha of low diversity habitat with a superabundance of sedge, which represents 0.007% of the overall area of the Swale water body or 0.003% of the area of marsh covered by the relevant SSSI designation. In this regard, the area is not considered to be a key part of the marsh habitat within the estuary.

The Technical Note further highlights that the area to be dredged is of low diversity, located in a heavily urbanised and disturbed environment, and is already fragmented.

It can therefore be concluded that the proposed dredging will not affect the status of aquatic flora at the level of the water body (i.e., the scale of concern to the WFD).

Benthic invertebrate fauna

The proposed dredging will cause the loss of approximately 0.2 ha of disturbed, low diversity intertidal habitat (see above), and will temporarily affect benthic invertebrates within a further 0.2 ha as a result of the channel deepening. This is considered to be a local impact (affecting an area around 0.014% of the water body).

No mechanism has been identified by which the dredging of such a small area could affect the status of this biological quality element at the level of the water body (i.e., the scale of concern to the WFD).

Fish

There is no evidence, anecdotal or otherwise, to indicate that Fareham Creek Basin is of particular importance for fish. Indeed, the physical characteristics of the Basin make it very unlikely that the area is of even local significance not only are the Basin's properties affected by the presence of the sea, but there is a high density of freshwater flow into the Basin rather than being affected by high salinity. Further, there is considerable debris in the channel, and at low water there are no obvious places of refuge (e.g., eelgrass and, apart from the presence of epipelic algae (e.g., characeae), no other vegetation on the mudflats or in the channel) (RH-DHV, 2015). Local observations support expert opinion that the Basin may not be used during the summer months by small numbers of juvenile fish. However, as dredging is intended to take place from September to March inclusive, these individuals will not be affected.

Fish are mobile species and are thus able to move away from unfavourable conditions (e.g., sediment plumes). The removal of the vegetation along with the top layer of silt prior to commencing water injection dredging will mitigate the potential for any local downstream issues associated with oxygen levels or microbial contamination. Significant local impacts on any fish present in the Creek or the Basin are not therefore anticipated.

At water body level, no mechanism has been identified whereby the proposed dredging could affect the status of the biological quality element. As such, it can be concluded that there will be no effect on the WFD status of the final water body insofar as fish are concerned.
Faversham Creek Basin ... in summer
... and in winter

Loss of 0.2 ha of low diversity habitat with a superabundance of sedge ...
Sedge monoculture

- Sedge (80%)
- Some creeping grasses
- Limited Sea Aster growing on creek edge of sedge bed
Applying ‘Clearing the waters’ (3)

Other aquatic flora ... ecological Technical Note confirms dredging will cause loss of 0.2 ha of low diversity habitat with a superabundance of sedge ... 0.007% of the overall area of the Swale water body (or 0.003% of the area of marsh covered by the relevant SSSI designation) ... not a key part of marsh habitat within estuary. Note also highlights that area is of low diversity, located in a heavily urbanised and disturbed environment, already fragmented ... therefore concluded that dredging will not affect status of aquatic flora at the level of the water body (i.e. the scale of concern to the WFD).

Benthic invertebrate fauna

The proposed dredging will cause the loss of approximately 0.2ha of disturbed, low diversity sedentary habitat (see above, and will be spatially affected within the immediate vicinity of the channel deepening: this is considered to be a local impact affecting 0.007% of the water body).

No mechanism has been identified by which the dredging of such a small area could affect the status of this biological quality element at the level of the water body (i.e. the scale of concern to the WFD).

Fish

There is no evidence, anecdotal or otherwise, to indicate that Fareham Creek Basin is of particular importance for fish. Indeed, the physical characteristics of the Basin make it very unlikely that the area is of any local significance not only as the Basin’s properties affected by the presence of the works, but also that it is a significant feature in the local area. Further, there is considerable debris in the channel, and at low water there are no obvious places of refuge (i.e. no seagrass and, apart from the presence of ephemeral algae (see above), no other vegetation on the mudflats or in the channel). Technical Note confirms that the fish populations are very low and therefore concluded that dredging will not affect status of aquatic flora at the level of the water body (i.e. the scale of concern to the WFD).

At water body level, no mechanism has been identified whereby the proposed dredging could affect the status of the biological quality element. As such, it can be concluded that there will be no effect on the WFD status of the final water body nor as fish are concerned.
Applying ‘Clearing the waters’ (3)

Fish ... limited freshwater flow into basin; considerable debris in channel; no obvious low water refuge ... Local observations support expert opinion that Basin may be used in summer by small numbers of juvenile flatfish ... dredging to take place September to March inclusive, so fish not affected. Also, fish are mobile, able to move away from sediment plumes; removal of vegetation prior to dredging will mitigate potential for local problems with oxygen levels or microbiological contamination downstream ... no significant local impacts anticipated. At water body level, no mechanism identified whereby dredging could affect status of fish in Swale water body.
Faversham Creek Basin fish habitat?
Applying ‘Clearing the waters’ (3)

Fish ... limited freshwater flow into basin; considerable debris in channel; no obvious low water refuge ... Local observations support expert opinion that Basin may be used in summer by small numbers of juvenile flatfish ... dredging to take place September to March inclusive, so fish not affected. Also, fish are mobile, able to move away from sediment plumes; removal of vegetation prior to dredging will mitigate potential for local problems with oxygen levels or microbiological contamination downstream ... no significant local impacts anticipated. At water body level, no mechanism identified whereby dredging could affect status of fish in Swale water body.

Fish habitat, RP-DVR was assessed to provide input into the WFD compliance assessment.

The Technical Note (PH-DRV, dredging will cause the loss of a habitat with a superabundance of the overall area of the Swale marsh covered by the relevant SSSI is not considered to be a key estuary.

The Technical Note author highlights low diversity, is located in an environment, and is already fragmentary.

It can therefore be concluded that the status of aquatic flora at the local scale of concern to the WFD).

Benthic invertebrate fauna

The proposed dredging will cause disturbed, low diversity habitats to be affected. Any loss of the channel deepening this affecting to local around 0.014% of the basin.

No mechanism has been identified for the small area could affect the status level of the water body (i.e., the scale of concern to the WFD).

Fish

There is no evidence, already Fareham Creek Basin is part of a subject physical characteristics of the Basin of such local significance not affected by the presence of the gulf, but into the basin other than during periods of significant weather events, significant water levels, and the river. There is no evidence of environmental problems (e.g., species or habitat) affecting these areas. If support expert opinion that the Basin may be used in summer by small numbers of juvenile flatfish ... dredging to take place September to March inclusive, so fish not affected. Also, fish are mobile, able to move away from sediment plumes; removal of vegetation prior to dredging will mitigate potential for local problems with oxygen levels or microbiological contamination downstream ... no significant local impacts anticipated. At water body level, no mechanism identified whereby dredging could affect status of fish in Swale water body.
Applying ‘Clearing the waters’ (3)

Priority (hazardous) substances

Sediments with same chemical ‘signature’ already regularly licensed for both water injection dredging and disposal to sea ... can therefore be concluded that proposed dredging will not affect the chemical status of the Swale water body.

There is no evidence, anecdotal or otherwise, to indicate that Fareham Creek Basin is of particular importance for fish. Indeed, the physical characteristics of the Basin make it very unlikely that the area is of even local significance not only are the Basin’s properties affected by the presence of the gate, but there is very limited freshwater flow into the Basin other than during periods of high rainfall. Further, there is considerable debris in the channel, and at low water there are no obvious places of refuge (i.e. no seagrass and, apart from the presence of ephemeral algae (e.g. weeds) no other vegetation on the mudflats or in the channel (RIV-DHIV, 2015). Local observations support expert opinion that the Basin may be used during the summer months by small numbers of juvenile fish. However, as dredging is intended to take place from September to March inclusive, these individuals will not be affected.

Fish are mobile species and are thus able to move away from unfavourable conditions (e.g. sediment plumes). The removal of the vegetation along with the top layer of silts prior to commencing water injection dredging will mitigate the potential for any local downstream issues associated with oxygen levels or microbial contamination. Significant local impacts on any fish present in the Creek or the Basin are not therefore anticipated.

At water body level, no mechanism has been identified whereby the proposed dredging could affect the status of the biological quality element. As such, it can be concluded that there will be no effect on the WFD status of the Swale water body if fish are concerned.
Applying ‘Clearing the waters’ (3)

Protected areas ... not in Special Protection Area; outside Site of Special Scientific Interest; not key part of marsh habitat in estuary; main species (sedge) classified as superabundant; not of conservation significance; site unlikely to support other species (nesting birds or water voles) because high level of disturbance. Loss of 0.2ha of sedge / temporary disturbance of 0.2ha of mudflat not expected to have direct effect on SPA status. Indirect effects on Natura site unlikely because sediments are characteristic of wider water body and vegetation is to be removed prior to dredging. Conclusion: neither water-dependent features nor wider interest of SPA likely to be affected by dredging.

Table 2 demonstrates that the material to be dredged from Fareham Creek Basin is entirely characteristic of sediments in the wider Swale system. According to the Maintenance Dredge Protocol (BHR, 2001) and the WFD strategic level compliance assessment (BHR, 2003), the Swale and the Medway water bodies are both characterised by sediment with slightly elevated levels of certain metals and PAHs (polycyclic aromatic hydrocarbons). A 2012 review of existing data together with a programme of new sampling and analysis undertaken by Port of Sheerness Ltd informed this conclusion. In particular, the data collection exercise specifically tested samples taken from the so-called ‘receiving environment’ i.e. areas representative of where the sediments suspended by water injection or agitation dredging might be expected to deposit.

Sediments with the same chemical signature as those to be dredged from Fareham Creek Basin are already regularly licensed for both water injection dredging and for disposal to sea. Taking all of this information into account, it can therefore be concluded that the proposed water injection dredging will not affect the chemical status of the Swale water body.
Shellfish Waters ... Two main concerns: smothering of shellfish beds; microbiological contamination. Small capacity of dredger means only small quantities dredged and only at high water on spring tides. No issues therefore expected. Microbiological contamination: Swale East regularly fails to meet SWD objectives. Five combined sewer overflows enter Creek; not uncommon to be used >20 times per year. Cumulative levels of bacteria in sediments nor persistence in surface sediment well understood, so precautionary mitigation (remove surface sediment only with long reach excavator before water injection dredging). Outcome no detrimental effects on Shellfish Waters Directive objectives anticipated.
‘Aim to improve’ objective

• No practicable (technically feasible and not disproportionately costly) options that could improve failing parameters (dissolved inorganic nitrogen, mercury, TBT and benzo(a)pyrene) were identified

• Currently no cost-beneficial not-in-place mitigation measures identified for inclusion in the 2015 RBMP: contribution to delivery of mitigation measures therefore not currently possible
Effects of future operations in dredged Basin

- No mechanism for an effect of future operations in dredged area on water body status identified
- Commercial and recreational vessels already regularly use the Swale transitional water body; no evidence that navigation contributes to existing failures
- Also assumed that:
  - future maintenance dredging will be assessed via Medway Ports’ updated Maintenance Dredge Protocol and strategic WFD compliance assessment, and
  - any necessary constraints or mitigation measures will be included as licence conditions.
Overall conclusion

• Taking into account water body size, the nature and scale of the proposed activity, and the implementation of the proposed mitigation measures to minimise the potential implications for the Shellfish Waters [and to avoid any local issues associated with the downstream transport of vegetation] the proposed dredging in Faversham Creek Basin will have no effect on the WFD status of the Swale transitional water body

• No effects on adjacent water bodies are anticipated

• The activity is therefore WFD-compliant and no further WFD assessment is required
Thanks for listening!

jan@janbrooke.co.uk
For info or further questions on this presentation, please contact:

Massimo Marra  
JASPERS Networking and Competence Center  
Senior Officer  
ph: +352 4379 85007  
m.marra@eib.org  
www.jaspersnetwork.org  
jaspersnetwork@eib.org