



Lee Stevens
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Our ref CCE/2015/55140

Date 16 April 2015

Dear Mr Stevens

Enquiry regarding Thurrock LFRMS SEA Scoping Report

Thank you for sending the SEA Scoping report on 19 March. We have gathered comments from on the report and they are as follows.

We are pleased to note that Biodiversity, Flora & Fauna, Water Environment, Soils & Geology and Climate Change have all been scoped into the Strategic Environmental Assessment. We note that Flood Risk, Water Resources and Water Quality are all considered within the 'Water Environment' section.

Table 3-2 on page 8, under 'Water Environment', states a key theme to be "better regulation and management of the water environment to benefit water resources and flood risk, and reduce water pollution". We suggest the wording 'and improve water quality' rather than 'reduce water pollution'. The aim should be not only to reduce pollution, but also to promote multifunctional land use, for example for river corridor improvements that can provide flood protection and help towards achieving Water Framework Directive objectives.

We are happy that the report has considered WFD, protected species, BAP species and designated sites. We are concerned that there is no mention of invasive species and the detrimental effects caused by their introduction to the environment and spread along the river network. For example, floating pennywort has been reported from a watercourse in Tilbury and last year we removed a significant amount of the plant from the river.

We believe that the SEA should include a short section on reducing the incidence and spread of invasive plant and animal species, which is a legal requirement for species designated under the Wildlife and Countryside Act 1981 (Variation of Schedule 9) (England and Wales) Order SI 2010/609.

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This amends the Wildlife and Countryside Act 1981 by adding new species to the list of plants not to be planted or allowed to grow in the wild, including Himalayan balsam, floating pennywort and cotoneaster. You can find more information on this issue on the link here: <https://www.gov.uk/japanese-knotweed-giant-hogweed-and-other-invasive-plants>

Doc Ref	Comment
Table 3-1 pg. 7	Reference should be made to the following: <ul style="list-style-type: none"> • Water Act (2014) • South Essex Catchment Flood Management Plan (2009) • Thames Estuary 2100 Plan (2012) not 2002 • Thurrock Council Surface Water Management Plan (2013) • Thames Flood Risk Management Plan (2015 – Draft)
Section 3.2 Pg. 8	Whilst appendix A is acknowledged, an explanation of how these relevant policies, plans and programmes and their relationship with the Local Flood Risk Management Strategy (LFRMS) should be provided within this section.
Section 4.2 Pg.10	Where referring to “natural low points” in the study area, Tilbury should be referred to given it is prone to surface water flooding for this very reason. This should be reflected in the final LFRMS.
Figure 4-1 Pg.11	Suggest the following: <ul style="list-style-type: none"> • Label “Purfleet” • Change the legend text to read “Watercourses” rather than “River Network”
Section 4.2.1 Pg. 12	Concerning flood risk management measures and the potential to affect landscape characteristics, we advise that this should be managed via the development of Thurrock Council’s proposed Riverside Strategy for the Thames Estuary.
Section 4.4.1 Pg. 22	Refinement of the term “main rivers” in this context is required. If you mean the term “main river” as designated on the main river map held by the Environment Agency, then there are many more than currently referred to in the report. The Thames Estuary is not designated as a “main river” as designated on the main river map held by the Environment Agency for the Thurrock frontage. You should make reference to “Gobians Sewer” not “Gabbions Sewer”. Further explanation is required on the sentence “ <i>These are low flow channels with no additional capacity to accept surface water runoff</i> ”. How have you derived this statement?

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<p>Section 4.4.5 Pg. 23</p>	<p>There is no differentiation between the numerous sources of flood risk in the study area, nor those that the LFRMS will seek to address (surface water, ordinary watercourse, groundwater).</p> <p>There is no brief outline of the roles and responsibilities under the Flood and Water Management Act 2010, which would be of benefit.</p> <p>Thurrock Council Surface Water Management Plan is not referred to at all, surface water is a significant source of flood risk in low-lying areas of the study area, especially Tilbury and Bulphan. This is arguably the most likely flood risk to people and property, although it is acknowledged that the residual risk of flooding from the Thames Estuary poses the biggest consequence. Key flooding risk areas should be referred to.</p>
<p>Section 4.7 Pg. 27</p>	<p>There is no indication of the percentage of people currently at risk of flooding, for varying sources of flood risk, within the study area, including those in deprived areas. This information should be provided to give greater context.</p>
<p>Section 4.8.2 Pg. 29</p>	<p>No reference is made to the existing FCRM infrastructure within the study area, including condition and status. We recommend reference is made to the Thames Tidal Defences, including Tilbury and Fobbing Barriers and Mardyke Sluice amongst others, as well as the Tilbury Flood Storage Area (FSA). This is key infrastructure required to support the study area.</p> <p>An examination of critical infrastructure within the study area also at flood risk is recommended, considering the impacts of climate change.</p>
<p>Figure 4-11 Pg.29</p>	<p>Detail the location of the FCRM infrastructure as referred to above.</p>
<p>Section 4.10 Pg. 30</p>	<p>Reference to the Thurrock Council Surface Water Management Plan would be beneficial in this section.</p> <p>We also recommend consideration of development planning proposals on floodplain management in line with the National Planning Policy Framework.</p> <p>Our Thames Estuary 2100 plan advocates the following recommendations for the relevant policy units in the study area relevant to this section:</p> <ul style="list-style-type: none"> • “...a programme of floodplain management including flood warning, emergency planning, and localised flood protection and resilience for vulnerable key sites...” • “...partnership arrangements and principles to ensure that new development in this zone is safe, and flood risk management is factored into the planning process at all levels...”

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Section 4.11 Pg. 31	Update the existing conclusions in line with the recommended changes.
Table 5-2 Pg. 34	Population – 9 : Suggest “Increasing the resilience of people, property and businesses and critical infrastructure within Thurrock to the risk of flooding”
Section 6.1 Pg. 36	Public consultation is encouraged as a means by which to help set the environmental context and determine the scope of assessment.

Section 4.4 – Water Environment and more specifically WFD.

Paragraph 4.4.2 Water Framework Directive:

The report states that most of the Mardyke is not designated as Heavily Modified. Whilst this was correct, a number of changes have been made to waterbodies in the South Essex Catchment as part of the 2nd cycle of the River Basin Management Plan (2015-2021), the draft of which is currently out for consultation and the final plan will be published in December 2015. You can find the consultation documents at the following link: <https://www.gov.uk/government/publications/thames-river-basin-management-plan>

As part of these changes most of the Mardyke is now designated as Heavily Modified for Flood Protection and the lower Mardyke is also designated for Urbanisation. A number of mitigation measures required to achieve Good Ecological Potential are not in place.

Paragraph 4.4.3 – Surface Water:

This section mentions the Thames Estuary as well as a number of fluvial/freshwater rivers. It concludes that the Thames Estuary is the main watercourse within Thurrock which may be affected by planned growth, because it will receive effluent from Tilbury Sewage Treatment Works. The report also mentions that reduction in flooding could improve water quality, by removing pathways for pollution to enter rivers via floodwater (e.g. from sewage treatment works) However, little consideration is given to hydromorphology and the impact of land use/management and river maintenance on hydromorphology and ultimately ecology. This section seems to focus on chemical water quality and insufficient consideration is given to hydromorphological impacts of modifying and maintaining watercourses, which can have equally significant impacts on ecology and WFD. Fluvial rivers in the catchment could be significantly impacted by flood risk management activities as well as urbanisation/growth and development, so the scope should be increased to consider these aspects as well as water quality impact on the Thames.

As the fluvial rivers and estuaries within this catchment have very different characteristics and pressures, it may be worth considering them separately, with greater attention to hydromorphology as well as the water quality impacts.

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Paragraph 4.4.6 – Key environmental issues:

The SEA states that:

“The water bodies in Thurrock currently fail to meet good ecological status/potential under the WFD. This is partly due to the installation of structures for flood conveyance and land drainage. The LFRMS will need to consider whether any flood risk management measures will lead to adverse impacts on the watercourses within the borough and whether the LFRMS can help contribute to achieving WFD objectives and improving water quality”.

We think it would be worth highlighting that not only the ‘installation of structures’ which contribute towards the failure to achieve Good Ecological Status. Historical maintenance and modifications to river channels to improve land drainage and flood defence also have a significant impact on the current ecological status of fluvial rivers in the catchment; for example widening, deepening, straightening, re-aligning, silt and vegetation deposits on the bank disconnecting the river from its natural floodplain and extensive removal of bank-side trees in this catchment. Furthermore, current and future maintenance activities, such as improved land drainage, vegetation clearance, de-silting, removing fallen trees from the channel, bank-side tree cutting/removal etc, also have the potential to reduce the ecological status of rivers in the catchment, and prevent rivers from reaching good status.

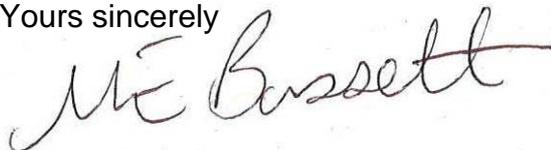
The impacts of land use and river maintenance should be considered in the Local Flood Risk Management Strategy, as the strategy could have a significant effect on both land use and river maintenance undertaken by the Council or landowners/managers, and this in turn could impact on ecological status as well as WFD compliance.

Section 5 – SEA objectives & indicators, Table 5.2, objectives 5 & 6:

Again, the focus of the objectives and indicators is on water quality, with little consideration given to the environmental impact on morphology.

Thank you for taking the time to consult us on this matter and please do contact us if you have any further queries.

Yours sincerely



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