

# THE QUAYS, BARRY WATERFRONT

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## FULL PLANNING PERMISSION: 2010/00696/FUL DISCHARGE OF CONDITION 15 (RISKS ASSOCIATED WITH CONTAMINATION)

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### Introduction

1. This submission has been prepared to discharge Condition 15 of the full planning permission for Barry Waterfront which states that:

*Prior to the commencement of the development approved by this planning permission (or such other date or stage in development as may be agreed in writing with the Local Planning Authority), the following components of a scheme to deal with the risks associated with contamination of the site shall be submitted to and approved in writing by the Local Planning Authority: P.121*

1. *A preliminary risk assessment which has identified:*
  - (a) *All previous uses.*
  - (b) *Potential contaminants associated with those uses.*
  - (c) *A conceptual model of the site indicating sources, pathways and receptors.*
  - (d) *Potentially unacceptable risks arising from contamination at the site.*
2. *A site investigation scheme, based on (1) to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off site.*
3. *The site investigation results and the detailed risk assessment (2) and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken.*
4. *A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in (3) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action. Any changes to these components require the express consent of the Local Planning Authority. The scheme shall be implemented as approved.*

### Geotechnical Investigations

2. Geotechnical investigations on Barry Waterfront have been undertaken by three consultants Arup, Earth Science Partnership (ESP), and more recently by Integral Geotechnique (IG). Various reports, and parts of reports, prepared by the consultants and included with this submission are to be used to discharge Condition 15. Specific parts of the Arup and ESP reports, relevant to each part of the planning condition, are detailed in the table overleaf.

<b>Condition 15 Part</b>	<b>ESP Report Reference</b>
<b>1</b>	The Arup Desk Study included in Appendix K of the submitted ESP report, titled <i>Geotechnical Remediation</i> , covers Part 1 of this planning condition.
<b>2</b>	The Arup Site Investigation included in Appendix K of the ESP report, titled <i>Geotechnical Remediation</i> , covers Part 2 of the planning condition.
<b>3</b>	The two ESP reports, titled <i>Geotechnical Remediation</i> and <i>Supplementary Controlled Waters Risk Assessment</i> , covers Part 3 of the planning condition.
<b>4</b>	The two ESP reports, titled <i>Geotechnical Remediation</i> and <i>Supplementary Controlled Waters Risk Assessment</i> provides information on the verification reports required to discharge Part 4.

3. Copies of an exchange of correspondence in early 2011 between the Consortium's former geotechnical consultant, Earth Science Partnership, and the EA on the subject of planning conditions are attached for your information. All other matters relating to the discharge of Condition 15 will have to be addressed in due course by the specialist contractor employed by the Consortium to remediate the site.

*Directors:*

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Our Ref: db/4563s/1636a CWRA.EA It.1

2nd February 2011

Mr Christian Servini  
Planning Liaison  
Environment Agency Wales  
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CF3 0EY

**BY POST AND EMAIL**  
VoG Ref: 2010/00696/FUL  
EA Ref: SE2010/112938/02-L01

Dear Christian,

### **BARRY WATERFRONT DEVELOPMENT WEST POND RESPONSE TO COMMENTS ON CWRA**

Thank you for your letter dated 17<sup>th</sup> January 2011 in which you provide comments on our supplementary Controlled Water Risk Assessment (Ref: 4563s/1636a – Oct 2010), and we are pleased to provide further information and context on your queries.

We appreciate that your comments have been provided prior to planning approval; however, to accelerate the development program they are useful as the client is now considering undertaking the remedial works as an advanced contract prior to approval being granted.

With reference to your letter of 9<sup>th</sup> September (Ref: SE2010/112938/01-L01) could you please confirm that items 1 and 2 of your initial condition are now satisfied. A number of the remaining conditions relate to the remedial works and construction activities and will be satisfied as appropriate in the future.

With regard to your specific comments, we are pleased to respond below.

#### *EA Comment 1*

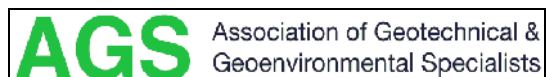
As described in our June 2010 report (Ref: 4563s.1636), an area of potential inorganic contamination was identified in the west of the site. During our supplementary site works (October 2010) we undertook specific targeted sampling in this area with a number of trial pits and boreholes to allow further soil, leachate, perched, alluvial and rock groundwater sampling.

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The area of concern was not dismissed without consideration, but the potential for significant contamination established as low, based on the direct evidence afforded by comprehensive contamination testing.

The absence of a widespread soil/leachate term in the supplementary works confirmed the single source identified by the Structural Soils/Arup 2008 works to be isolated and not a significant source term. The low levels on perched water in this zone confirmed the isolated source was not causing a more generic impact and low levels on alluvial and rock aquifers confirmed no significant impact on Controlled Waters.

#### *EA Comment 2*

The potential for vertical migration of contaminants from perched and alluvial water bodies is discussed in Sections 4.4 and 6.0 of our June 2010 report (Ref: 4563s.1636) and Sections 4.4 and 7.1 of our October report (Ref: 4563s.1636a).

The potential for downward migration was acknowledged which was why the existing bedrock installations were re-sampled in the supplementary works and 3no. new bedrock installations were constructed in key areas of concern.

This supplementary sampling demonstrates no clear link of rock water chemistry to contamination observed in adjacent or overlying contaminated Alluvial groundwater or perched water bodies. Low levels of contamination were confirmed in bedrock, the dock water, and the discharge at the harbour, indicating no clear linkage/impact to the rock aquifer or surface waters.

The potential for the observed contamination to affect the rock aquifer and surface waters is acknowledged and discussed in Section 7.1 as being a key driver in our recommendation for remedial action. Once the contamination is reduced to acceptable levels the implications of this potential migration pathway are nominal.

#### *EA Comment 3*

The natural deposits beneath West Pond are situated at depths of around 10m below ground level (~0mAOD). Cable Percussion Drilling was adopted as it allows relatively accurate identification of strata boundaries and well installation; however, whilst samples recovered are suitable for description purposes, from these depths it is very difficult to obtain a suitably undisturbed sample for valid laboratory testing.

The ConSIM data is considered robust and suitable for decision making in particular as the influence of these parameters on the RTM06 calculation is nominal. The parameters of permeability and hydraulic gradient are much more sensitive to change which is why they were considered further in our sensitivity analysis.

#### *EA Comment 4*

The final remediation strategy is to be determined by the successful tendering contractor who will be required to obtain any appropriate licenses for the works.

*EA Comment 5*  
Noted.

*EA Comment 6*

As explained above, the client is now considering the remediation works as part of an advanced contract and the active remedial works may commence in less than eight weeks. We will keep you updated on progress and the program and will seek to meet you with the successful tenderer prior to implementation of any works.

Any further comments you may have that may influence the works would be gratefully received within the next three to four weeks.

We trust the above meets with your present requirements, however, should you have any queries or require any further information, please do not hesitate to contact us.

Yours sincerely,

**Giles Sommerwill**

Enc.

Cc Yvonne Pritchard @ VoG Planning  
Matthew Llewellyn @ EA GWCL

creu lle gwell  
creating a better place



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Ein cyf/Our ref: SE/2011/113668/01-L01  
Eich cyf/Your ref: 2010/00696/FUL

Dyddiad/Date: 03 March 2011

Annwyl / Dear Mr Sommerwill

**Re: Response to comments on CWRA, Barry Waterfront development West Pond**

Thank you for your e-mail and attached letter which we received on 2 February 2011.

We note the comments in your letter and look forward to receiving the remediation strategy from the contractor appointed from the tendering process.

With regards to your query regarding items 1 and 2 of our initial condition relating to land contamination (as requested in our response to the Vale of Glamorgan dated 9 September 2010), the data presented to date should satisfy these items.

We acknowledge that a number of the remaining conditions we have requested relating to remedial works and construction activities will be satisfied as appropriate in the future.

We trust our advice is clear. Please contact me if you have any further queries.

Yn ddiffuant / Yours sincerely

  
**Christian Servini**  
**Planning Liaison Officer 1**

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