

REPORT

Boston Alternative Energy Facility

Air Quality Deposition Monitoring Plan

Client: Alternative Use Boston Projects Ltd

Planning Inspectorate
Reference: EN010095

Document Reference: 9.51

Pursuant to: APFP Regulation: N/A

Reference: PB6934-RHD-ZZ-XX-NT-Z-4075

Status: Final/0.0

Date: 13 December 2021



Note / Memo

**HaskoningDHV UK Ltd.
Industry & Buildings**

To: National Infrastructure Planning
From: Alternative Use Boston Projects Limited
Date: 13 December 2021
Our reference: PB6934-ZZ-XX-NT-Z-4075
Reference: 9.51
Planning Inspectorate: EN010095
Reference:
Classification: Project related
Checked by: BDB Pitmans
Approved by: Paul Salmon

**Subject: Boston Alternative Energy Facility Examination: Deadline 4 Air Quality
Deposition Monitoring Plan**

1 Introduction

1.1 Background

At the Issue Specific Hearing 2 (ISH2) into Environmental Matters on Wednesday 24 November 2021, in relation to the following Agenda Item, Natural England provided a written response in Natural England's Response to ISH 2 (Environmental Matters) Questions (set out below for convenience):

“ExA Question: “3b. [2.0.7 & 2.0.8]. Can NE outline measures which the Applicant could undertake to reduce risk of adverse effects from deposition on saltmarsh habitats?”

“Natural England advises that there is no standard best practice advice in relation to mitigations measures to reduce air quality impacts on saltmarsh habitats. It is dependent on the design and location of the source of the deposit. Therefore, we believe that the Applicant's engineers are best placed to provide mitigation measures and/or project modifications to reduce air quality concerns.”

The Applicant provided an oral response to Examining Authority's question at ISH2 where the following points were made:

- The assessment of the impacts of emissions from the Facility upon nitrogen deposition at saltmarsh habitats along The Haven was conducted on a worst-case basis, with the assumption that emissions of nitrogen oxides (NO_x) and ammonia (NH₃) would be emitted at 100% of their permitted levels.
- In reality, as is demonstrated by the emissions monitoring results of all other EfW plants in the UK, typical emissions of NO_x are at approximately 80% of the permitted level and NH₃ are at around 20% of the permitted level.
- Actual nitrogen deposition levels would, therefore, be lower than those assessed in the updated Environmental Statement Chapter 14 Air Quality (document reference 6.2.14, REP1-006), Table 14.35, page 68. The Environment Agency, in regulating the operation of the future facility through the Environmental Permit, would be most likely to set emission limits that ensure protection of the environment.

The Environment Agency observed at ISH2 that, in order to confirm the actual nitrogen deposition and ambient concentrations at the saltmarsh habitats, it could be possible to carry out monitoring at the

saltmarsh locations. The Applicant agreed, observing that a period of baseline monitoring before operation of the facility would also be required, to provide a “before and after” picture.

1.2 This document

This Technical Note provides an outline for the monitoring scheme that will be carried out to assess the likely level of nitrogen deposition at the saltmarsh areas and other designated sites in the vicinity of the facility site. The final Air Quality Deposition Monitoring Plan will form part of the Landscape and Ecological Mitigation Strategy secured by Requirement 6 of the draft DCO (document reference 2.1(2), REP3-003).

2 Outline Monitoring Plan

2.1 Saltmarsh and Designated Sites Areas and Monitoring Locations

There are a number of saltmarsh habitats and other locally-designated sites in the vicinity of the Application site, and these are shown on **Figure 1**. These are essentially linear in form, extending along both banks of The Haven. Contingent upon the results of a Health & Safety Risk Assessment, confirming safe access for personnel, it would be the aim to establish one representative monitoring point within each of the discrete areas of saltmarsh and other designated sites, as indicated on **Figure 1**.

2.2 Monitoring methodology

It is proposed to deploy passive diffusion tubes for the purposes of monitoring ambient concentrations of compounds that contribute to nitrogen deposition, i.e., nitrogen dioxide (NO₂) and ammonia (NH₃). The diffusion tubes need no electricity and can be affixed to a normal wooden fencing post in the ground. They are left in place for a calendar month¹ in accordance with Defra guidance² and are then recovered and analysed in a UKAS-accredited laboratory. The measured ambient monthly average concentrations will then be accumulated into an annual average and the total nitrogen deposition will be calculated using established deposition velocities, applied to these annual average concentrations.

As the monitoring personnel will be making monthly visits to the sites, they will take photographs across each of the monitoring locations in order to record the conditions of the sites. These photographs will be made available to Natural England and the Environment Agency upon request.

2.3 Monitoring Programme

The operational monitoring would be conducted over a minimum of a calendar year, with the exact duration to be agreed. In addition, six months of monitoring would be required to be completed prior to “hot commissioning” of the Facility, to provide a robust baseline against which to assess the potential impact of emissions from the Facility.

3 Reporting

Monthly short-form monitoring reports would be compiled by the Applicant and sent to an agreed list of recipients. These reports would also be made available on the Facility website. At the end of the baseline period and the end of the first full year’s operational monitoring, more detailed reports would be compiled

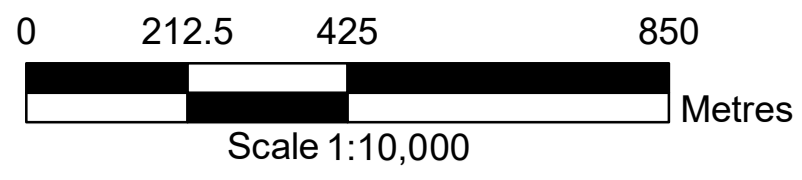
¹ Defra NO₂ Diffusion Tube Monitoring Calendar

² Defra Local Air Quality Management Technical Guidance (TG16), April 2021

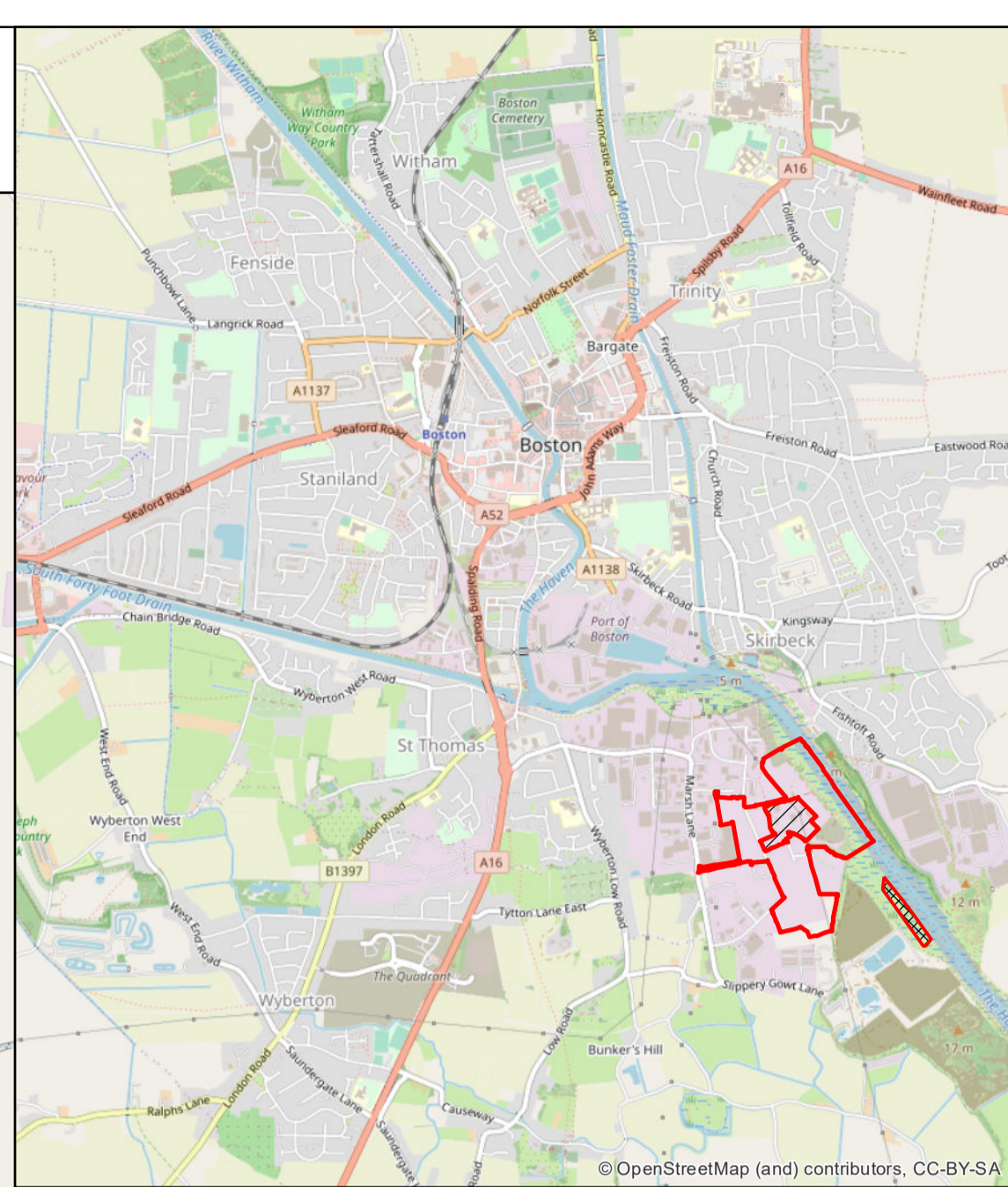
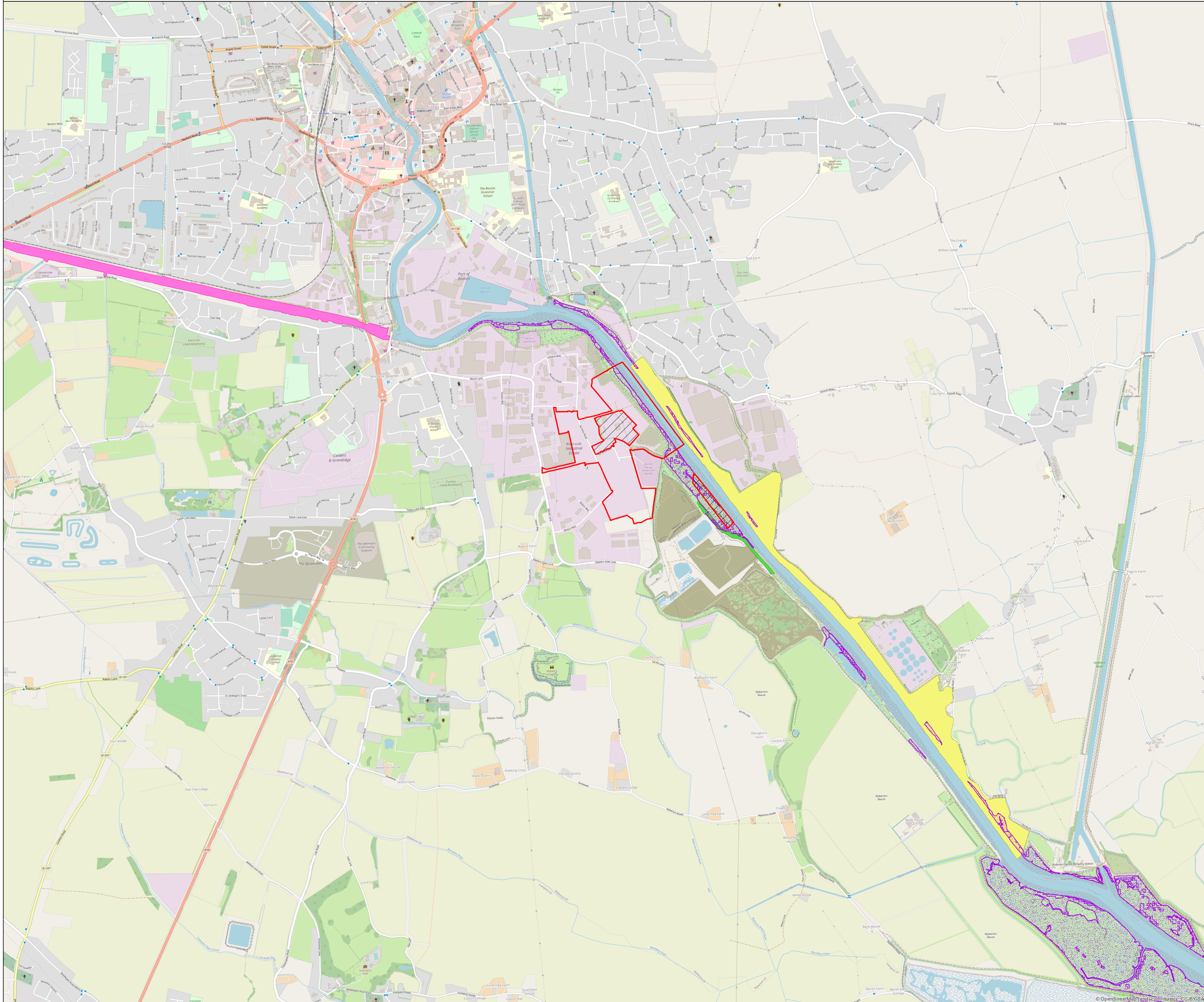
and made available to agreed recipients, incorporating the deposition calculations and a summary of the emissions monitoring results from the Facility.

4 Plan Review and Updating

The final agreed Plan will be a live document and subject to regular review and updating, where necessary and agreed by all parties.



BOSTON ALTERNATIVE ENERGY FACILITY DEVELOPMENT CONSENT ORDER
eRegulation 5(2)(o) - Designated Ecological Interest Sites Around the Boston Facility
Technical Note - Outline Air Quality Deposition Monitoring Plan - Figure 1
BOSTON BOROUGH COUNCIL



- Key**
- Order limits
 - Habitat Mitigation Area
 - Land outside Order limits
 - Areas of Saltmarsh
- Local Wildlife Sites**
- Havenside
 - Slippery Gowt Sea Bank
 - South Forty Foot Drain

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APPLICANT **ALTERNATIVE USE
BOSTON PROJECTS LTD**

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REV	DATE	DESCRIPTION	BY	CHK	APP
0	08/12/21	For submission			

TITLE **BOSTON ALTERNATIVE ENERGY FACILITY
DEVELOPMENT CONSENT ORDER
Regulation 5(2)(o) - Designated Ecological
Interest Sites Around the Boston Facility - Figure 1
BOSTON BOROUGH COUNCIL**

Application Number EN010095					
DRAWN	MCP	CHECKED	AG	APPROVED	PS
DATE	08/12/2021	SCALE @A1	1:10,000	REF	PB6934
DRAWING NUMBER PB6934-RHD-01-ZZ-DR-4033			STATUS	SO	REVISION 0