Howard Carter
By email only

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15th October 2021
Our ref: 551771mt15Oct21P01

Dear Howard

Houseboat Valuer, 22 Riverside, Shoreham by Sea – Additional Ecology Mitigation Information

We understand Natural England have responded with a request for the following additional information relating to ecological mitigation for the proposed houseboat project at 22 Riverside, Shoreham by Sea.

- details/plan on how and where the saltmarsh habitat would be transplanted and showing how & where an area 1.5-2 times the affected area will be established.
- monitoring plan

The plan appended to this letter show the location of the existing saltmarsh vegetation and the locations where this saltmarsh will be translocated and replanted; this shows an area double the size replanted (although in the first instance of course, this will be at a lower plant density than currently exists). The plants will be spread throughout this wider area to encourage a net increase in salt marsh vegetation growth surrounding the new boat.

This will be undertaken following guidance described in the Environment Agency's Saltmarsh Management Manual[i]. This document states:

Saltmarsh vegetation can only be established successfully, however, if the physical as well as biological conditions are satisfactory. Natural colonisation should, therefore, be considered as the preferred option for saltmarsh vegetation establishment rather than artificial transplantation

The bare mudflat appears suitable to support vegetation patches and is subject to the same physical and biological conditions as the current vegetated areas and therefore the proposed locations and species are considered appropriate. Small (~1-2m length) silt traps/sedimentation fences will however be installed on any small areas where erosion is observed occurring adjacent to the boat to ensure that suitable conditions remain in the relocation areas. These traps will simply comprise wooden poles with geotextile membrane and brushwood spanned between the poles. The use of these fences will be reactive to conditions at the time of translocation as they are a simple and cheap intervention to make minor changes to the local sedimentation regime. As the salt marsh is a constantly changing environment it is not necessary to say with certainty that these will be appropriate at the time of works but an ecologist will be present at the commencement of works to inform the need.

The translocation will take place in mid-spring to early summer (as per best practice guidance). An ecologist will be present to oversee the plant translocation and signage will be erected so that construction teams are aware of the areas to be protected. Plants in patches of ~0.5x0.5m square 'turf blocks' will be carefully excavated to a depth of at least 0.4m beneath root growth using spades by hand (the vegetation patches are not large enough to justify use of machinery and this allows greater sensitivity). These will be replanted in the translocation areas by an experienced landscaper

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with excavations made and turfs installed, pressed down by light foot pressure. The works will be done during neap tides to ensure that relocated plants are not dislodged by tidal movement. The vegetation 'turf's will be stored for a short time and not allowed to dry out; this approach was found to be successful at a translocation project in Dorset[ii].

The future monitoring will follow advice in this document. Annual visits to the site by a suitably qualified ecologist during the summer will be undertaken for the first 5 years following completion of the translocation. Data on the following factors will be collected:

- Percent survival rates of plants, plant vigour and vegetation cover, potentially using aerial photographs to assess spread of vegetation.
- Repeat vegetation mapping to assess change in diversity and to determine whether succession is occurring.

The document also recommends *'topographic contour mapping of the marsh and mudflat, related to Ordnance Datum, and vertical accretion measurements to assess whether the new marsh is accreting sediment'*. This is not considered appropriate given the small scale of the project.

The outcomes of the monitoring will be reported annually to Natural England with associated recommendations for any remedial works to meet the intended conservation objectives and outcomes described in the Ecological Impact assessment report.

We hope the above is all clear. Should you have any questions do not hesitate to contact us.

Yours sincerely



Morgan Taylor

Director

For and on behalf of Greengage Environmental Ltd

Appendix 1 saltmarsh vegetation translocation plan

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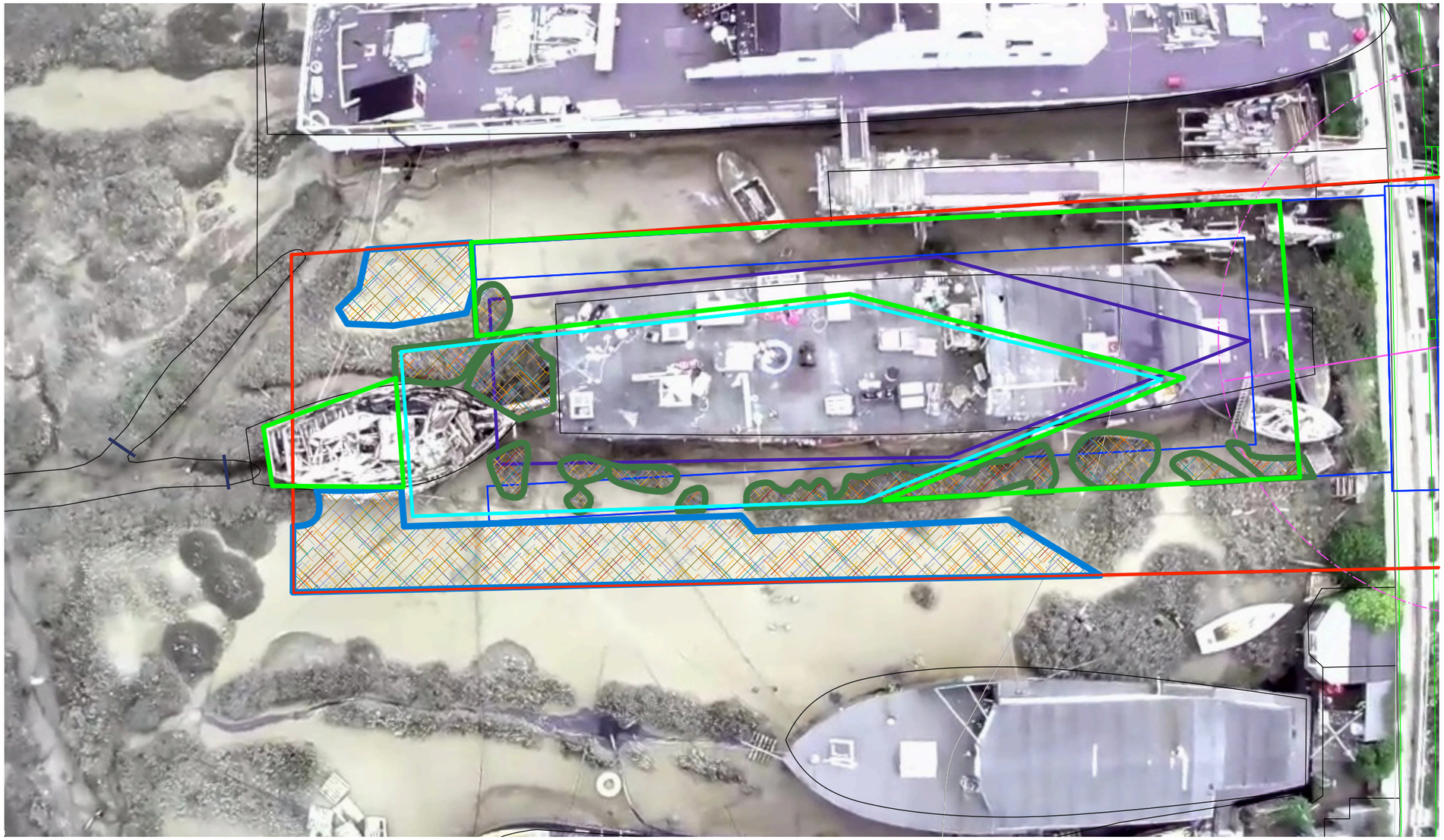
[i] Joint Defra / Environment Agency Flood and Coastal Erosion Risk Management R&D Programme, Saltmarsh management manual, R&D Technical Report SC030220 https://assets.publishing.service.gov.uk/media/602bf8d8e90e070556671435/Saltmarsh_management_manual_Technical_report.pdf

[ii] Environment Agency, The restoration of vegetation on saltmarshes, R&D Technical report W208, http://ea-

lit.freshwaterlife.org/archive/ealit:4481/OBJ/77105_ca_object_representations_media_182_original.pdf



Saltmarsh Vegetation to be translocated
Total area 53sq.m

Saltmarsh area for translocation
Total area 106sq.m

Final position of new hull

Temporary position of new hull during construction

Temporary gantry platform and scaffold during construction

Saltmarsh area available for replanting after completion
Total area 235sq.m

Potential location for small sedimentation fences (if deemed necessary at time of works)

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New floating home
22 Riverbank, Shoreham by Sea, BN43 5YH

Saltmarsh plant translocation
1:200 @A3
SK/2005/2015