



Plant Colonisation on OSA Coastal Environments



Bladder Wrack on OSA

On 15th and 16th June 2020 site visits were made to several sites where OSA has been used in a saline environment. One site was in Suffolk and the rest in Essex.

The aim of the visits was to determine the extent to which Bladder Wrack establishes itself on OSA revetments. Examples of grouted rock were also inspected to see if the seaweed establishes itself on that too.

During the visits it appeared that the Bladder Wrack grows below a certain level related to the local tidal levels. Where revetments were below this level, the visits indicated that the Bladder Wrack grows on many different materials - rock, concrete slabs, concrete blocks, timber and OSA.

Bladder Wrack was apparent on OSA in most cases. Exceptions were when beach material was mobile and we assume the abrasion of the mobile material prevents growth. this was also the case for concrete and rock where the foreshore was mobile.

Bladder Wrack was abundant on old grouted rock and was getting established on grouted rock of four years old. When grouted rock is placed the result is a good coverage of bituminous mastic, but there are some areas of bare rock. As the material ages, the surface grout is abraded to leave the grout in between the rocks. It appears that the Bladder Wrack grows on the rock surface rather than the mastic surface.

A summary of the findings follow in this document.

Photo Ref	Location	Date Installed	Material	Notes
Brad-A	Bradwell Power Station, Essex	November 2016	20-32mm OSA	Bladder Wrack on OSA where mobile beach material finishes



Photo Ref	Location	Date Installed	Material	Notes
Brad-B	Bradwell Power Station, Essex	Not known	Grouted rock	Bladder Wrack on old grouted rock



Photo Ref	Location	Date Installed	Material	Notes
Brad W-A	Bradwell Wick, Essex	October 2016	20-32mm OSA	Bladder Wrack well established along lower part of revetment



Photo Ref	Location	Date Installed	Material	Notes
Brad W-B	Bradwell Wick, Essex	October 2016	20-32mm OSA	Bladder Wrack well established along lower part of revetment



Photo Ref	Location	Date Installed	Material	Notes
Brad W-C	Bradwell Wick, Essex	October 2016	20-32mm OSA	Close up of lower part of revetment



Photo Ref	Location	Date Installed	Material	Notes
Brad W-D	Bradwell Wick, Essex	October 2016	20-32mm OSA	Bladder Wrack well established along lower part of revetment



Photo Ref	Location	Date Installed	Material	Notes
Dov - A	Dovercourt, Essex	October 2010	10-20mm Elastocoast on 20-32mm OSA	A 50mm layer of Elastocoast was placed on a 20-32mm OSA layer. Bladder Wrack very well established



Photo Ref	Location	Date Installed	Material	Notes
Dov - B	Dovercourt, Essex	October 2010	10-20mm Elastocoast on 20-32mm OSA	A 50mm layer of Elastocoast was placed on a 20-32mm OSA layer. Bladder Wrack very well established



Photo Ref	Location	Date Installed	Material	Notes
Dov - C	Dovercourt, Essex	March 2002	Grouted Rock Toe	Bladder Wrack well established on grouted rock toe



Photo Ref	Location	Date Installed	Material	Notes
F Hall-A	Foulton Hall, Little Oakley, Essex	September 2009	20-32mm OSA	Bladder Wrack at toe - patchy due to mobile foreshore



Photo Ref	Location	Date Installed	Material	Notes
Har -A	Harwich, Essex	October 2003	20-32mm OSA	Bladder Wrack well established along lower part of revetment



Photo Ref	Location	Date Installed	Material	Notes
Har - B	Harwich, Essex	October 2003	20-32mm OSA	Bladder Wrack well established. Note grading difference between upper area (20-40mm) and lower area (20-32mm)



Photo Ref	Location	Date Installed	Material	Notes
Har - C	Harwich, Essex	April 1997 - October 2003	20-40mm & 20-32mm OSA	Near area to the left of the red line is 20-40mm OSA, far area to right of red line is 20-32mm OSA. Similar amount of established Bladder Wrack



Photo Ref	Location	Date Installed	Material	Notes
Steep -A	Steeple Bay, Essex	September 2016	20-32mm OSA	Bladder Wrack well established along lower part of revetment



Photo Ref	Location	Date Installed	Material	Notes
Steep -B	Steeple Bay, Essex	September 2016	20-32mm OSA	Bladder Wrack well established along lower part of revetment



Photo Ref	Location	Date Installed	Material	Notes
Steep - C	Steeple Bay, Essex	September 2016	Grouted Rock	Bladder Wrack at toe of grouted rock revetment (4 years old)



Photo Ref	Location	Date Installed	Material	Notes
TT Is -A	Two Tree Island, Essex	August 2005	20-32mm OSA	Bladder Wrack well established along lower part of revetment



Photo Ref	Location	Date Installed	Material	Notes
TT Is -B	Two Tree Island, Essex	August 2005	20-32mm OSA	Bladder Wrack well established along lower part of revetment



Photo Ref	Location	Date Installed	Material	Notes
Wood - A	Woodbridge, Suffolk	September 2010	20-32mm OSA	Bladder Wrack well established along lower part of revetment



Photo Ref	Location	Date Installed	Material	Notes
Wood - B	Woodbridge, Suffolk	September 2010	20-32mm OSA	Bladder Wrack well established along lower part of revetment (camera lens cap -55mm - included for scale)

