[redacted]

Sent: 23 February 2015 12:46
To: Planning
[redacted]
Subject: Further Objection to AW/344/14/HH - Bognor Reef SSSI, CA and ASC - ' The Most Important Site in the World for Fossil Insects...'

Dear Sir

Aldwick Beach - 'THE MOST IMPORTANT SITE IN THE WORLD FOR FOSSIL INSECTS...'

In extension of our multifarious objections to this application, we wish to add the attached Notification issued under Section 28 of the Wildlife and Countryside Act 1981.

We respectfully urge you to study this closely and, then, please to ensure that no further damage is caused to this application site as with the dumping of alien sand which has already occurred, or by the use of vehicles to deliver materials or removed spoil from excavation if the swimming pool is to be built by any means.

Every work is to be studied for it is a meaningful and authoritative report and we all have a duty to protect this SSSI. In particular, we draw attention to the following statements:-

1. 'This site comprises a long stretch of foreshore of great geological interest and an extensive are of vegetated shingle, a habitat type which is rare in Britain.'

2. 'The foreshore here is one of the few places where the whole thickness of the London Clay can be studied in sequence.'

3. 'Finally, the most important site in the world for pyritised fossil insects (especially beetles) is on the foreshore at Aldwick. The genera Bognoria and Aldwichia are found only here. One species of beetle belongs to a genus, Pactopus, now confined to western North America, and otherwise unknown in a FOSSIL STATE.'

4. 'THE EASTERN FORESHORE (the location of this site) is a valuable site which has yielded a diverse Lower Eocene avifauna, including a significant number which are only rarely preserved.'

Yours faithfully

Richard Ostler, Chairman, CHECAA

COUNTY: WEST SUSSEX SITE NAME: BOGNOR REEF

DISTRICT: ARUN

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981.

Local Planning Authority: ARUN DISTRICT COUNCIL

National Grid Reference: SZ 912982 Area: 64.4 (ha.) 159.1 (ac.)

Ordnance Survey Sheet 1:50,000: 197 1:10,000: SZ 99 NW, SZ 89 NE

Date Notified (Under 1949 Act): 1980 Date of Last Revision: –

Date Notified (Under 1981 Act): 1988 Date of Last Revision: –

Other Information:
This site will be listed in 'A Geological Conservation Review'.

Reasons for Notification:
This site comprises a long stretch of foreshore of great geological interest and an extensive area of vegetated shingle, a habitat type which is rare in Britain. At the western end is a small area of old sand dune with an interesting flora including a specially protected species listed on Schedule 8 of the Wildlife and Countryside Act 1981.

Biological Interest
The shingle strip which runs along the beach at Bognor develops into an extensive shingle beach west of SZ 915982. In the shelter of the main bank shingle plant communities have developed, typically with yellow horned poppy *Glaucium flavum*, sea beet *Beta vulgaris*, and the uncommon sea kale *Crambe maritima*. Small grassy patches occur infrequently, with false oat-grass *Arrhenatherum elatius* and red fescue *Festuca rubra*.

The small outlying area of sand dune at The Green is all that remains of a once much more extensive dune system. The grassland, scrub and small marsh support a number of interesting plants and invertebrates including the long-winged conehead grasshopper *Conocephalus discolor* and the nationally endangered childing pink *Petrorhagia nanteulii.*

Geological Interest
The foreshore here is one of the few places where the whole thickness of the London Clay can be studied in sequence, although favourable tides occur infrequently and some exposures remain constantly under water. Most of the rocks are clays or sands but there are two sequences of more resistant rocks: calcareous sandstones which form the main Bognor Reef and glauconitic sandstones which comprise the less substantial Barn Rocks to the west. The fossil flora and fauna of these beds is outstanding.

The site is a key site for plant fossils from the London Clay (divisions B_1 and B_2) and is of great importance to the study of Tertiary floras. It is the only locality in the Hampshire Basin to yield abundant London Clay plants and the only site known to have yielded plants from the B_2 division of this formation. The site has yielded examples of some one hundred and thirty species (representing seventy families), including numerous type specimens. Dominant families include the Vitaceae, Menispermaceae and Burseraceae. The genera *Bognoria* and *Aldwichia* are found only here, as are some thirty species. An outstanding palaeobotanical site of great importance to studies of Tertiary floras.

The eastern foreshore is a valuable site which has yielded a diverse Lower Eocene avifauna, including a significant number of small species which are only rarely preserved. Seven

species (representing seven orders) have been recorded from the site. For five species this is the type locality. Three orders, the Charadriiformes, Columbiformes and Apodiformes, are unique to Great Britain at this time.

Finally the most important site in the world for pyritised fossil insects (especially beetles) is on the foreshore at Aldwick. This mode of fossilisation preserves insects uncrushed and they can be extracted simply by sieving. The insects are allochthonous, being derived from the land and associated with a marine fauna (of Lower Eocene age) after death. One species of beetle belongs to a genus, *Pactopus*, now confined to western North America, and otherwise unknown in a fossil state. Other beetles include representatives of modern tropical genera, as well as the earliest known members of the families Eucnemidae and Anobiidae.