SH/06/912

Date: 20th July 2007
Our ref: TR01-2 ConPlan
Your ref: PAG/SH/06/TEMP/0027

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NATURAL ENGLAND

South East Region
Coldharbour Farm
Wye
Ashford
TN25 5DB

T 01233 812525
F 01233 812520

Miss Angela Watts
Planning Applications Group
Kent County Council
First Floor
Invicta House
County Hall
Maidstone
Kent ME14 1XX

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PLANNING
APPLICATIONS UNIT

Dear Angela,

Dungeness Site of Special Scientific Interest (SSSI)
Dungeness Special Area of Conservation (SAC)
Dungeness to Pett Level Special Protection Area (SPA) and proposed Ramsar site

Town and Country Planning Act 1990

Application No	**SH/06/TEMP/0027**
Applicant	**The Environment Agency**
Proposal	**Extraction of shingle for recycling in order to maintain sea defences**
Location	**Dungeness Shingle Borrow Pit, Dungeness**

Following our telephone conversation on 26th June 2007 I am now writing to provide our final response on the above application.

Our letters of 31st August 2006 and more recently 24th May 2007 have set out in detail our concerns with the application. Please make reference top these alongwith the main points of concern in this letter as a way of summary.

1. Legislation
This application is within the Dungeness Special Area of Conservation (SAC), Dungeness Site of Special Scientific Interest (SSSI),and lies close to the Dungeness to Pett Level Special Protection Area (SPA) and proposed Ramsar site . This means that determination of the proposal should be undertaken with regard to the requirements of the Habitats Regulations[1], in particular Regulations 48 and 49.

[1] *The Conservation (Natural Habitats, &c.) Regulations 1994*

Regulation 48(1) of the Habitats Regulations requires that a competent authority undertakes an Appropriate Assessment of the implications for the conservation objectives for any plan or project which *"(a) is likely to have a significant effect on a European site in Great Britain (either alone or in combination with other plans or projects), and (b) is not directly connected with or necessary to the management of the site*". At this point I can confirm that Natural England advises that the proposal will not be likely to have a significant effect on the Dungeness to Pett Level SPA or on the proposed Ramsar site and will not require any further consideration under the Habitats Regulations with regards to this proposal. However, it will have a likely significant effect on the SAC.

In addition to the protection afforded European sites, you will be aware that, where SSSIs are involved, under Section 28 of the *Wildlife and Countryside Act 1981* (as amended) notice to Natural England is required before a owner or occupier or public body carrying out (S28H), or authorising others to carry out (S28I), any operation likely to damage any of the features by reason of which the site is of special scientific interest.

As from the 18 April 2007 the Board of Natural England confirmed the notification of the Dungeness, Romney Marsh and Rye Bay SSSI. This has been accompanied by a revision of the qualifying features for the SSSI. I would draw your attention when considering this application, to the active coastal geomorphological processes; these are more explicitly identified as qualifying features.

2. Dungeness and its importance

Dungeness is the most important shingle site in the UK and almost certainly the most important in Europe. It is one of the largest expanses of shingle in the world. It has a number of unique features of international conservation importance for its geomorphology, plant and invertebrate communities, amphibians and birdlife. This is reflected through its conservation designations Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR), Special Protection Area (SPA) and Special Area of Conservation (SAC).

The pattern of shingle ridges has built up over 5,000 years, vital in piecing together the information on climatic change. The unique habitats that have established at Dungeness have evolved over this long period of time and display a unique succession from the youngest shingle ridges forming on the eastern shoreline to the long established and previously undisturbed ridges found to the south-west. Along the southern coast of Lydd Ranges the storm beach and adjacent ancient shingle beaches creates valuable and rare coastal habitats such as saline lagoons.

3. Dungeness SAC

The current joint application submitted by the Environment Agency (EA) and British Energy (BE) is to extract 67,000 cubic metres of shingle per

year for an 11 year period until 2018 within Dungeness SAC. The EA use the shingle for sea defences at Jury's Gap on the southern shore and the Power station use the shingle to build up the shingle bund in front of the two power stations.

Dungeness SAC is selected for the following Annex I habitat features and Dungeness is considered to hold outstanding examples of these habitats in a European context.

- Annual Vegetation of Drift Lines (AVDL)
- Perennial Vegetation of Stony Banks (PVSB)

and the Annex II species

- Great crested newt

The potential impacts of the proposal are

- Direct impact on Annual Vegetation of Drift Lines (AVDL)
- Direct and indirect impact on Perennial Vegetation of Stony Banks (PVSB)_
- Reduced shingle accretion on the eastern shore. This has the effect of reducing the area of accreting shingle and therefore shingle habitat which displays the successional stage between AVDL and PVSB on newly created shingle ridges
- The 'in combination' impacts with other operations notably the reprofiling over the next 8 years of the beach ridge on the Lydd Ranges frontage and the beach works along the frontage at Rye harbour which the EA have recently discussed with Natural England .

Under Regulation 48, as Competent Authority, the Council is required to undertake an Appropriate Assessment of the implications for the SAC in view of the site's conservation objectives. Enclosed are nature conservation objectives drafted by Natural England in November 2000 for the SAC.

The issue of 'In combination' effects is relevant to this application. I have enclosed a copy of the Habitat Regulation Guidance Note (HRGN) 4 *Alone or in combination* for guidance on this matter which helps to explain how these should be considered. The plans or projects that are of relevance to this application is the placing and reprofiling of shingle along the Lydd Ranges frontage that lies to the west of the Borrow Pit site on the southern shoreline. In addition the Environment Agency has recently approached Natural England with proposals on the coast for beach management within the Dungeness SAC at Rye Harbour which may need consideration as 'in combination'.

HRGN 4 Point 2.3 states –

> The Regulations limit the scope of the *in combination* test to "other plans or projects". These should include:
> · approved but as yet uncompleted plans or projects;

· permitted ongoing activities such as discharge consents or abstraction licences, and
· plans and projects for which an application has been made and which are currently under consideration but not yet approved by competent authorities.

Any consideration of the effects of the plan or project currently on the table, in combination with other plans or projects, may involve consideration of its effects in combination with any of the above notwithstanding that they may have previously been considered not likely to have a significant effect, either alone or in combination.

The placing and reprofiling of shingle along the Lydd Ranges frontage is currently under consideration with Shepway DC and Rother DC as competent authority. I have set out more detail on this plan/project in Appx 1.

The applicants have enclosed with their application a report (Study to Inform Appropriate Assessment SIAA) to assist Kent County Council, as Competent Authority. We have supplied detailed comment on the report in our letters dated 31st August 2006 and 24th May 2007. Our comments on the report's conclusions are as follows,

Natural England **concurs** with the direct impacts on the AVDL and PVSB as stated in the conclusion of the SIAA.

Natural England **concurs** with the approximation of area that will not accrete on the eastern shore over the lifetime of the planning application as a result of slowing of accretion on the eastern shoreline. The 1ha/year reduction in potential gain on the eastern shore is probably a reasonable reflection of the 1991-2001 trends, although these may not be linear.

Natural England **concurs** that offshore losses do occur and the figure of 10,000m³/year lost offshore is probably the most reliable figure for the last decade.

In our letter dated 31st Auguat 2006 a simple, pragmatic checklist for assessing likely effect on integrity was provided and this is attached again in Appx 2. These are based on Habitats Directive guidance derived from European Commission documents.

I can confirm that Natural England's **is unable to conclude that the proposals will not adversely affect the integrity of the Dungeness Special Area of Conservation (SAC)**

4. Shingle Recharge

With current understanding of the coastal geomorphology there is agreement within the Dungeness Shoreline Management (DSM)Group that if shingle recharge from another source other than the Borrow Pit, was placed at Broomhill, this would result in a reduction of the impact of the slowing of accretion on the eastern shore. This arises because in using a

source other than the Borrow Pit , less material would be extracted from the Borrow Pit. The average rate of longshore drift and therefore the average volume of material moving around the Ness would remain unchanged. The material not removed from the Borrow Pit is then available for accretion of the eastern shore. Therefore more shingle accretes on the eastern shore which reduces the impact of the slowing of accretion.

The issue of shingle recharge has been raised a number of times in our discussions with the applicants and we have explored the opportunities available to Environment Agency and British Energy to address the adverse impact of the operations at the Borrow Pit through the use of shingle recharge. Unfortunately despite willingness on all sides to meet and discuss we have not been able to reach a solution.

Natural England would **strongly suggest** however that there does appear to be a realistic possibility of reducing or even removing the impact of the Borrow Pit extraction proposals in the form of shingle recharge and Natural England would be keen to see this continue to be explored through the process of the planning application.

5. Alternative sources of shingle

Under the terms of the Habitats Regulations the competent authority must be satisfied that there are no alternative solutions before deciding that the project may proceed for imperative reasons of overriding public interest.

A useful reference which sets out guidance for the assessment of alternative solutions can be found in the European Commission document *Assessment of plans and projects significantly affecting Natura 2000 sites* - Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.

Within section 2.6 it states

> *to fulfil the requirements of the habitats directive,* ***it is for the competent authority to determine whether alternative solutions exist or not****; and this assessment should take place once the appropriate assessment stage has concluded that adverse effects are likely.*
> *Competent authorities will at that stage consider a range of solutions. These may include those alternative solutions already considered by the proponent of a project or plan, but will also include other alternative solutions that may be suggested by other stakeholders. It must be recognised, therefore, that authorities may determine that further alternative solutions exist even where the proponent of a project or plan has demonstrated that a range of alternative solutions had been examined at the design stage. In reporting the assessment of alternative solutions, it will be important to record all alternative solutions considered as well as their relative impacts on a Natura 2000 site.*

Alternative sources of shingle have been presented by each applicant in the two original Statement of Case presented in the planning application.

More recently the applicants have presented in a letter dated 22nd February 2007 the recent investigations that the Environment Agency has undertaken with a local quarry source. This alternative source was rejected in the original application and Natural England would suggest that this potential alternative merits serious consideration. Are there other local quarries that need to be taken into account?

We are also aware that in the western Solent New Forest District Council was able to identify, and secure permission to extract, a source of shingle from close inshore in order to enable large scale beach recharge at Hurst Spit. While this alternative might not be feasible now, it is a realistic possibility during the life time of the application.

To assist Kent County Council as compentent authority Natural England suggest that the following questions would help as part of the assessment of alternative solutions to provide a thorough, robust examination of the alternatives.

- Have all possible alternative sources of shingle been rigorously explored?
- Are the presentations of the alternative sources realistic in terms of costs and practicalities?
- Has there been any examination by the applicants in terms of their joint need? Are there opportunities to make a joint approach for alternative sources? Other similar operations in the area eg other shingle requirements on other stretches of coastline in the area could also be included. This would be particularly relevant to the Environment Agency, in the context of its shingle recharge requirements in the Region.

The use of alternative sources of shingle has been argued against by both applicants on the following grounds

- That there are serious cost implications in providing shingle recharge
- That the applicants believe this will lead to disproportionate social and economic consequences

Given the difficulty in delivering compensation there may be a point where the cost of recycling 67,000m^3 and providing compensatory habitat compared with the cost of sourcing shingle from elsewhere and providing less compensatiory habitat would be comparable. As a very minimum the latter approach in terms of reducing the impact on the SAC is preferable.

In the Environment Agency's letter dated 7th June 2007 they take issue with our comments on the costings as presented in our letter dated 24th May 2007. The point that we were making was that the costings presented

for the proposed shingle extraction plus compensation package needed to be read with caution. The compensation package that has been presented to date in our view is inadequate and would therefore require additional compensatory habitat or an alternative compensatory habitat package and would therefore need to be reflected in the costs.

The costings were being presented as a way to compare the proposal against the alternatives that the applicants were presenting and therefore Natural England felt it was important to highlight that the compensation package was not, in our view, adequate. If, as the Environment Agency suggest, alternative sites have been located then Natural England are very willing to advise and be involved in discussion with regard to these new proposals.

6. Compensatory Habitat

The compensatory habitat must be designed to fulfil the same contribution to structure and function as the areas lost or damaged, and most stages require a substrate of deep shingle. An exceptional and unique part of the SAC interest at Dungeness is the vegetational succession on shingle. It is now clear that this succession has been damaged by shingle recycling operations over the last 40 years (this may well have led to the loss of 40ha or more accretion on the western part of the site over the last 40 years). The aim should therefore be to prevent further damage by restoring the succession where the scheme would result in either direct loss or suppression of a habitat, or further loss where the development of the ridge system is prevented as a result of reduced accretion and the early stage habitat types cannot develop.

Natural England set out its concerns with the Rye Harbour Farm compensatory habitat package in a letter to the Environment Agency dated 7 July 2006 and in our letter dated 24th May 2007. We would welcome further discussion on the recent findings following an extensive land search conducted by Halcrow within the general area of the Dungeness SAC to identify further locations for compensatory habitat. We have not heard formally from the applicant since last year on the issue of compensation.

As such, based on the information received to date, our concerns with the compensatory package as set out in our letter dated 7th July 2006 still stand.

7. Conclusions

1. The potential impacts on the Dungeness SAC

    - Direct impact on Annual Vegetation of Drift Lines (AVDL)
    - Direct and indirect impact on Perennial Vegetation of Stony Banks (PVSB)
    - Reduced shingle accretion on the eastern shore. This has the effect of reducing the area of accreting shingle and therefore

shingle habitat which displays the successional stage between AVDL and PVSB on newly created shingle ridges
- The 'in combination' impacts with other operations notably the reprofiling over the next 8 years of the beach ridge on the Lydd Ranges frontage

2. Natural England confirms that it is unable to conclude that the proposals will not adversely affect the integrity of the Dungeness Special Area of Conservation (SAC) and on this basis Natural England **objects to the proposal.**

3. It is acknowledged that there are significant cost implications in the use of other sources of shingle. However Natural England would suggest that there does appear to be a realistic possibility of reducing or even removing the impact of the Borrow Pit extraction proposals in the form of shingle recharge. The Barksore Marshes case, which was dealt with by Kent County Council, considered the altenatives case. It may provide some useful guidance as the Inquiry Inspector concluded that an alternative which in this case was costing three times as much was not unreasonable if it avoided damaging the international site. In light of the importance of the Dungeness SAC it may also be the case that the higher costs of the alternatives with regard to this proposal at the Borrow Pit are similarly not considered unreasonable if it avoids damaging the SAC. Natural England would be keen to see this explored more fully, particularly if the provision of compensatory habitat was shown to be of comparable cost to the alternatives.

4. The compensation proposed thus far by the applicants, has far from satisfied NE officers, as this does not adequately and effectively compensate (in terms of ensuring the coherence of the Natura 2000 network) for the losses and damage cause by the proposal.

Please do not hesitate to contact me for further assistance or to discuss any matters arising from this letter. I would be happy to arrange a meeting if you feel that this would be helpful.

Yours sincerely.

Jo Dear

Jo Dear
Conservation Officer
Kent Area Team
Direct Dial 01233 811216
Email jo.dear@english-nature.org.uk

cc

ENGLISH NATURE

Kent Team
The Countryside Management Centre
Coldharbour Farm
Wye, Ashford
Kent
TN25 5DB
Tel: +44 (0)1233 812525
Fax: +44 (0)1233 812520
Email:_donnah@english-nature.org.uk

SAC: Dungeness
SPA: Dungeness to Pett Level
Component SSSI: Dungeness .

Conservation objectives for the European interest on the SSSI

The conservation objectives for the European interests on the SSSI are:

subject to natural change, to maintain*, in favourable condition, the:

- Annual vegetation of drift lines
- Perennial vegetation of stony banks

to maintain*, in favourable condition, the habitats for the population of:

- Great crested newt (*Triturus cristatus*)

to maintain*, in favourable condition, the habitats for the populations of Annex 1 species + of European importance, with particular reference to:

- standing water
    - shingle
    - marshy grassland
    - arable

    + Bewick's Swan, common tern, Mediterranean Gull

to maintain*, in favourable condition, the habitats for the populations of migratory bird species + of European importance, with particular reference to:

- Standing water
    - marshy grassland

    + Shoveler

* maintenance implies restoration if the feature is not currently in favourable condition.
The conservation objectives for the Dungeness Special Area of Conservation are, in accordance with para C 10 of PPG 9, the reasons for which the SAC was designated.

The conservation objectives for Dungeness to Pett Level Special Protection Area are, in accordance with para C10 of PPG 9, the reasons for which the SPA was classified.

The SAC includes land within: Dungeness SSSI and Rye Harbour SSSI

The SPA includes land within: Camber Sands and Rye Saltings SSSI, Dungeness SSSI, Pett Level SSSI and Rye Harbour SSSI.

Favourable Condition Table for Dungeness SSSI

The Favourable Condition Table will be used by English Nature and other relevant authorities to determine if a site is in favourable condition. Favourable condition is achieved when the targets given below are met.

The favourable condition table should inform the scope and nature of any 'appropriate assessment' under the Habitats Regulations, but an appropriate assessment will also require consideration of issues specific to the individual plan or project. The favourable condition table does not by itself provide a comprehensive basis on which to assess plans and projects as required under Regulations 20-21, 24, 48-50 and 54 - 85. The scope and content of an appropriate assessment will depend upon the location, size and significance of the proposed project. English Nature will advise on a case by case basis.

Following an appropriate assessment, competent authorities are required to ascertain the effect on the integrity of the site. The integrity of the site is defined in para C10 of PPG9 as the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified. The determination of favourable condition is separate from the judgement of effect upon integrity. For example, there may be a time-lag between a plan or project being initiated and a consequent adverse effect upon integrity becoming manifest in the condition assessment. In such cases, a plan or project may have an adverse effect upon integrity even though the site remains in favourable condition.

Annual counts for qualifying bird species will be used by English Nature, in the context of five year peak means, together with available information on UK population and distribution trends, to assess whether the SPA is continuing to make an appropriate contribution to the Favourable Conservation Status of the species across Europe.

Operational feature	Criteria feature	Attribute	Measure	Target	Comment
Vegetated shingle	Annual vegetation of drift lines	Extent	Area of annual vegetation of drift lines and the geomorphological structures that support this feature Length and width (m), of annual vegetation of drift lines, and percentage cover of vegetation, measured once per reporting cycle in late summer (July - September). Sample sites along the full stretch of coastline to be identified to cover approx 10% of the known extent of habitat. The area and % cover of vegetation should be mapped initially to provide a baseline, with monitoring occurring at intervals all around the coast.	No decrease in linear extent , width of community, and % cover of vegetation from baseline (yet to be established). Extent must take account of natural variation of this habitat as a result of dynamic coastal processes(storm events etc.). Indicative target-10% of vegetation maintained seasonally over the structure that could support it.	This attribute is dependent on there being sufficient shingle available to maintain the form of the shingle bank. Judgements in changes to extent/area will have taken particular care to distinguish changes as a result of natural functions vs. anthropogenic actions because of the highly variable nature of this habitat. In years following heavy storms the seeds for this community may be washed some distance inland, with much less vegetation found near the coast.
		Mobility	The linear extent and area of substrate suitable for colonisation by annual vegetation of drift lines not immediately constrained by introduced structures or landforms such as sea walls or groynes. Measured once per reporting cycle. Baseline study needs to	No increase in linear extent or area , constrained by introduced structures or landforms or operations. These areas to be identified whilst undertaking baseline monitoring.	An important aspect of this habitat is its ability to modify its distribution in response to natural dynamic coastal processes. Introduction of physical constraints would reduce the extent of this community and affect the overall structure of the drift line communities.

			identify introduced structures which limit the distribution of this plant.		
		Coastal processes	Number and location of coastal defence operations within the sediment cell disrupting the sediment supply to and within the site. Measured once per reporting cycle. Information on coastal processes should be available from SMPs	No disruption to the natural patterns of erosion and accretion within the site, or increase in the number of coastal defence operations disrupting the natural supply of sediment to the site.	Sediment budget within the site is influenced by sediment supply into the site. The south coast of Dungeness is eroding as the supply of shingle resulting from glacial erosion is exhausted. There would consequently be natural erosion from the south coast to the east coast, balancing the habitat available for the feature within the site. Coast defence work within the site can reduce the cover of this vegetation, as can operations which restrict the flow of shingle to the site, and are regarded as damaging. Operations which add shingle to the system for coast defence purposes, but which do not damage the vegetation feature are acceptable as the vegetation retains its current distribution, despite the disruption of natural coastal processes.
		Substrate	Presence of shingle and fine matrix in combination with surface or buried organic material	Maintain substrate through natural processes with sufficiently low levels of human-induced disturbance to allow drift line vegetation to complete its vegetation cycle. As an indicative target, drift line organic materials should be present along at least 10% of area surveyed, with artificial (non-organic) debris not restricting or suppressing vegetation establishment and growth. Targets appropriate to Dungeness will need to be established when the vegetation is subject to a baseline survey.	The combination of inorganic and organic substrate is an important precursor to development of annual vegetation of drift lines. Substrate (i.e. sediment) supply should be regulated by natural coastal processes. Drift line organic materials (tidal-derived seaweed, driftwood etc.) on the surface of and in combination with the shingle matrix are important sources of nutrients and anchoring points essential for vegetation development and survival and may play a part in maintaining a seed bank.
		Characteristic species of annual vegetation of drift lines	Presence of characteristic species of the annual vegetation of drift lines, particularly *Atriplex glabriuscula*. Assessments will need to be made during late summer (July - September)	Maintain the presence and broad distribution of stands of *Atriplex glabriuscula* dominated community and other local variants of drift line vegetation across the feature, allowing for natural variation. As these communities can be very variable, a local baseline will need to be established, but should not be lower than 10% of the area that could be colonised.	This community is found in a narrow strip at the extreme high water mark. Changes in the frequency and abundance of *Atriplex* should be expected to occur seasonally as a result of natural disturbance by storm events, but the community is sensitive to disturbance by human activities. Some of these communities do not fit well into the NVC classification but this is currently under review. Such communities are dominated by *Beta*

					and *Atriplex spp.* and show affinities to MC 6 *Atriplex hastata-beta vulgaris ssp maritima* Sea-bird cliff community. primarily annuals but perennials may occur in areas with greater stability.

Operational feature	Criteria feature	Attributes	Measure	Target	Comment
Vegetated shingle	Perennial vegetation of stony banks	Extent	Area (ha) of perennial vegetation of stony banks, and the area of geomorphological structures supporting them, measured once per reporting cycle	No decrease in extent or area from previous studies. Vegetation allowed to recover naturally in areas where it has been lost due to human-induced disturbance. Baseline to be established largely from Rob Fuller's vegetation survey (ITE, 1989), but will need ground checking in some areas and up-dating. Extent must take account of natural variation of this habitat as a result of dynamic coastal processes	This attribute is dependent on there being adequate area to support the whole range of vegetation communities which have been previously recorded on the site. Extent of the site will influence vegetation succession.
		Mobility	Percentage of linear extent and area of the active zone of shingle feature suitable for colonisation by perennial vegetation of stony banks immediately constrained by introduced structures or landforms, measured once per reporting cycle.	No increase in linear extent or area constrained by introduced structures or landforms	An important aspect of this habitat in the early stages of the succession near the coast, is its ability to modify its distribution in response to natural dynamic coastal processes. Introduction of physical constraints would reduce the extent of this community and affect the vegetation pattern. On more established stable parts of shingle structures, mobility is a less significant attribute.
		Coastal processes	Number and location of coastal defence operations within the sediment cell disrupting the sediment supply to and within the site. Measured once per reporting cycle. Information on coastal processes should be available form SMPs	No disruption to the natural patterns of erosion and accretion within the site, or increase in the number of coastal defence operations disrupting the natural supply of sediment to the site.	Sediment budget within the site is influenced by sediment supply into the site. The south coast of Dungeness is eroding as the supply of shingle resulting from glacial erosion is exhausted. There would consequently be natural erosion from the south coast to the east coast, balancing the habitat available for the feature within the site. Coast defence work within the site can reduce the cover of this vegetation, as can operations which restrict the flow of shingle to the site, and are regarded as damaging. Operations which add shingle to the system for coast defence purposes, but which do not damage the vegetation feature

					are acceptable as the vegetation retains its current distribution, despite the disruption of natural coastal processes.
		Substrate	Presence of shingle/sand in combination with surface or buried organic material	Maintain proportion of shingle/sand/organic matter, regulated entirely by natural processes.	The combination of inorganic and organic substrate, derived from natural processes, is an important factor in allowing the establishment and development of this type of vegetation. The presence of a fine matrix influences the water balance of the surface layers
		Lack of disturbance	Proportion of substrate not showing evidence of human disturbance. This can include evidence of path network proliferation, especially from access points/car parks/throughway; resulting in detached clumps of vegetation and broken surface layers; disturbance of bare shingle; loss of sorting and relief of the ridge system.	Maintain substrate with sufficiently low levels of human-induced disturbance to allow perennial vegetation to establish and undergo succession.	Much of the site has suffered disturbance in the past, sometimes excessively. If this has stopped, recovery of vegetation may be possible, but may be very slow, depending on the amount of fine matrix, the availability of a suitable seed source and possibly "soil" chemistry . If disturbance is continuous, recovery is unlikely to occur. Infrequent moderate disturbance may, in certain circumstances, initiate successional phases and can lead to the development of modified grassland communities
		Vegetation composition	Presence of vegetation communities characteristic of perennial vegetation of stony banks. Vegetation communities are likely to consist of one or more of the following (characterising species in brackets), starting from the east coast, and ending on the eroding south coast: Pioneer (*Crambe maritima, Rumex crispus*); Arrhenatherum grassland	Maintain range o f specialist vegetation and its zonation preciously recorded on the site, taking account of natural variation. One or more of the characterising species for each range of communities should be at least frequent if the communities have been previously recorded on the site.	The range of vegetation is based on the surveys by Fuller, 1989, and Ferry Lodge and Waters (1990). The range of NVC-equivalent communities for this type of vegetation covers heaths, grasslands, (acid and mesotrophic), sand dunes, scrub, maritime cliff and saltmarsh and mires. Some communities are present as part of a succession following previous disturbance Disturbed shingle supports some species of interest, but should not be created deliberately at the expense of pristine communities. Despite this it is of some conservation interest and existing communities should be maintained. The wetland communities have changed considerably in the past 40 years, becoming

			(*Arrhenatherum elatius, Silene maritima, Galium mollugo, Hypochaeris radicata and Pilosella officinarum*). Broom scrub (*Cytisus scoparius, Teucrium scorodonia).* Lichen "heath" with less than 30% grasses (*Dicranum scoparium, Cladonia* spp. *Rumex acetosella, Teucrium scorodonia Jasiona montana, Silene nudicalis*); Maritime lichen "heath" (*Festuca rubra, Armeria maritima, Cladonia rangiformis, Lotus corniculatus, Geranium robertianum*). Scrub *Prunus spinosa,* Ulex europaeus, *Ilex aquifolium, Sambuccus nigra* and *Rubus fruticosus agg.* (Epiphytic lichens may be prominent especially on the *Prunus*). Wetland. A variety of communities ranging from open fen to carr, with species such as *Carex disticha, Sphagnum sp. Galium palustre, Potentilla palustris, Lythrum salicaria, Iris pseudacorus, Thelypteris palustris Phragmites australis, Typha angustifolia and Salix*		largely dominated by scrub. This habitat supports species of interest and as an ideal management should aim to maintain a variety of wetland communities.

			cinerea. Disturbed shingle communities. Plantago lanceolata, Echium vulgare, Glaucium flavum, Sedum acre, Senecio jacobaea, Festuca rubra and Poa compressa		
		Vegetation negative indicators	Presence of negative indicator species including non-native species, invasive species indicative of changes in nutrient status and species not characteristic of typical communities.	No further increase in species not typically associated with the communities that define the feature. A baseline survey is required to determine the distribution and abundance of non-native species.	Changes in the extent and cover of invasive species usually indicate a change in conditions on a site, often as a result of anthropogenic activities which may promote rapid expansion or increase in cover. These are often initiated by changes in management. Such species include those identified as negative indicators for grasslands such as Urtica dioica, together with non-native species and scrub/trees.
		Vegetation patterning	Presence of vegetation patterns related to geomorphological structure (ridges and lows and size of shingle).	No reduction in extent of vegetation cover exhibiting relationship to geomorphological structure, taking account of natural variation.	Vegetation patterns can be related to the physical characteristics of the substrate. Patterns of ridges and lows in particular reflect the variations in particle size which in turn affect water-holding capacity.
		Hydrological conditions	Impact of changes to hydrological conditions on extent and composition of both the wetland vegetation communities where they have been previously recorded, and the dry shingle.	Maintain hydrological conditions that will sustain specialist freshwater wetland vegetation communities, subject to natural variation.	The water table can be adversely affected by water abstraction, whilst disturbance of the surface layers can affect the water-holding capacity of the surface layers (see substrate attribute). If wetland communities, where present, exhibit signs of reduction in freshwater supply, (long-term replacement of wetland species by scrub or dry grassland species or species of brackish conditions), or patches of deep rooted vegetation on shingle such as *Prunus spinosa* die that cannot be attributed to natural variation, further detailed studies of hydrological conditions may be needed.

Operational feature	Criteria feature	Attribute	Measure	Target	Comments
Ponds/ditches	Great crested newt	Presence of Great crested newt	Continued presence of Great crested newt	Record of species, in each sub-population, every year where adequate monitoring of ponds is possible.	Record by observation at any life stage. Note though that newt meta-populations sometimes show natural patterns of extinction and recolonisation within different ponds in a metapopulation.
		Presence of ponds and ditches.	Ponds and ditches (permanent and temporary) to remain in suitable numbers to sustain the size and range of population.	Maintain, the range of the newts across the site, and the number of breeding ponds (bearing in mind that newt distribution in a meta-population may vary naturally over a period of time). Those ponds identified prior to March 2000 are shown on Map 1, with further information held on a Map Info Workspace held at English Nature's Wye Office. In 2000 there were three distinct metapopulations, as shown below the the numbers of breeding ponds reported at each (excluding records of adult newts in fish ponds). Lydd Ranges - 5 ponds. RSPB reserve - 12 ponds. Lydd airport - 9 ponds In addition there is a breeding population in a ditch on the ARC land.	Photographs are needed of all known ponds as part of a baseline study. Not all of the ponds on the Dungeness SAC have been surveyed to date, and new ponds are likely to be made. It is possible therefore that the known range of this species on the site will expand.
		Pollution	Absence of pollution	Slight pollution may be acceptable. Minor algal or duckweed blooms are not necessarily a problem. Pollution is unacceptable if it affects the viablity of the pond as a great crested newt site.	If significant pollution is found the source needs to be found and addressed. If pollution problem will not clear of itself within one season advice should be sought on cleaning the pond. Note 50% of great crested newt eggs are inviable due to an entirely natural phenomenon.
		Extent (depth and	Ponds should be of sufficient size and	Premature desiccation (ie before mid-July) is acceptable for all ponds in two out of three years	

		persistence).	depth to avoid desiccation over the course of the breeding/ tadpole development season (February to mid-August) for at least one in every three years. Ponds to be found throughout the site.	provided highly successful recruitment in third year. Three consecutive years of desiccation of all the ponds in a meta-population, with no recruitment, should be considered unfavourable. Deeper ponds are acceptable where there is no chance of colonisation by fish.	
		Shading	Extent of shading	Ponds should be kept in a predominantly open state, with cover by emergent fen vegetation or trees restricted to less than 25%. On grazing marsh ditches stands of emergent vegetation should be allowed to choke 50-75% of the ditches, with small sections along the ditch cleared to open water. (The stands of emergent vegetation offer suitable terrestrial habitat during the summer, and partial clearance is less likely to encourage colonisation by sticklebacks).	
		Fish	Absence of fish in majority of ponds.	Unfavorable if any fish are found to be present, including sticklebacks, in more than 10% of potential breeding ponds in each of the three metapopulations. Ditches supporting newts should be kept isolated from the main ditch network to avoid fish colonisation.	Action is less important if pond is likely to desiccate or if, for any reason, good levels of recruitment are found (tadpole counts).
		Extent	Total area of site as notified Area of suitable newt habitat to mapped during baseline study.	No loss of area or fragmentation of site. No barriers to newt movement between ponds	See map 2.
		Habitat structure and quality	Structural variety of vegetation or habitat features within site	Extensive, structurally varied habitats in close proximity (or continuous with) breeding pools offering shelter from desiccation, high summer temperatures, and low winter temperatures. Features that offer these conditions include woodland, scrub,	Type of habitat varies between sites. Record condition of site at time of selection and define components of structural variety. Absence or only small areas of such habitat may be

		Water depth	Extensive shallow water (feeding), measured periodically (frequency to be determined).	Water depths should not deviate significantly.	Bewick's swan require a water depth of <1m Shoveler require a water depth of <30cm.
Shingle	Populations of European importance	Landscape	Open terrain relatively free of obstructions (feeding, anti-predator, roosting), measured periodically (frequency to be determined).	No significant reduction in view-lines in feeding and roosting areas in relation to reference level.	Nesting seabirds require unrestricted viewlines for early detection of predators. Methodology for assessing target to be determined. Reference level to be determined
		Vegetation characteristics	Range of vegetation heights and presence of bare ground for colonial nesting , measured periodically (frequency to be determined).	Sward height and density throughout areas used for nesting should not deviate significantly from an established baseline.	Mediterranean gulls require sward heights of between 10-30 cm in nesting areas. Common terns require short vegetation of <cm and bare ground, with areas of longer vegetation providing cover, subject to natural change.
Standing water	Populations of European importance	Food availability	Presence and abundance of freshwater fish , measured periodically (frequency to be determined).	No significant reduction in presence and abundance of food species in relation to reference level, subject to natural change.	Coarse fish, crustacea and annelids are important for common tern.
All habitats	Populations of European importance	Food availability	Presence and abundance of fish, ground-surface and aquatic invertebrates, measured periodically (frequency to be determined).	Presence and abundance of prey species should not deviate significantly from a reference level, subject to natural change.	Gobies, earthworm, snails, beetles, lepidoptera, grasshoppers, spiders and dipteran flies are important for feeding Mediterranean gull.

				rough grassland and fen, and may also be offered by a variety of substrates including coarse shingle, rubble, wood, and other debris.	unfavourable.

Operational feature	Criteria feature	Attribute	Measure	Target	Comments
Standing water, Shingle, Marshy Grassland Arable	Populations of European importance and annex 1 and migratory populations of European importance: Bewick's swan, common tern, Mediterranean gull and shoveler.	Extent of habitat	Area (ha), measured periodically (frequency to be determined).	No significant decrease from reference level, subject to natural change.	All seabirds and waterfowl. Reference level to be determined
		Disturbance in roosting and feeding areas	Human disturbance absent or at a low level , measured periodically (frequency to be determined).	No significant displacement of birds attributable to human disturbance from reference level.	All seabirds and waterfowl. Methodology for assessing target to be determined. Reference level to be determined
		Landscape	Open terrain relatively free of obstructions (feeding, anti-predator, roosting),	No significant reduction in view-lines in feeding and roosting areas.	Bewick's Swan prefer unrestricted views over >500 metres to allow early detection of predators when feeding and roosting.

			measured periodically (frequency to be determined).		Methodology for assessing target to be determined. Reference level to be determined
Standing Water	Populations of European importance and annex 1 and migratory populations of European importance: Bewick's swan, common tern, Mediterranean gull and shoveler.	Food availability	Presence and abundance of aquatic plants , measured periodically (frequency to be determined).	No significant reduction in presence and abundance of food species from reference level.	Potamogeton, Ceratophyllum, Zannichellia, Myriopyhllum, Chara spp. for Bewick's swan *Scirpus, Eleocharis, Carex, Potamogeton and Glyceria for* shoveler.
			Abundance of aquatic invertebrates , measured periodically (frequency to be determined).	No significant reduction in presence and abundance of food species from reference level.	Prey species floating or just below the water surface during the winter season, including Hydrobia, caddisfly, beetles, crustaceans, diptera are important for shoveler. Methodology for assessing target to be determined. Reference level to be determined
		Water area	Large open areas of water (feeding, roosting), measured periodically (frequency to be determined).	No significant reduction in water area, from a reference level.	One or more freshwaters >10ha Bewick's swan use these water bodies in greatest numbers when floods at Cheyne Court are dry.

ENGLISH NATURE

Habitats regulations guidance note

NATURA 2000

HRGN

Issued by Wyn Jones, Strategic Development and Reporting Team, English Nature. Tel: 01733 455148

Alone or in combination

1. Introduction

1.1 The Conservation (Natural Habitats, & c.) Regulations 1994 (the Regulations) require competent authorities to make an appropriate assessment of any plan or project which is likely to have a significant effect on a European site, **either alone or in combination with other plans or projects** and is not directly connected with or necessary to the management of the site (for nature conservation). This test appears in regulations 20, 24, 48 and 60 and is therefore implicit in many other regulations. It is derived from the obligations of Article 6(3) of the EC Habitats Directive (the Directive).

1.2 Neither the Directive nor the Regulations provide a definition of alone or in combination. The phrase has yet to be considered by the courts.

1.3 The European Commission produced guidance on the provisions of Article 6 in April 2000, which together with experience gained from casework, has been used to inform the interpretations contained in this guidance note.

2. Application

2.1 The purpose of the tests in the Directive and Regulations is to ensure that the integrity of a European site is not adversely affected by a plan or project. It is therefore logical that when applying the test of likely significance *either alone or in combination with other plans or projects*, "alone or in combination" should be treated as "alone and/or in combination". Where the plan or project;

- alone is likely to have a significant effect;
- alone is not likely to have a significant effect but in combination with other plans or projects is likely to have a significant effect;
- an appropriate assessment will be required.

2.2 Although the reference to *alone or in combination* is restricted to the likely significance test, having ascertained the need for an appropriate assessment it would be illogical and inconsistent with the purposes of the tests in the Directive and the Regulations, not to consider the appropriate assessment in the same context. The appropriate assessment of the implications of the plan or project for the site should be made alone or in combination with other plans or projects.

2.3 The Regulations limit the scope of the *in combination* test to "other plans or projects". These should include:

- approved but as yet uncompleted plans or projects;
- permitted ongoing activities such as discharge consents or abstraction licences, and
- plans and projects for which an application has been made and which are currently under consideration but not yet approved by competent authorities.

Any consideration of the effects of the plan or project currently on the table, in combination with other plans or projects, may involve consideration of its effects in combination with any of the above notwithstanding that they may have previously been considered not likely to have a significant effect, either alone or in combination.

Note that in some circumstances, it may also be appropriate to include plans and projects not yet submitted to a competent authority for consideration, but for which sufficient detail exists on which to make judgements on their impact on the European site. For example, an Environmental Impact Assessment may be being carried out and consulted on by a developer prior to an application being submitted.

2.4 Whilst the "in combination" test is restricted to other plans or projects, in considering whether a plan or project either alone or in combination is likely to have a significant effect it is necessary to consider the influences on the site which have affected and are continuing to affect the condition of each European interest feature on the site. These influences constitute what is often referred to as the "*cumulative effect*". The current condition of the interest features may be a reflection of the cumulative effect on them. However, any assessment of their condition must be separated from the cumulative effect on them as there may be a time-lag between the influences exerting themselves and any effect on the site becoming manifest. It should be noted that a plan or project may be likely to have a significant effect on a site or result in the integrity of the site being adversely affected even though the interest features on it remain in favourable condition.

2.5 Where judgements are being made for the purposes of a review of consents under Regulation 50, it may be appropriate to assess the contribution of a consent as a proportion of the total influences on the site for the purposes of prioritising the review of that consent. If the majority of the influences on a site arise from sources other than the consented activity it may not be a priority for review. This approach is not appropriate however for the purpose of assessing the effects of a consent under Regulation 48 or 50. The effects must be assessed either alone or in combination with other plans or projects and not as a proportion of the total influences on the site.

2.6 The term *cumulative effect* is not found in the Directive nor in the Regulations. However, it is commonly used to include all of the plans or projects referred to in 2.3 above together with:

- completed plans or projects
- activities for which no consent was given or required
- natural processes (by natural mechanisms and at a natural rate)

2.7 Whilst the Directive and the Regulations require a precautionary approach, it is necessary to base any judgements on the impact of plans or projects on information which reasonably indicates likely cause and effect.

2.8 Where a feature for which the site has been selected as being of European importance is already in unfavourable condition or critical thresholds are being exceeded (or is subject to cumulative effects which will lead to either of these being the case), any additional plan or project which, either alone or in combination, adds to these

levels is likely to have a significant effect on the European Site.

2.9 Equally there may be the possibility that plans or projects may be considered so trivial or inconsequential as not to be significant either alone or in combination with other plans or projects. (Please see HRGN3 on "likely significant effect"). An example of this would be a discharge consent for a few cubic metres of treated sewage many miles upstream of a European site.

3. Implementation

3.1 Competent authorities in considering a plan or project *alone or in combination* require a good overview of plans and projects likely to affect the site, including:

- those requiring approval or consent from other competent authorities;
- similar and different types of plans and projects, even where their effects may be different, for example some resulting in disturbance and some in loss of habitat;
- those that alone may be insignificant;
- the state of completion of the plans and projects.

3.2 When dealing with the in combination effects of plans or projects, the following should be considerations which will influence any assessment:

(a) each case must be assessed on its merits, either alone or in combination, looking at the cumulative effect on the site at the time the case is being considered;

(b) completed plans or projects, insofar as they form part of the cumulative effect, will be considered in that they have affected and may continue to affect the condition of the interest features on the site. Commission guidance states that "it is important that some account is still taken of such plans and projects in the assessment, if they have a continuing effect on the site and point to a pattern of continuing loss of integrity";

(c) the cumulative effect on the site should be assessed relative to the conservation objective for the site and the favourable condition table which is attached to the conservation objective for the European interest features on the site;

(d) a point will be reached, if adequate information exists to make a judgement, where in view of the conservation objective for the site and the cumulative effect on it, it will be clear that any additional effect is likely to be significant;

(e) depending on the cumulative effect on the site, the conservation objective and the nature of the application (including scale, duration, method and timing) it may be possible to conclude that there is not likely to be a significant effect;

(f) in permitting a plan or project, a competent authority is not setting a precedent creating a presumption in favour of future unproposed developments. Each case must be treated on its merits at the time it arises for consideration;

(g) the strategic approach recommended at paragraph 3.6 should assist in dealing with applications affecting these sites.

3.3 Where detailed information is not available at this stage, a judgement must be reached on likely significant effect on the information that is available. The precautionary approach would be that where there is uncertainty the conclusion should determine a likely significant effect, unless available information clearly indicates otherwise, and consider the detailed analysis as part of the appropriate assessment.

3.4 In view of their role as a statutory consultees, the country agencies are well placed to form an overview of plans and projects being dealt with by several competent authorities and may be able to provide guidance on how best to progress a cooperative approach between competent authorities in determining a case. At some sites the number of competent authorities involved are so numerous that the establishment of a comprehensive communication network is necessary. In the case of European marine sites the management group may provide a means by which an overview may be maintained and information communicated.

3.5 It would be sensible for competent authorities to discuss proposed plans and projects with the country agencies at the earliest opportunity so that measures may be introduced to avoid the potential for any significant effects or any potential adverse effect on the integrity of the site.

3.6 At a number of large and complex sites where many competent authorities are involved, a strategic and pro-active approach is desirable. The benefit of establishing such an approach is that it can provide a focus for communications and a framework within which to identify the category of plans and projects with the potential to affect the site and their location. The product of this approach should be a clear working document for the reference of competent authorities in exercising their functions.

3.7 At the Humber SPA a number of competent authorities were proposing to authorise or undertake plans or projects adjacent to the site which, if undertaken simultaneously, would have resulted in considerable disturbance to the species of European importance and an adverse effect on the integrity of the site. The competent authorities together agreed to a timetabling of the plans and projects and were able to reduce the disturbance so as to avoid the adverse effect.

3.8 Finally, Regulation 52 does not require a competent authority to assess any implications of a plan or project which would be more appropriately assessed by another. The Secretary of State may issue guidance to competent authorities for the purposes of regulations 48 to 51, as to the circumstances in which an authority may or should adopt the reasoning or conclusions of another competent authority in determining likely significant effect or adverse effect where a plan or project

- is undertaken by more than one competent authority, or
- requires the consent, permission or other authorisation of more than one competent authority, or
- is undertaken by one or more competent authority and requires the consent, permission or other authorisation of one or more other competent authorities.

If in doubt seek advice from the relevant country agency specialist.

The text of this guidance note was developed by English Nature for the Government's inter-departmental steering group on the Habitats Directive and approved by it. It is the fourth in a series of guidelines which has been developed for staff in the country agencies but may be useful for other competent authorities, and developers and promoters of projects to help their understanding of the key principles used in the decision making process. Further guidance notes are planned in the series will cover appropriate assessments; adverse effect on integrity and the consideration of permitted developments affecting European sites.

Annex 1
Application for permission for the placing and reprofiling of shingle along the Lydd Ranges frontage

The Environment Agency have applied to place and reprofile shingle along the Lydd Ranges frontage. This application is currently under consideration with Shepway DC and Rother DC as competent authority.

1) For the eight years of the application, a Beach Management Plan would provide a mechanism that would ensure that the works are managed and directed in a way that would avoid any adverse effect on the SAC and bring about recovery to the designated site and features over the period of the consent. The Environment Agency and Natural England, together with the planning authorities, would manage and review the operations through the Beach Management Plan on an annual basis. Annual reviews would identify whether targets, including safeguards such as thresholds that would not be exceeded, were being met

2) The written notification of Shepway District Council's approval under Regulation 62 should be subject to adherence to the Beach Management Plan. Activities that departed from that plan would therefore not be in accordance with the Council's written approval and would not satisfy the condition imposed on the exercise of permitted development rights by Regulation 60. Planning permission would need to be sought for any such development.

3) The proposed Beach Management would be viewed as a working document to guide and direct the works on an annual basis. Each year's review would build on the information gained from the previous year's work and fine-tune the operations to ensure that the management of the foreshore progresses towards restoring favourable condition. The BMP is also a robust structure to introduce new management practices such as those proposed in the Folkestone to Cliff End Coastal Strategy Review. It will aid a smooth transition from the current management into the new approach.

4) **Once the detail has been agreed between all parties the Beach Management Plan and the Annual Reviews will act as the assurance that provides the certainty that the operations would not adversely affect the integrity of the site.** The BMP would be proposed to the local Planning authorities with the request that written approval under Regulation 62 is subject to adherence to

the Beach Management Plan and carrying out the Annual Reviews. If at any point that condition is not met, the Environment Agency would no longer be carrying out development in accordance with permitted development rights and would need to seek planning permission. Circumstances in which the condition is not met could arise at any point through the period of the 9 year application. In taking this Beach Management Plan and Annual Review approach, it is important that all parties are aware that there is a risk of not meeting the Environment Agency's defence standards should the mitigation not be delivered. This would become apparent through the Annual Review. Planning permission would therefore need to be sought from the Local Authorities.

Annex 2
(Extract from Annex 1 accompanying English Nature's letter dated 31st August 2006.)

English Nature's Conclusions on the study to inform the Apropriate Assessment

To assist a simple, pragmatic checklist for assessing likely effect on integrity is provided below. These are based on Habitats Directive guidance derived from European Commission documents.

Checklist of criteria for habitats	English Nature's Comment
That the area of annex I habitats (or composite features) will not be reduced?	**No, there will be a reduction in the area of Annex 1 habitats AVDL and PVSB** **AVDL** The impact of shingle extraction on the AVDL feature extends over a distance of 0.6 km (3% of the SAC frontage). And 'in combination' with the shingle reprofiling on the Lydd Ranges frontage over the next eight years an additional 1.4km (7% of the SAC frontage) **PVSB** The impact of shingle extraction on this feature extends over an area of 2.4 ha Indirect impact on the successional stages of PVSB due to the slowing of accretion on the eastern shoreline. Over the 11 years of the planning application it is estimated that the area of young ridge accretion will reduce by 9.8ha
That there will be no changes to the composition of the habitats for which the site was designated (e.g. reduction in species structure, abundance or diversity that comprises the habitat over time)?	**No, there will be changes to the composition of the habitats for which the site was designated** Direct impact on the AVDL due to extraction of shingle along the foreshore of the Borrow Pit site. Together with 'in combination' effects with the reprofiling this will bring about fragmentation and disruption to the natural function of the habitat Direct impacts on the PVSB within the Borrow Pit site. Indirect impact on PVSB through the slowing of accretion and a reduction of the succesional stages of the habitat from AVDL through to early stage PVSB

That there will be no interruption or degradation of the physical, chemical or biological processes that support habitats and species for which the site was designated or classified?	**No, there will be interruption or degradation of the physical, chemical or biological processes that support habitats and species for which the site was designated or classified** The natural evolution of the ness through the movement and deposition of the shingle by coastal processes is vital for the creation of new habitat that will support the two Annex I habitat features. The proposal interferes with the coastal processes and the natural deposition of the shingle. The integrity of the site is closely related to the coherence of the site's ecological structure and function, across its whole area that enables it to sustain the habitats for which the site is classified.

There are further site-specific factors which are key that need to be considered when forming judgements on integrity in individual cases. These are listed below.
Please make reference to the full copy of the Annex 1 accompanying our letter dated 31st August 2006 and this will relate to the references to where these factors have been discussed in more detail. An Appropriate Assessment would be expected to take account of these issues which are based on Habitats Directive guidance derived from European Commission documents.

- Scale of impact – see comments in 6.3 Extent of Impacts above
- Long term effects and sustainability – see comments in 6.4(c)
- Duration of impact and recovery/reversibility - comments in 6.4(c) above and in 2.5 in covering letter.
- Dynamic systems - see comments in Geomorphology(5) above
- Off-site impacts – see comments in 6.3 (b)
- Uncertainty in cause and effect relationships and a precautionary approach – see comments in letter 2.6 Indirect Impacts 4th paragraph.