6 Assessment of Vinci Ringway Capital Scheme Proposals: South Wight Maritime SAC

6.1 Review of effects on the South Wight Maritime SAC

Undercliff Drive Schemes B, C and D

6.1.1 The Screening Statement identified possible new ground water drainage as a potential source of impact on the SAC. Vinci Ringway does not propose any new drainage for these three schemes and it can be concluded that there would be no effect on the SAC or any Annex I habitats for which the SAC has been selected.

Military Road, Brook Chine

6.1.2 The Brook Chine scheme proposed by Vinci Ringway involves the installation of a temporary modular 16m span pile-supported bridge to be pre-installed in the path of the regressing landslide. Coastal processes would be permitted by the new structure, to allow erosion of the landslide and regression of the coastline, and leaving the road suspended seaward of the inner cliff edge on the pile supported bridge. The drainage scheme installed by the Isle of Wight Council that takes ground water away from the landslide to the newly developed Churchill Chine will be maintained.

6.1.3 Conservation of the ecological structure and function of the vegetated sea cliff habitat present at this site is dependent upon maintaining natural coastal processes including the interaction between freshwater flows, coastal slippage and marine erosion. In addition, many of the typical species of the vegetated sea cliff habitat including the Glanville fritillary butterfly are dependent upon warm micro-climates. The influence of shade and changes in the micro-climate of the coastal slopes is therefore important.

6.1.4 Although the vegetated sea cliff SAC habitat will migrate inland, the boundary of the SAC is fixed at the existing road edge. However, impacts of the road scheme may be assessed where they occur either within the SAC or on habitats and species populations from the SAC where they occur outside of the site boundary. Guidance on this matter is provided within Managing Natura 2000 sites (European Commission, 2000), which states:

"It is important that Member States, both in their legislation and in their practice, allow for the Article 6(3) safeguards being applied to development pressures which are external to a Natura 2000 site but which are likely to have significant effects within it." EC, 2000, p.34

Military Road - Shippards Chine

6.1.5 The Shippards Chine scheme proposed by Vinci Ringway initially involves a monitor and maintain approach. Once cliff regression has proceeded to such an extent that an engineering intervention becomes necessary, the solution would be the same as for Brook Chine.

6.1.6 A temporary modular 16m span pile-supported bridge would be pre-installed in the path of the regressing landslide. Coastal processes would be permitted by the new structure, to allow erosion of the landslide and regression of the coastline, and leaving the road suspended seaward of the inner cliff edge on the pile supported bridge.

6.1.7 However, Shippards Chine is currently heavily constrained by the construction of the rock gabion outfall onto the beach by the Compton Bay car park. This structure prevents normal evolution of the chine feature and is intended to reduce the rate of cliff face regression. Although this will prolong the life of the cliff top vegetated sea cliff habitats between the road and cliff edge, perpetuation of the road on its current alignment prevents further migration of the vegetated sea cliff landwards, resulting in 'coastal squeeze' of the habitat. The feature is currently having an adverse effect on the integrity of the SAC. The Habitats Directive requires that action is taken to maintain and where appropriate restore favourable conservation status to Natura 2000 sites (SAC and SPA).

6.2 Assessment of Impacts on South Wight Maritime SAC against Conservation Objectives 4-6: Undercliff Drive – Areas B – D

6.2.1 There are no likely adverse effects from these three road schemes on the Conservation Objectives for the South Wight Maritime SAC.

6.3 Assessment of Impacts on South Wight Maritime SAC against Conservation Objectives: Military Road, Brook Chine

6.3.1 The proposed new bridge structure is designed to allow movement of the vegetated sea cliff habitat landwards of the existing SAC boundary by suspending the road on a pile supported bridge above the habitat.

6.3.2 Drainage works at Brook Chine, which have been designed to prevent the creation of a new chine on the line of the old river channel, will be maintained. It is assumed that this drainage scheme is not currently having an adverse effect on the SAC.

Conservation Objective 4: The geographical distribution of the habitats and their overall area within the sites should be maintained or increased.

6.3.2.1 The extent of habitat will be maintained as a result of the Vinci Ringway proposals for Brook Chine as it allows the vegetated sea cliff vegetation to migrate landwards in the context of cliff retreat.

Conservation Objective 5: The mix of species (their species structure) and the ecological inter-relationships between these and other environmental and management factors (ecological function) which are needed for the long-term maintenance of the habitats should be likely to continue to exist.

6.3.2.2 The ecological function of this section of coast is already modified by drainage that may be preventing the development of a new chine feature associated with the former river channel. Groundwater is currently being diverted to Churchill Chine which may be eroding faster than would naturally occur due to increased flows through this chine. The proposed bridge structure will allow for continued coastal erosion and permit the vegetated sea cliff habitat to maintain its structure and function. However, this is regarded as a temporary structure and hence restoration of a naturally functioning coastline will need to be agreed once the stability of the structure has been undermined. This will include removal of the piles and other road infrastructure and restoration of the drainage system, with possible short term impacts to the cliff vegetation and Glanville fritillary from access for machinery.

Conservation Objective 6: The conservation status of the habitats' typical species are maintained in terms of their population size, range and habitat extent.

6.3.2.3 Providing that the vegetated sea cliff habitat is able to retreat around the new bridge structure, and therefore that the chine develops in the way anticipated by engineering designs, there should be no adverse effects on the typical species of this habitat. However, there is some concern that if a new chine should develop under the new bridge this will become heavily shaded by the road preventing the development of the warm micro-climate upon which many of the typical vegetated sea cliff species are associated, including the Glanville fritillary and many burrowing bees and wasps. However, chines are often naturally shaded and the area of shade under the bridge will be relatively small (approximately 240m^2). On balance this is not considered to be an adverse effect on the integrity of the SAC.

6.4 Assessment of Impacts on South Wight Maritime SAC against Conservation Objectives: Military Road, Shippards Chine

6.4.1 The proposed new bridge structure is designed to allow movement of the vegetated sea cliff habitat landwards of the existing SAC boundary by suspending the road on a pile supported bridge above the habitat.

6.4.2 The rock gabion outfall at Shippards Chine, which has been designed to slow the evolution of the chine feature, would be retained. However, the outfall is having an adverse effect on the integrity of the SAC at this location.

Conservation Objective 4: The geographical distribution of the habitats and their overall area within the sites should be maintained or increased.

6.4.3 The extent of habitat will be maintained as a result of the Vinci Ringway proposals for Shippards Chine as it allows the vegetated sea cliff vegetation to migrate landwards in the context of cliff retreat.

Conservation Objective 5: The mix of species (their species structure) and the ecological inter-relationships between these and other environmental and management factors (ecological function) which are needed for the long-term maintenance of the habitats should be likely to continue to exist.

6.4.4 The ecological function of this section of coast is already modified by the rock gabion outfall that is preventing chine development. The proposed bridge structure will allow for continued coastal erosion and permit the vegetated sea cliff habitat to maintain its structure and function.

6.4.5 However, the bridge is regarded as a temporary structure and hence restoration of a naturally functioning coastline will need to be agreed once the stability of the structure has been undermined. This will include removal of the piles and other road infrastructure, restoration of the drainage system and removal of the gabion tower, with possible short term impacts to the cliff vegetation and Glanville fritillary from access for machinery.

Conservation Objective 6: The conservation status of the habitats' typical species are maintained in terms of their population size, range and habitat extent.

6.4.6 Providing that the vegetated sea cliff habitat is able to retreat around the new bridge structure, and therefore that the chine develops in the way anticipated by engineering designs, there should be no adverse effects on the typical species of this habitat. However, there is some concern that if a new chine should develop under the new bridge this will become heavily shaded by the road preventing the development of the warm micro-climate upon which many of the typical vegetated sea cliff species are associated, including the Glanville fritillary and many burrowing bees and wasps. However, chines are often naturally shaded and the area of shade under the bridge will be relatively small (approximately 240m^2). On balance this is not considered to be an adverse effect on the integrity of the SAC.

6.5 Overall Assessment against SAC Conservation Objectives

6.5.1 It is concluded that none of the capital schemes proposed by Vinci Ringway for Undercliff Drive will have an adverse effect on the integrity of the South Wight Maritime SAC.

6.5.2 It can be concluded that capital scheme proposals for Brook Chine and Shippards Chine will not have an adverse effect on the integrity of the South Wight Maritime SAC. However, currently installed drainage modifications at Brook and Shippards Chines are likely to be adversely affecting ecological integrity, and opportunities should be sought to restore the SAC to favourable condition once the temporary bridge structures are removed.