Habitats Regulations Assessment (HRA) Screening Statement: Test of Likely Significant Effects

Shoreham Cement Works Area Action Plan (AAP)
Regulation 18 - Issues and Options

February 2022

1. Introduction

1.1 The purpose of this screening statement is to identify whether the Shoreham Cement Works Area Action Plan (AAP), either alone or in combination with other plans and projects, could result in likely significant effects upon internationally important wildlife sites. It will determine whether the next stage in the process, further Habitats Regulations Assessment work in the form of an 'Appropriate Assessment', is required.

1.2 This HRA Screening report supports the Regulation 18 Issues and Options consultation for the Shoreham Cement Works AAP.

1.3 The South Downs National Park Authority (SDNPA) will also be undertaking a Sustainability Appraisal (SA), incorporating Strategic Environmental Assessment (SEA), of the AAP. The findings of this HRA Screening will be incorporated into the SA/SEA.

Habitats Regulations Assessment Screening

1.4 Habitats Regulations Assessment (HRA) refers to the requirement for any plan or project to assess the potential implications for International Sites. There are many sites of international nature conservation importance within, or in proximity to, the National Park. Their influence and potential for impacts upon them are not constrained by the National Park boundaries or those of other Local Planning Authorities outside of the National Park. International Sites have the highest level of protection. These are protected under the Conservation of Habitats and Species Regulations 2017 (as amended) which transposes Global Agreements into UK Law. Sites protected under these regulations are referred to in this HRA Screening report as 'International Sites'.

1.5 The UK left the EU on 31 January 2020 under the terms set out in the European Union (Withdrawal Agreement) Act 2020 ("the Withdrawal Act") and a transition period that ended in December 2020. The most recent amendments to the Habitats Regulations – the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 – make it clear that the need for HRA continues notwithstanding UK exit from the EU. Consequently, there is a statutory obligation in law to give due regard to the International Sites over and above Development Plans and any supplementary planning documents.

1.6 The first stage of the HRA process involves an assessment or screening of whether the plan is likely to have a significant effect on one or more International Sites, alone or in combination with other projects or plans. The objective is to 'screen out' those plans and projects (or site allocations/policies) that can, without detailed appraisal, be said to be unlikely to result in significant adverse effects upon International Sites.

1.7 If screening determines that there is the potential for likely significant effects, further HRA work would be required in the form of an Appropriate Assessment, which considers the effects in more detail to confirm whether there would be adverse effects on the integrity of the International Site.

Screening methodology

1.8 The methodology for the likely significant effects screening in this report identifies whether there are potential impact pathways arising from the AAP on International Sites, and if so, whether the AAP alone or in combination with other relevant plans or projects, is likely to result in significant effects.

1.9 Screening for likely significant effects does not take into account any potential mitigation measures. Case law has established that any mitigation must be considered at the 'Appropriate Assessment' stage.

1.10 The information used has been gathered from the HRA for the adopted South Downs Local Plan (SDLP) plus subsequent information providing updates as appropriate. The SDLP allocates the Shoreham Cement Works site for development (Policy SD56) and establishes a set of key principles and policy requirements. This strategic level policy was considered through the HRA that accompanies the SDLP and this screening report should be read in conjunction with it (see Appendix A).

The Shoreham Cement Works Area Action Plan

1.11 Shoreham Cement Works is a 44ha site including a semi-derelict cement works, inactive chalk quarry, temporary inert recycling facility and a mix of temporary business uses. The site is located about 5km north of Shoreham and 2km south of Upper Beeding in West Sussex.

1.12 The Shoreham Cement Works site is allocated in the SDLP (Policy SD56) as an area of significant opportunity for a mixed use development which delivers a substantially enhanced landscape and uses that are compatible with the purposes of the National Park. To help to achieve this the SDNPA has started work on an Area Action Plan (AAP) for the site, with the overall aims of:

- enhancing the visual impact of the site from both the nearby and distant public viewpoints;
- conserving, enhancing and providing opportunities for understanding the biodiversity, geodiversity, historic significance and cultural heritage of the site;
- ensuring the delivery of Ecosystems Services; and
- ensuring that the design of any development is of the highest quality and appropriate to its setting within a National Park.

1.13 The Regulation 18 consultation for the Shoreham Cement Works AAP is an Issues & Options consultation. This document includes a vision for the site, overarching design principles, and presents evidence, key issues and examines a series of cross cutting themes including landscape, nature recovery, climate change and types of development such as housing, tourism and business. This Issues & Options document does not contain any policies. These will feature in the Preferred Option version of the AAP.

2. Screening: Likely Significant Effects

2.1 The HRA Report for the South Downs Local Plan (SDLP) identified the Castle Hill Special Area of Conservation (SAC) and the Arun Valley SAC, Special Protection Area (SPA) and Ramsar sites as the nearest International Sites to the Shoreham Cement Works site and relevant for consideration. Appendix B sets out the reasons for designation, sensitivities and conservation objectives for these sites.

Castle Hill SAC

2.2 Castle Hill SAC is 16.3km away from the Shoreham Cement Works site. Due to the distances involved and nature of the designated site and its sensitives, there are no realistic impact pathways present for Castle Hill SAC.

Arun Valley SAC/SPA/Ramsar – Water Neutrality

2.3 The Arun Valley SAC, SPA and Ramsar is 16.8km away from the Shoreham Cement Works site. The HRA for the SDLP concluded there would be no adverse effects on integrity for the Arun Valley International Sites. However, since this time, the issue of water neutrality has emerged in the Sussex North Water Resource (Supply) Zone (WRZ). This area is served by groundwater abstraction near Pulborough. The hydrology (water quantity and its movement) of the area is essential to maintaining the habitat upon which the designation features/species rely on. The Shoreham Cement Works site is located just within the Sussex North WRZ. Given the size of the development and in particular its location in the Sussex North WRZ compared to the size of the WRZ a likely significant effect on the SAC, SPA and Ramsar site can be dismissed alone. However, since the WRZ covers such a large area encompassing planned development across a range of local authorities the potential for effects 'in combination' need consideration.

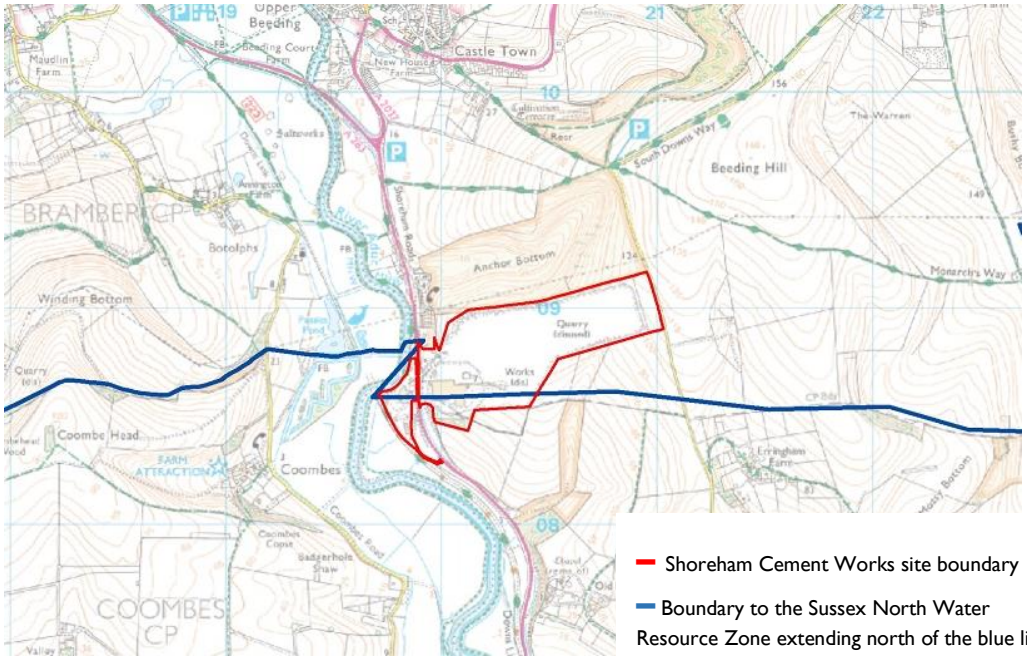

Figure 1 - Shoreham Cement Works and the Sussex North Water Resource Zone

2.4 Natural England have raised concerns about abstraction at this location and the effect this may be having on the hydrology and subsequent impact on the Arun Valley designations. Site improvement plans for the Arun Valley sites identify inappropriate water levels as threats to the sites. The Supplementary Advice on the Conservation Objectives for the Arun Valley advises that for SAC features dependent on wetland habitats supported by surface and/or ground water, maintaining the quantity of water support will be critical, especially at certain times of year during key stages of their cycle. Inadequate quantities of water can adversely affect the availability and suitability of breeding, rearing and feeding habitats. Ultimately, this might lead to the loss of the structure and functioning of wetland habitats. The Supplementary Advice provides targets including specifically for water level/flow for the SAC:

- Maintain water quantity to a standard which provides the necessary conditions to support the feature;
- Characteristic water levels to be maintained. Generally, in wet ditches summer water depth at least 0.5m in minor ditches and 1m in major drains. 90% of channel length should reach this target; and
- For *Anisus vorticulus*: 30% of ditches should not exceed 1m in depth.

2.5 Natural England have been, and are continuing, undertaking detailed assessments of the Arun Valley sites. Natural England have set out an overview of their evidence so far in the Frequently Asked Questions (FAQs) document issued in December 2021[1]. The following is extracted from the FAQs regarding their findings on condition and hydrological links:

'Evidence shows that wildlife within the Arun Valley site is declining. Some of the designated site has been shown to be linked hydrologically to a layer of rocks from which water is currently being abstracted, or in other locations the hydrogeological link cannot be ruled out.

A full Natural England condition assessment survey of ditches, plants, wetlands, invertebrates has now been completed with the final survey undertaken in October 2021. The full condition assessment data analysis will be completed by March 2022. The accompanying report is expected to be published by Autumn 2022, pending the results of the water quality monitoring.

The review to-date has shown (with source of information in brackets):

- *The SAC feature (Anisus vorticulus) has been reduced to a small population around a single ditch (in Oct 2021 survey) in Amberley Wild Brooks having been moderately widespread previously and has gone entirely from south of Pulborough Brooks where it was present, if uncommon, previously. This is a loss of up to three quarters of its former range within the SAC. This former range was a quarter of the species UK population. The SAC is therefore failing its conservation objectives for range and distribution and the species is at risk of going extinct on the site. (various studies including Natural England commissioned October 2021 Survey of Anisus vorticulus - in preparation).*
- *SPA and Ramsar wintering bird features – only teal are meeting their conservation objective population targets (wetland bird survey (WeBS) data BTO).*

[1] Natural England Water Neutrality Frequently Asked Questions for Developers, December 2021 https://www.southdowns.gov.uk/wp-content/uploads/2022/01/Natural-England-Water-Neutrality-FAQs-for-developers-Dec-2021.pdf

- *A peer reviewed paper (Hicks et al 20192) shows statistically significant changes in the vegetation community, including those that form part of the Ramsar and SSSI features, in the north of Amberley Wild Brooks, indicative of slowly drying conditions.*
- *Environment Agency (EA) water quality monitoring is limited – but shows ditch water quality is exceeding nutrient targets for total phosphorus -TP values) National guidance recommends more stringent total phosphorus values for sites with groundwater input and total nitrogen (TN) targets on still waters and ditches with aquatic plant and invertebrate interest. Groundwater that is abstracted is less nutrient rich than surface water on which the site must rely currently and the drying on the site makes the impacts of the high nutrients in the surface water greater by reducing the dilution.*
- *A technical study into habitat management for the SAC snail (as part of back from the brink partnership work) shows water quality, in particular suspended solids, are issues for the SAC snail. These suspended solids are likely to be from the clay in banks when they collapse and/ or from overtopping. The water turbidity is exacerbated by the very shallow or dry ditches in summer on Pulborough Brooks*
- *All the impacts on designated sites appear to be exacerbated by climate change. (Hicks et al 2019)*

The information on ecological decline provided in the December 2019 letter [to Southern Water] *is summarised above. The key sections from the December 2019 letter which set out the hydrological links on the site are provided below:*

- *Based on detailed reviews of superficial and underlying geology, new and old boreholes logs and new Southern Water and Natural England ground water modelling data, the area that shows the significant community change in the Hicks et al paper (2019) on Amberley Wild Brooks is consistent with the area that is connected to the aquifer and therefore, theoretically, the abstraction. Though this drying may also be climatic, NE does not have sufficient evidence to rule out any combined impact of the climatic drying and the abstraction.*
- *The hydrogeology of the designated sites is complex. The underpinning geology varies spatially and is overlain by a range of drift deposits that vary in their permeability across the three designated sites. It is uncertain what the significance of groundwater supply from the abstracted aquifer to the designated sites would be without the abstraction. The British Geological Survey (BGS) maps and national peat mapping show there are significant areas of peat on the northern area of Amberley Wild Brooks, on the south eastern area of Pulborough Brooks and on the eastern margin of the north of Pulborough Brooks. These areas of peat are also reflected by the Amberley citation and by local knowledge. These areas of peat are coincident with areas of the sites underlain by the aquifer and potentially permeable superficial deposits that potentially provide a pathway for groundwater discharge to the edges of the designated sites. The presence of peat suggests considerably wetter conditions than currently and could be indicative of significant groundwater connectivity in the past.*
- *The potential for hydrological connectivity between the peat areas at the wetland surface and the aquifer beneath cannot be ruled out. Combined with the evidence of vegetation community changes indicative of drying, the uncertainty of the impact of the wellfield proposals and existing abstraction remains for Amberley Wild Brooks.*
- *Results from Southern Water's numerical groundwater modelling in 2019 predicted the without abstraction height of water (naturalised head) is predicted to be 4-6 metres above ground level whilst abstraction generates a water level (head) that hovers around ground level at Pulborough Brooks, In the absence of the abstraction, the model predicts the site would be much wetter than it is now, with significant groundwater input.'*

2.6 In September 2021, Natural England issued a position statement (see Appendix 3) to the LPAs within the Sussex North WRZ area. The position statement advises: '*As it cannot be concluded that the existing abstraction within Sussex North Water Supply Zone is not having an impact on the Arun Valley site, we advise that developments within this zone must not add to this impact… and one way of achieving this is to demonstrate water neutrality*'.

2.7 The Natural England Position Statement applies to development that requires a public water supply from Southern Water's Sussex North WRZ. It applies to all new development that could increase water consumption, and this could include new homes, commercial, tourism, and new educational uses where they are supplied by public water supply.

2.8 The Shoreham Cement Works AAP is being prepared to facilitate a mixed-use scheme. The Issues & Options document explores use of the site for homes, commercial, education and tourism development, which are in scope of the Natural England Position Statement. Therefore, Likely Significant Effects of the Shoreham Cement Works AAP on the Arun Valley SAC/SPA/Ramsar regarding hydrology cannot be excluded and the AAP is screened in for Appropriate Assessment. At this stage in AAP preparation there is insufficient information about the policies of the AAP to undertake an Appropriate Assessment. Therefore, Appropriate Assessment will be undertaken at Preferred Options stage.

Air Quality

2.9 The HRA for the SDLP identified a potential impact pathway for several International Sites of impacts on air quality by traffic arising from development.

2.10 The South Downs Local Plan Chapter 6 sets out an assessment of the potential adverse effects on each relevant International Site from degradation in air quality. Detailed transport and air quality modelling were undertaken for the Local Plan, which included the allocation of Strategic Site Shoreham Cement Works under policy SD56. The modelling assessed the road links within 200m of the relevant International Sites and was inherently 'in combination' by taking into account growth in surrounding local authorities. The assessment concludes that:

'due to the relatively modest amount of growth planned within the South Downs National Park and its dispersed nature the Local Plan does not meaningfully retard[2] the predicted improvement in air quality adjacent to an y of these links. Therefore, no adverse effects on the integrity of any European sites are expected, alone or in combination with other projects and plans. This is the conclusion even without taking into account the air quality and sustainable transport policies within the South Downs Local Plan, which may reduce the projected increase in vehicle flows'.[3]

2.11 There are no material changes in the nature and scope of the site and the range of proposals for the AAP that would lead to an amendment or change to this conclusion. Moreover, Shoreham Cement Works is 16km from the nearest International Sites which is well beyond the zone at which material changes in vehicle flows would be expected due to this

[2] 'retard' meaning – delay or hold back/make something slower (https://dictionary.cambridge.org/dictionary/english/retard))
[3] Para 5.3.43 South Downs National Park Authority Local Plan HRA 2018
https://www.southdowns.gov.uk/wp-content/uploads/2018/04/SDLP-05-Habitats-Regulations-Assement-2018.pdf

development, even in combination. For example, a zone of 10km is typically used to scope in European sites vulnerable to reductions in air quality. This is based on the average UK car journey being approximately 10.6km[4].

3. Conclusion

3.1 Likely significant effects arising from the Shoreham Cement Works on the Arun Valley SAC/SPA/Ramsar regarding hydrology cannot be excluded when considered in combination with other plans and projects within Southern Water's Sussex North Water Resource Zone and therefore the AAP is screened in for Appropriate Assessment.

3.2 At this stage in AAP preparation there is insufficient information about the policies of the AAP to undertake an Appropriate Assessment. Therefore, Appropriate Assessment will be undertaken at Preferred Options stage

[4] GOV.UK (2019). *Average number of trips made and distance travelled*. https://www.gov.uk/government/statistical-data-sets/nts01-average-number-of-trips-made-and-distance-travelled, accessed 10/02/22

Appendix A – Habitats Regulations Assessment for the South Downs Local Plan

Revised SDNP HRA in light of Sweetman II People Over Wind judgement

Appendix B – International Sites Overview

Castle Hill Special Area of Conservation

Reasons for designation

- Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (*important orchid sites)
- Early gentian

Sensitivities, vulnerabilities and pressures

- Management of grazing levels to conserve and enhance plant (and associated animal) species
- Controlled encroachment of scrub
- Leaching and spray-drift of nutrients from surrounding arable land.

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats
- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

Arun Valley Special Area of Conservation

Reasons for designation

- Annex II species Ramshorn snail *Anisis vorticulus*

Sensitivities, vulnerabilities and pressures

- Inappropriate water levels
- Water pollution
- Inappropriate ditch management

Conservation Objectives

Maintain or restore:

- The extent and distribution of the habitats of the qualifying features,
- The structure and function of the habitats of the qualifying features,
- The supporting processes on which the habitats of the qualifying features rely,
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

Arun Valley Special Protection Area

Reasons for designation

Qualifying individual species listed in Annex I of the Wild Birds Directive (Article 4.1)

- A037 *Cygnus columbianus bewickii* Bewick's swan (non-breeding) During the time of site notification, the SPA supported 115 individuals representing at least 1.6% of the wintering population in Great Britain (5 year peak mean 1992/93 - 1996/97).

Qualifying assemblage of species (Article 4.2)

- Waterbird Assemblage: During the non-breeding season the SPA regularly supports an assemblage of waterfowl with the area regularly supporting 27,241 individual waterfowl (5 year peak mean for 1992/93 to 1996/97) including: Shoveler *Anas clypeata*, Teal *Anas crecca*, Wigeon *Anas penelope*, Bewick's Swan *Cygnus columbianus bewickii*.

Sensitivities, vulnerabilities and pressures

- Disturbance
- Management of grassland habitat, ditch management and control of shade-inducing marginal vegetation.
- Loss of supporting habitat
- Management of the hydrology of the area important. For example, the impact of water abstraction, river maintenance, and ensuring that winter flooding can continue as part of the existing management of the site

Conservation Objectives

Maintain or restore:

- The extent and distribution of the habitats of the qualifying features (both within and outside the SPA),
- The structure and function of the habitats of the qualifying features,
- The supporting processes on which the habitats of the qualifying features rely,
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

Arun Valley Ramsar

Qualifying Features

Criterion 2:
The site holds seven wetland invertebrate species listed in the British Red Data Book as threatened. One of these, *Pseudamnicola confusa*, is considered to be endangered. The site also supports four nationally rare and four nationally scarce plant species.

Criterion 3:
In addition to the Red Data Book invertebrate and plant species, the ditches intersecting the site have a particularly diverse and rich flora. All five British duckweed *Lemna* species, all five water-cress *Rorippa* species, and all three British water milfoils (*Myriophyllum* species), all but one of the seven British water dropworts (*Oenanthe* species), and two-thirds of the British pondweeds (*Potamogeton* species) can be found on site.

Criterion 5:
Assemblages of international importance.

- Species with peak counts in winter: 13,774 waterfowl (5 year peak mean 1998/99-2002/03)
- Species / populations identified subsequent to designation for possible future consideration: Northern pintail, *Anas acuta*, NW Europe: 641 individuals, representing an average of 1% of the population (5-year peak mean 1998/99-2002/03)
- Species currently occurring at levels of national importance:
    - Eurasian wigeon, *Anas penelope*, NW Europe 4742 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3)
    - Eurasian teal , *Anas crecca*, NW Europe 2931 individuals, representing an average of 1.5% of the GB population (5 year peak mean 1998/9-2002/3)
    - Northern shoveler, Anas clypeata, NW & C Europe 222 individuals, representing an average of 1.5% of the GB population (5 year peak mean 1998/9- 2002/3)
    - Ruff, *Philomachus pugnax*, Europe/W Africa 27 individuals, representing an average of 3.8% of the GB population (5 year peak mean 1998/9-2002/3).

Appendix C – Natural England Water Neutrality Position Statement, September 2021

Web link Natural England's Position Statement for applications within North Water Supply Zone