South Downs
National Park Authority

Agenda Item 7

Report PC21/22-52

Report to	**Planning Committee**
Date	**12 May 2022**
By	**Director of Planning**
Title of Report	**Shoreham Cement Works Area Action Plan Issues & Options**
Purpose of Report	**Brief Planning Committee on the Shoreham Cement Works Area Action Plan, its Sustainability Appraisal and Habitat Regulations Assessment Screening and recommend a way forward with the Regulation 18 consultation**

Decision

The Committee is recommended to:

1. **Endorse the direction of the draft Issues & Options version of the Shoreham Cement Works Area Action Plan (Appendix 1) subject to any comments made by the Planning Committee being addressed.**
2. **Endorse the direction of the digital engagement subject to any comments made by the Planning Committee being addressed.**
3. **Note the main issues arising from Sustainability Appraisal (Appendix 2) and Habitat Regulation Assessment Screening Statement (Appendix 3).**
4. **Recommend that the Authority approve the draft Issues & Options version of the Area Action Plan for public consultation under Regulation 18 of The Town and Country Planning (Local Planning) (England) Regulations 2012 subject to any minor changes that arise prior to the start of the consultation being agreed by the Director of Planning in consultation with the Chair of the Authority.**

Executive Summary

- This is the draft Issues & Options version of the Area Action Plan (AAP).
- The Member Task & Finish Group have provided a high level steer on the AAP and have scrutinised several versions of it in detail.
- Shoreham Cement Works is an extraordinary site located in the narrowest part of the National Park offering exceptional opportunities for exemplar sustainable mixed use development.
- The vision for the site was established in the Local Plan, which committed the Authority to preparing the AAP.
- The AAP explains the evidence we have gathered on a number of themes including transport and cultural heritage.

- There are 28 questions in the Issues & Options that we are asking everyone to answer.
- There are no policies in this document. Instead, these will appear in our Preferred Option consultation

1. Area Action Plan

1.1 The Member Task & Finish Group was set up in summer 2021 to oversee the timely development of a sound and legally compliant AAP for Shoreham Cement Works that delivers the allocation of an exemplar sustainable development and a substantially enhanced landscape. There was a site visit in July 2021 followed by meetings to provide a high level steer. The Group have commented in detail on the draft AAP and the Chair of the Authority has penned the Foreword.

1.2 The AAP will be the development plan for Shoreham Cement Works. It has been prepared by the SDNPA, which is the local planning authority for the site. The SDNPA does not own the site, which is owned by the Dudman Group of companies. The purpose of the AAP is to guide the development of this exceptional site and help deliver an exemplar mixed use development of regional or indeed national importance. We have sought to engage with the company owner, Mr Dudman, throughout the preparation of this document.

1.3 This is the draft Issues & Options version of the AAP. It introduces this exceptional site drawing a spatial portrait of the site itself and the wider area in which it is set. It re-imagines it with a vision and a set of objectives for its redevelopment. The opportunities and constrains are explained and illustrated and some general design principles outlined. It divides the site into five areas based on its geology, topography, hydrology and built form. The areas are the Riverside, Cement Works, Bowl, Moonscape and Clifflands.

1.4 We commissioned a comprehensive suite of evidence based studies to support the AAP. The main finding of these studies are set out in chapter 5 of the document and they will be published in full when the consultation starts. Whilst gathering the evidence for this AAP we have learnt a lot about this extraordinary site. The Cement Works itself was built by the concrete industry leader and pioneer, Oscar Faber, who also designed the Menin Gate in Ypres and advised Winston Churchill on the construction of the Mulberry Harbours. The cliffs are home to peregrine falcons and there are records of 12 distinct bat species within 2 km of the site.

1.5 A number of potential development scenarios were prepared for the AAP. All the development scenarios are for a mixture of different land uses, which will all vary in viability and impact on the landscape. These scenarios were systematically tested by the consultants preparing our transport and viability studies. The headlines for the four scenarios are as follows:

- Mixed use scheme with employment and 400 new homes
- Mixed use scheme with employment and 240 new homes
- Mixed use leisure led scheme with and 200 new homes
- Mixed use scheme with employment and 84 new homes (dismissed appeal scheme)

1.6 This is an Issues & Options document and so it does not include any policies. Instead it explores a number of cross-cutting themes and highlights a number of issues and tensions raised by the evidence both within the five areas and affecting the site as a whole. For example, the most contaminated part of the site is the Bowl located behind the Cement Works where concrete kiln dust was deposited. The least contaminated area is the Moonscape, but this is subject to rock fall from the Clifflands.

1.7 We ask 28 questions on the document as whole, for example, are there any particular ideas, issues or policies you would like to see in the AAP? We also ask questions on the cross cutting themes, for example, what sort of businesses would you like to see and why?

1.8 We will consider all the answers to the questions and any other evidence we need to gather. We will then prepare our Preferred Option for the redevelopment of Shoreham Cement Works. We will consult on this for another eight weeks and then submit it for independent examination to consider the soundness and legal compliance of the AAP. A Planning Inspector will be appointed to conduct the examination. The intention is to adopt the final AAP in 2023.

2. Sustainability Appraisal and Habitat Regulation Assessment

2.1 A Sustainability Appraisal (SA) of the Issues & Options AAP has been prepared and forms Appendix 2 of this report. The SA includes a number of sustainability objectives that have been used to appraise the issues and options on an iterative basis. These iterations identify how emerging options for the site will help to achieve the relevant social, environmental and economic objectives and will recommend how sustainability could be improved.

2.2 The Issues & Options AAP sets out a number of reasonable alternatives that are appraised through the SA. In order for the AAP to be justified it needs to have an appropriate strategy, taking into account the reasonable alternatives, and based on proportionate evidence. The main findings of the SA are set out in chapter 6 of the Issues & Options document.

2.3 A Habitat Regulation Assessment (HRA) Screening Statement has been prepared and forms Appendix 3 of this report. The objectives of the HRA are to identify any aspects of the AAP that would cause an adverse effect on the integrity of Natura 2000 sites, otherwise known as European sites (Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and, as a matter of Government policy, Ramsar sites), either in isolation or in combination with other plans and projects; and to advise on appropriate policy mechanisms for delivering mitigation where such effects are identified.

2.4 The HRA screening concluded that due to the issue of water neutrality in the Sussex North Water Resource (Supply) Zone an Appropriate Assessment of the AAP is required. This is not required at the Issues & Options stage of plan preparation, but is required at the Preferred Option stage.

2.5 Going forward, the SDNPA are working jointly with other affected local planning authorities on a study and strategy to achieve a strategic solution for development on this matter across the Sussex North Water Resource (Supply) Zone.

3. Digital engagement

3.1 As a local planning authority the Authority strives to be accessible to all and ensure developments and policies are fully informed by the communities we support. As part of the Equality Diversity and Inclusion strategy for the AAP we are seeking a bigger response to the consultation with more end users. We would like to hear the views of local people living both inside and outside the National Park and we particularly want to engage with young people on the AAP through the consultation.

3.2 We think that the best way to do this is through digital engagement. We have commissioned the digital engagement experts PlaceChangers to create a digital consultation platform that can be accessed from any digital device including mobile phones and tablets. We will advertise the consultation on social media and use QR codes for people to scan and access the consultation portal. We commissioned drone footage from the Sussex based aerial and ground imaging company Visual Air so that people will be able to view the whole site on line. Much of the site cannot be viewed from the road as it is hidden by the cement work buildings and public access is obviously not allowed. Data protection issues were

taken into account during the filming and editing of the footage. We will show a trailer video for the consultation at Planning Committee.

3.3 We have worked collaboratively with local community groups on the consultation. We will be holding in person consultation events with Upper Beeding Parish Council and the Shoreham Society in June. We will also hold at least one event on line.

3.4 We do understand that many people in the National Park do not have good internet access and/or do not use the internet. Paper copies of the AAP will be available to view at a number of deposit points including Shoreham and Steyning Libraries. People will be able to respond to the consultation by email or by letters posted to the South Downs Centre

3.5 Our new digital approach to consultation for the AAP is in line with the Government drive towards digital engagement. It will also be a useful experience ahead of future consultations on the Local Plan Review.

4. Next steps

4.1 If Planning Committee endorse direction of the AAP then a report will go to the Full Authority meeting on 19 May to approve the draft AAP for consultation. The consultation will launch shortly afterwards and will last for eight weeks in line with our Statement of Community Involvement.

4.2 We will then consider the responses that we receive and, steered by the Task & Finish Group, we will start work on the Preferred Option.

5. Other implications

Implication	**Yes*/No**
Will further decisions be required by another committee/full authority?	Yes, the NPA decision on 19 May to approve the consultation on the Issues & Options
Does the proposal raise any Resource implications?	Yes, there are human and financial costs to preparing the AAP. These costs will be monitored and any variation to approved budgets will be reported as part of the budget monitoring process.
How does the proposal represent Value for Money?	We will seek to achieve best value in all the work we do on the AAP.
Which PMP Outcomes/ Corporate plan objectives does this deliver against	The AAP will deliver on most of its objectives. The key ones to highlight are: • 1.1 Protect landscape character • 3.1 Join up habitats • 4.1 Conserve heritage • 5.2 Improve accessibility • 9.1 Increase affordable housing • 10.1: Strengthen enterprise • 10.3: Promote sustainable tourism
Links to other projects or partner organisations	Yes, the AAP links to other plans and programmes particularly the Local Plan Review
How does this decision contribute to the Authority's climate change objectives	The AAP gives us the opportunity to formulate ambitious policies to both mitigate and adapt to climate change.

Implication	Yes*/No
Are there any Social Value implications arising from the proposal?	No
Have you taken regard of the South Downs National Park Authority's equality duty as contained within the Equality Act 2010?	An Equality Impact Assessment has been carried out for the AAP. We are keen to engage new audiences in our plan making particularly younger people. We have started to do this through digital engagement.
Are there any Human Rights implications arising from the proposal?	The emerging policies will be considered in light of statute and case law and any interference with an individual's human rights is considered to be proportionate to the aims sought to be realised.
Are there any Crime & Disorder implications arising from the proposal?	It is considered that the proposal does not raise any crime and disorder implications.
Are there any Health & Safety implications arising from the proposal?	None
Are there any Data Protection implications?	Yes, there are data protections implications from the statutory consultations that we will hold on the AAP. We have recently carried out a task to review the personal details we hold for the purposes of updating people on Local Plan matters and that we are compliant with GDPR.
Are there any Sustainability implications based on the 5 principles set out in the SDNPA Sustainability Strategy? 1. Living within environmental limits 2. Ensuring a strong healthy and just society 3. Achieving a sustainable economy 4. Promoting good governance 5. Using sound science responsibly	Yes, there are sustainability implications for the LPR and all the documents named in the LDS. Therefore, a Sustainability Appraisal has been prepared and forms Appendix 2 of this report

6. Risks Associated with the Proposed Decision

Risk	Likelihood	Impact	Mitigation
Radical changes to legislation and national policy on planning	2	3	Keep up to date with Government changes and keep a flexible approach to policy formulation
Fails to meet the tests of soundness and legal compliance at the examination and so cannot proceed to adoption	2	4	Ensure that the AAP is consistent with the NPPF, deliverable and based on robust evidence
Issues arising from the Habitat Regulations particularly water neutrality (Arun Valley)	4	4	We are working closely with the statutory bodies and our neighbouring local authorities on a strategic approach to resolving the issues

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Appendices Works

1. Draft Issues & Options version of the Shoreham Cement Area Action Plan
2. Draft Sustainability Appraisal
3. Habitat Regulation Assessment Screening Statement

SDNPA Consultees: Chief Executive; Director of Countryside Policy and Management; Director of Planning; Chief Finance Officer; Monitoring Officer; Legal Services, Business Service Manager

External Consultees: None

Background Documents: South Downs Local Plan

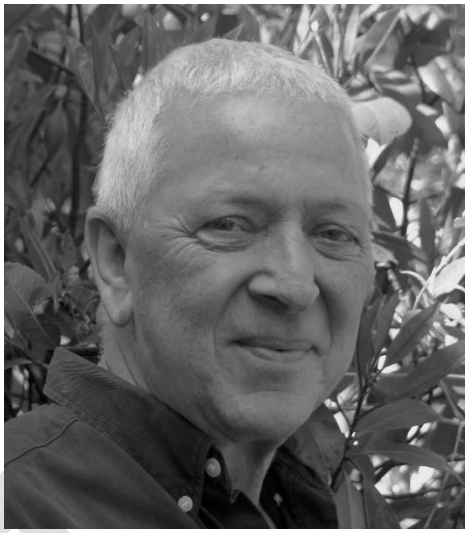
National Planning Policy Framework

South Downs
National Park Authority

Shoreham Cement Works
Area Action Plan
Issues & Options Consultation

May 2022

Foreword



My earliest memory of Shoreham Cement Works was the view from the top deck of a Southdown bus. It was a huge and somewhat mysterious hive of noise and activity producing a greyish white dust that echoed the colour of its utilitarian structures and coated the surrounding countryside.

Now the works buildings are abandoned and broken, their setting has become more tranquil and the surrounding vegetation has been returned to green. The decades of quarrying activities have produced a dramatic landscape of chalk plateaus, terraces and cliffs, with pioneer wildlife restoring nature where it can. The site remains a landmark, with its chimney visible for miles around, whilst the quarry's impressive topography displays views of the geology layers that underlie the Downs.

Today this legacy of past industry sits within the South Downs National Park, designated for its natural beauty, wildlife and cultural heritage. The site needs a new role that makes best use of its unique characteristics and relates to the National Park's purposes – to be regenerated as a place that is truly special and embodies values that will be both relevant and sustainable for a new era.

The site offers exceptional opportunities for visionary development proposals. Its location, topography and scale could enable a variety of uses and activities incorporating innovative landscape, architecture and engineering design and enhanced public access. Any development also has to be financially viable and must address practical constraints, but I hope that proposals for this site will produce solutions that will be imaginative, inspirational and deliverable.

Shoreham Cement Works has been identified in the Local Plan as a Strategic Development Site. We have therefore recognised it as having significance within the National Park as a whole rather than simply within a local context and that its potential future may be relevant to wide audiences.

This document recognises the importance of the site and sets out issues and options for development proposals, together with detailed background information. As an early stage consultation, it aims to seek views about the site and its future from anyone with an interest in this. I hope that it will attract responses, not only from local communities and key organisations, but also from a broader audience.

Whatever the end uses of development may be, I believe that Shoreham Cement Works represents a unique and exciting opportunity for an exceptional quality development that complements and celebrates the site and makes a positive contribution to the National Park. I look forward to seeing responses that help to progress this.

Ian Phillips

Chair, South Downs National Park Authority

26 April 2022

Consultation Questions

Here are the questions that we would like you to answer on Shoreham Cement Works. Please do read the whole document before you answer them. The questions are also set out at the end of the relevant chapters.

Shoreham Cement Works is located in the South Downs National Park, which has two purposes and a duty.

Question 1: How could the redevelopment of Shoreham Cement Works contribute to the purposes and duty of the National Park?

People have strong opinions of Shoreham Cement Works and we would like to know your opinion of the site as it is now.

Question 2: What three words do you associate most with Shoreham Cement Works?

We list a number of design principles and then ask some questions about them.

Some of the site is classified as brownfield or previously developed land (the Riverside and Cement Works) and some of it is classified as greenfield land (the Bowl, Moonscape and Clifflands).

Question 3: Should development be restricted to previously developed areas?

Question 4: Would you like to see materials on site re-used or re-cycled for construction?

Question 5: How far do you think the new buildings should reflect the height and massing of the existing buildings?

Question 6: Would you prefer a contemporary or traditional approach to architectural design or a mixture of both?

Question 7: What type of public space, such as public squares, pocket parks and skateboard parks, would you like to see and why?

There is a sequential experience as you pass through the different areas moving eastwards away from the main road either by vehicle or on foot.

Question 8: Should the redevelopment hide, frame or reveal new views moving eastwards away from the main road or a combination of all three?

The cultural heritage evidence explains the significance of the chimney and other industrial buildings.

Question 9: Should any of the buildings, such as the chimney, be retained on site?

Question 10: To what extent should the design of the redevelopment reflect the site's industrial past?

The nature recovery evidence reveals the wealth of biodiversity on the site, highlights opportunities to enhance it and explores tensions between conservation and redevelopment.

Question 11: In which area(s) of the site should the focus be for biodiversity protection, enhancement and creation?

Question 12: Should buildings and structures contribute to nature via green roofs and walls or should these surfaces support solar energy or a mixture?

The climate change evidence explores the mitigation of and adaption to climate change at Shoreham Cement Works.

Question 13: What renewable energy generation do you think the site could offer?

Question 14: What opportunities do you think there are for the design of the redevelopment to ensure resilience to climate change?

The Transport Assessment explored different options for accessing and moving around the site.

Question 15: What is your view on a new roundabout or any other solutions to access the site?

Question 16: Do you support shared surfaces or segregated routes for vehicular traffic and pedestrians/cyclists for parts of the redeveloped site?

The tourism evidence explores different visitor attractions that could be provided.

Question 17: What visitor attractions would you like to see on the site?

Question 18: What visitor attractions would you not like to see on the site?

Question 19: What do you think is special about this part of the National Park that could attract visitors and can you suggest how it could be enhanced as part the redevelopment?

The housing evidence explored housing need and the different types of homes that could be built in different part of the site.

Question 20: Who do you think would be interested in living at the redeveloped Shoreham Cement Works?

Question 21: What do you think would help make this a sustainable community where people would like to live?

Question 22: Do you think houses with gardens or flats or a mixture should be built?

The employment evidence explored the different types and numbers of jobs that could be provided on site following on from the pandemic and during the climate change and biodiversity emergencies.

Question 23: What sort of businesses would you like to see and why?

Question 24: What sort of businesses would you not like to see and why?

Green tech or green technology is an umbrella term that describes the use of technology and science to reduce human impacts on the natural environment. It includes a wide area of scientific research, including energy, atmospheric science, agriculture, material science and hydrology.

Question 25: Do you think green tech companies should be encouraged to locate here?

We would like to hear your opinions on Shoreham Cement Works before we write any policies. This Issues & Options document is seeking your views before we produce our Preferred Option.

Question 26: Are there any particular ideas, issues or policies you would like to see in the AAP?

Question 27: Have you got any other comments on Shoreham Cement Works?

Taking into account all the issues and options we ask one final question.

Question 28: Based on the Issues and options set out in this document, what are your three top priorities for the redevelopment of Shoreham Cement Works that should feature in the Preferred Option and why?

Contents

1 Introduction

What is the Area Action Plan and what is it seeking to achieve?

1.1 The Area Action Plan (AAP) will be the development plan for Shoreham Cement Works. It has been prepared by the South Downs National Park Authority (SDNPA), which is the local planning authority for the site. The SDNPA does not own the site, which is owned by the Dudman Group of companies. The purpose of the AAP is to guide the development of this exceptional site and help deliver an exemplar mixed use development of regional or indeed national importance.

1.2 This is the Issues & Options version of the AAP and we are seeking the views of everyone who is interested in the site. A special website has been created for this consultation, which can be accessed on https://www.southdowns.gov.uk/area-action-plan-shoreham-cement-works/. On this website you can view specially filmed drone footage and you can add your thoughts and comments on the development of the site. The consultation website contains the same questions that are set out throughout this document.

1.3 The final adopted version of the AAP will be the statutory development plan for Shoreham Cement Works along with the South Downs Local Plan[1] covering the whole National Park, the Upper Beeding Neighbourhood Plan[2] covering the parish of Upper Beeding and the West Sussex Joint Minerals Local Plan[3] and Waste Local Plan[4]. The planning system in this country is plan-led and statute states that decisions on planning applications must be taken in accordance with the development plan unless material considerations indicate otherwise. Accordingly, this AAP will be used in the determination of planning applications for Shoreham Cement Works.

1.4 The AAP will specifically cover the land bounded by the red line shown on the Policies Map. However, it also needs to look beyond the site boundaries to assess the implications for development particularly in regard to landscape and transport infrastructure.

Planning in the South Downs National Park

1.5 The AAP sets out how the National Park Authority as the local planning authority will manage development at Shoreham Cement Works up to 2033. This is based on the statutory purposes and duty for national parks as specified in the National Parks and Access to Countryside Act 1949, as amended by the Environment Act 1995:

- To conserve and enhance the natural beauty, wildlife and cultural heritage of the area

[1] South Downs Local Plan, South Downs National Park Authority, 2019
[2] Upper Beeding Neighbourhood Plan, Upper Beeding Parish Council, 2021
[3] West Sussex Joint Minerals Local Plan, West Sussex County Council & South Downs National Park Authority, 2018
[4] West Sussex Waste Local Plan, West Sussex County Council & South Downs National Park Authority, 2014

- To promote opportunities for the understanding and enjoyment of the special qualities of the National Park by the public

1.6 The National Park Authority also has a duty when carrying out the purposes:

- To seek to foster the economic and social well-being of the local communities within the National Park but without incurring significant expenditure in doing so, and shall for that purpose co-operate with local authorities and public bodies whose functions include the promotion of economic or social development within the area of the National Park.

1.7 In addition, Section 62 of the Environment Act 1995 requires all relevant authorities, including statutory undertakers and other public bodies, to have regard to these purposes. If there is an irreconcilable conflict between the two purposes, Purpose 1 takes precedence.

1.8 It should be noted that all areas of the National Park, both brown and green field, are given the highest level of landscape protection under paragraph 176 of the NPPF[5]. This includes Shoreham Cement Works.

1.9 A key question to ask of the redevelopment is how it could contribute to the purposes and duty of the National Park.

What is the structure of the AAP?

1.10 The Issues & Options version of the AAP is set out as follows:

- Introduction: introduces the AAP and talks about planning in a national park
- Shoreham Cement Works Now: paints a spatial portrait of the site and its surroundings today
- Re-imagining Shoreham Cement Works: sets out the vision and objectives for redevelopment, current opportunities and constraints and overarching design principles
- The Five Areas of Shoreham Cement Works: explores what makes each of the five areas special, their individual opportunities and constraints and design principles
- Issues and Options: explores the issues and options for a number of cross-cutting themes such as contaminated land and cultural heritage
- The Way Forward: talks about choosing a preferred option

1.11 This Issues & Options document does not contain any policies, which instead will feature in the Preferred Option version of the Plan.

Planning process and context

1.12 The planning timeline for Shoreham Cement Works is set out in Appendix 1. It starts with the permission granted to extract chalk just after the end of the Second

[5] National Planning Policy Framework, DLUHC, 2021

World War, sets out milestones for this AAP and looks forward to the eventual grant of planning permissions for redevelopment.

Major development in a national park

1.13 Major development in a national park is not permitted under national policy set in the NPPF and local policy set in the South Downs Local Plan other than in exceptional circumstances and where it can be demonstrated that the development is in the public interest.

1.14 The Local Plan established that the redevelopment of Shoreham Cement Works constituted major development. The Local Plan states that the Authority's main objective for this site is to secure a significantly enhanced landscape and accepts that major development provides the best opportunity to achieve this whilst noting that any scheme has to be viable to ensure delivery.

1.15 In order to ensure that the allocation of the site in the AAP is deliverable against the policy tests of major development set in paragraph 177 of the NPPF and Policy SD3 of the Local Plan, it is necessary to consider exceptional circumstances and public interest. Firstly, the need for the development arises from the need to deliver a substantially enhanced landscape for the site within the nationally designated landscape of the National Park. This need can obviously not be met elsewhere as it is site specific and so it meets the second test on developing outside the designated area. Thirdly, any detrimental effect on the environment, landscape and recreational opportunities will need to be carefully considered through this AAP and moderated as necessary.

1.16 A full assessment of major development would need to be made for any application that was submitted for this site in line with paragraph 177 of the NPPF and Policy SD3 of the Local Plan. It should be noted that criterion 3 of Policy SD3 sets high sustainability standards for major development in the South Downs, which are required to be zero carbon and zero waste.

Ecosystem Services and natural capital

1.17 Ecosystem services are the goods and services we get from nature. The redevelopment of this site will be required by the Authority to have an overall positive impact on the ability of the environment to contribute these goods and services. There are a multitude of different ecosystem services that can be broadly grouped into four categories namely cultural, regulating, supporting and provisioning services. Examples of ecosystem services currently provided by the site are the biodiversity of the open mosaic habitat covering most of the site (supporting services) and the tranquility at the far end of the quarry (cultural services).

Development scenarios

1.18 A number of potential development scenarios were prepared for the AAP. They follow on from the scenarios set out in the Sustainability Appraisal of the Local Plan.

Further work was done on the landscape-led capacity of the site to finesse the development quantums. We looked at all the land uses that are allowed under the Local Plan policy including homes, business units, a hotel and leisure facilities. All the development scenarios are for a mixture of different land uses, which will all vary in viability and impact on the landscape. The detailed figures are set out in a table forming Appendix 2 of this document and the headlines for the four scenarios are as follows:

1. Mixed use scheme with employment and 400 new homes
2. Mixed use scheme with employment and 240 new homes
3. Mixed use leisure led scheme with and 200 new homes
4. Mixed use scheme with employment and 84 new homes (dismissed appeal scheme)

1.19 These scenarios were systematically tested by the consultants preparing our transport and viability studies. It should be noted that no development or 'do nothing' is not a reasonable alternative for the site although it was addressed in the Sustainability Appraisal.

Sustainability Appraisal

1.20 The purpose of a Sustainability Appraisal (SA) is to promote sustainable development through the integration of social, environmental and economic considerations into the preparation of the AAP. It is necessary for both the AAP and its accompanying SA to meet the requirements of the Strategic Environmental Assessment Directive.

1.21 An SA for the South Downs Local Plan was undertaken by AECOM[6] and iterations of the SA supported each stage of plan preparation. As part of this work, the SA appraised the allocation of Shoreham Cement Works under Policy SD56. The SA process undertook an appraisal of a number of strategic level alternative options for the site. Four options were considered for the site through the SA process, linked to different uses for the site relating to land use classes.

1.22 The appraisal findings in relation to the four options were organised by the twelve sustainability themes. For each sustainability theme, a commentary on the likely effects was presented. Options were also ranked numerically reflecting their relative sustainability performance. Recognition was given to the significant negative visual impact the site has on the National Park and the complexity of delivering any development. Given that position, the Local Plan preferred approach was to seek a mixed use development, which delivers a significantly enhanced landscape and uses compatible with the purposes of the National Park, namely tourism / visitor based recreational activities and employment uses.

1.23 In addition, the preferred approach of the Local Plan sought to resist 'more development than is necessary to secure and deliver the environmentally led

[6] https://www.southdowns.gov.uk/wp-content/uploads/2019/07/Sustainability-Appraisal-Report-and-Addendum.pdf

restoration of the site'. In this context the preferred approach will help to both protect and support enhancements to the landscape character, biodiversity, and cultural heritage.

1.24 The first stage of the SA process is setting the context and objectives, establishing the baseline and deciding the scope of the SA. An SA scoping report for the AAP was prepared in 2021. In August/September 2021, The National Park Authority consulted the statutory bodies namely the Environment Agency, Natural England and Historic England, the two local authorities in which the site is located namely Horsham and Adur District Councils, West Sussex County Council and the local parish council namely Upper Beeding Parish Council. The Scoping Report[7] was subsequently updated following comments from the consultees and feedback from these groups has informed the SA of this Issues & Options document.

1.25 An SA of the Issues & Options has been published alongside the AAP. The SA includes a number of sustainability objectives, as set out in the Scoping Report, that have been used to appraise the issues and options on an iterative basis. These iterations identify how emerging options for the site will help to achieve the relevant social, environmental and economic objectives and will recommend how sustainability could be improved.

1.26 This Issues & Options AAP sets out a number of reasonable alternatives that are appraised through the SA. In order for the AAP to be justified it needs to have an appropriate strategy, taking into account the reasonable alternatives, and based on proportionate evidence.

Habitat Regulation Assessment

1.27 The objectives of the Habitat Regulation Assessment (HRA) of the AAP are to:

- Identify any aspects of the AAP that would cause an adverse effect on the integrity of Natura 2000 sites, otherwise known as European sites (Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and, as a matter of Government policy, Ramsar sites), either in isolation or in combination with other plans and projects; and
- To advise on appropriate policy mechanisms for delivering mitigation where such effects are identified.

1.28 In the early stages of AAP preparation we undertook an HRA screening following the principles established in the HRA for the Local Plan. This screened out potential issues and concluded no Appropriate Assessment was needed. However, since then the issue of water neutrality has emerged in the Sussex North Water Resource (Supply) Zone. The decision was made in 2022 to re-do the HRA screening[8] and this concluded that an Appropriate Assessment of the AAP is required. This is not

[7] Shoreham Cement Works Area Action Plan Sustainability Appraisal / Strategic Environmental Assessment UPDATED SCOPING REPORT, SDNPA, 2021

[8] Habitats Regulations Assessment (HRA) Screening Statement: Test of Likely Significant Effects, SDNPA, 2022

required at the Issues & Options stage of plan preparation, but is required at the Preferred Option stage.

1.29 Going forward, the SDNPA are working jointly with other affected Local Planning Authorities on a study and strategy to achieve a strategic solution for development on this matter across the Sussex North Water Resource (Supply) Zone.

Engagement with stakeholders

1.30 The views and input of the local community are vital to us. We would very much like to hear your views on the redevelopment of Shoreham Cement Works particularly if you have never commented on a planning document before. We have set up an online consultation that you can access on your mobile or computer. This includes drone footage and photos of the site.

1.31 We recognise that there are two main community groups with an interest in the site and we are working closely with both. Firstly, the Parish Council for Upper Beeding where the site is located and secondly the Shoreham Society, which represents people living to the south of the site in the town of Shoreham-by-Sea.

1.32 The site was purchased by the Dudman Group in 2017 and we have sought to engage with the company owner, Mr Dudman, throughout the preparation of this document.

Question 1: How could the redevelopment of Shoreham Cement Works contribute to the purposes and duty of the National Park?

2 Shoreham Cement Works Now: a Spatial Portrait

2.1 The spatial portrait of Shoreham Cement Works paints a geographical picture of the site and its surroundings. It highlights key features that are important both in the landscape and the local economy such as Brighton Airport and Lancing College. The spatial portrait forms figure 2.1.

2.2 Whilst gathering the evidence for this AAP we have learnt a lot about this extraordinary site. The Cement Works itself was built by the concrete industry leader and pioneer, Oscar Faber, who also designed the Menin Gate in Ypres and advised Winston Churchill on the construction of the Mulberry Harbours. The cliffs are home to peregrine falcons and there are records of 12 distinct bat species within 2 km of the site. It is one of the largest brownfield sites in the south of England. It stirs many emotions from a love of the industrial heritage, to a dislike of the 'scar' on the landscape. It is a very real example of the interaction between people and nature. Its redevelopment is an opportunity to turn a negative into a positive with a unique and inspiring redevelopment fit for the twenty first century.

2.3 Shoreham Cement Works covers 44 hectares and includes an inactive chalk quarry and semi-derelict works. It is familiar to many people and is very prominently located in the narrowest part of the National Park. Despite being an important part of the social and industrial heritage of the area, the site has a significant negative visual impact on the National Park, particularly from public rights of way and wider viewpoints, including the South Downs Way and the Downs Link.

2.4 The site is located about 5 km to the north of Shoreham-by-Sea and 2 km south of Upper Beeding village and is dissected by the busy Steyning Road (A283). It is bounded to the west by the River Adur and farmland in the floodplain, to the north by chalk grassland, and to the south and east by farmland. Immediately to the north on the A283 are forty Edwardian terraced houses, Dacre Gardens, which were built to house workers at the cement works, together with a flatted infill development.

2.5 Large-scale cement production began on the site at the end of the nineteenth century on the western part of the site next to the River Adur. The current buildings were completed in 1948-50, permission having first been granted for chalk extraction in 1946, and extended in 1950 and 1969. Chalk extraction and cement production ceased in 1991.

2.6 A number of businesses operate out of the area to the west of the main road. Land behind the derelict cement works is used as an inert waste recycling facility. There is no housing on site.

2.7 This AAP introduces a new way of looking at Shoreham Cement Works. It suggests dividing the site into five main areas based on its geology, topography, hydrology and built form. We are calling these areas the Riverside, Cement Works, Bowl, Moonscape and Clifflands. The first four areas are identified going west to east, but the Clifflands surround most of the site to the east of the main road. Each area has

different opportunities and constraints and chapter 4 sets out bespoke design principles and potential uses for each area. The five areas are shown in figure 2.2 and in figure 2.3 they are shown with a photographic overlay.

2.8 The western part of the site is set on the floodplain of the River Adur, which flows north to south across the National Park from Coombes Farm and through a gap in the South Downs near Lancing College. The River Adur enters the English Channel at Shoreham-by-Sea. The eastern part of the site is set into the dip slopes of the South Downs.

2.9 The spatial portrait stretches beyond the site's boundary, and acknowledges the many interdependencies and connections that exist across the boundary. For example, there is unmet housing need to both the south and north in Adur and Horsham Districts outside the National Park. Any development of the site would generate traffic and would therefore put pressure on both the local and the strategic road networks.

2.10 We have had the Covid pandemic since we started work on the AAP. This has affected the National Park in a number ways with many more people visiting the South Downs. The pandemic has influenced patterns of living and working with many people adopting hybrid patterns of working. The National Park Authority is seeking to build back better, greener and more local and this has influenced the preparation of this AAP.

Question 2: What three words do you associate most with Shoreham Cement Works?

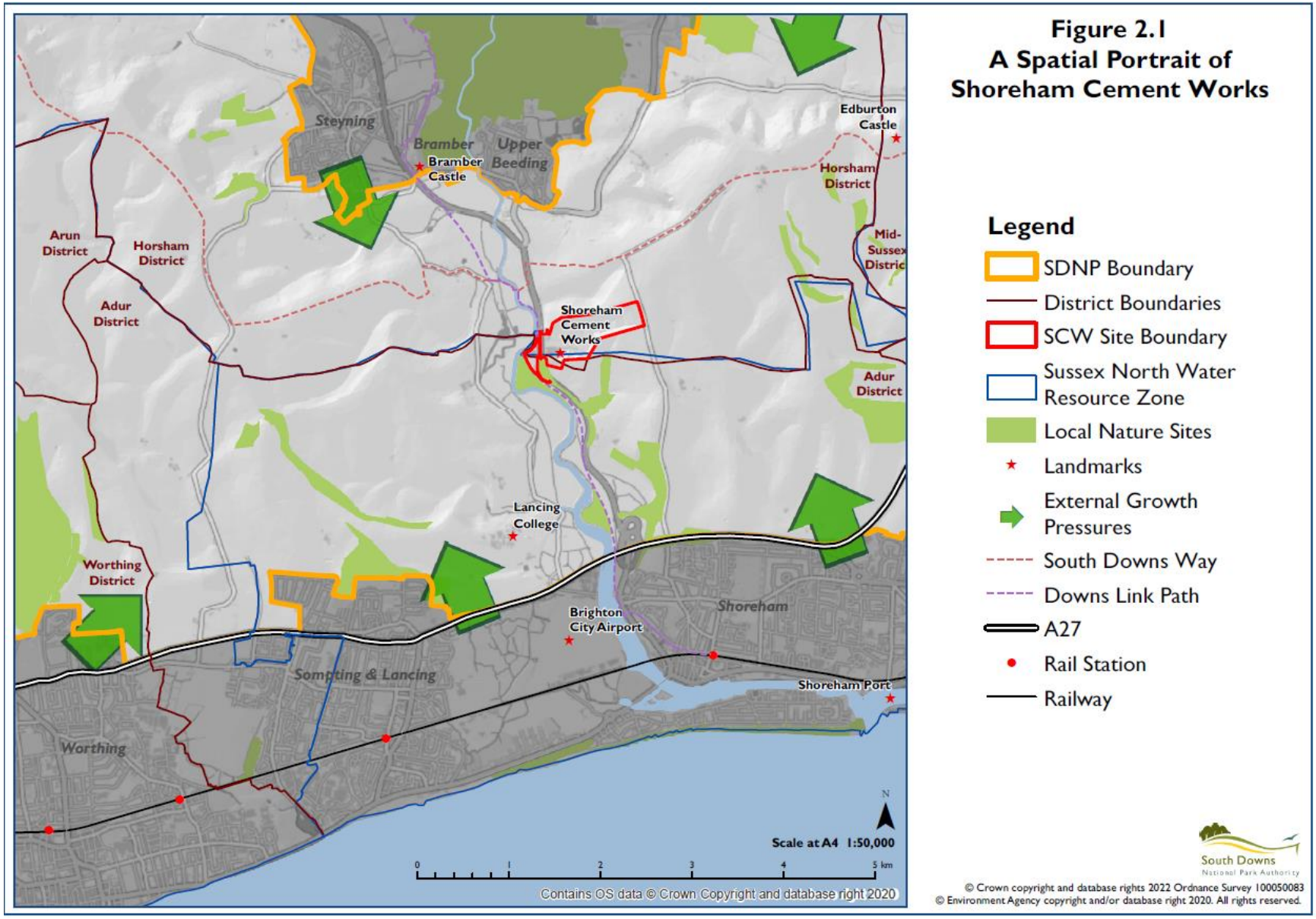
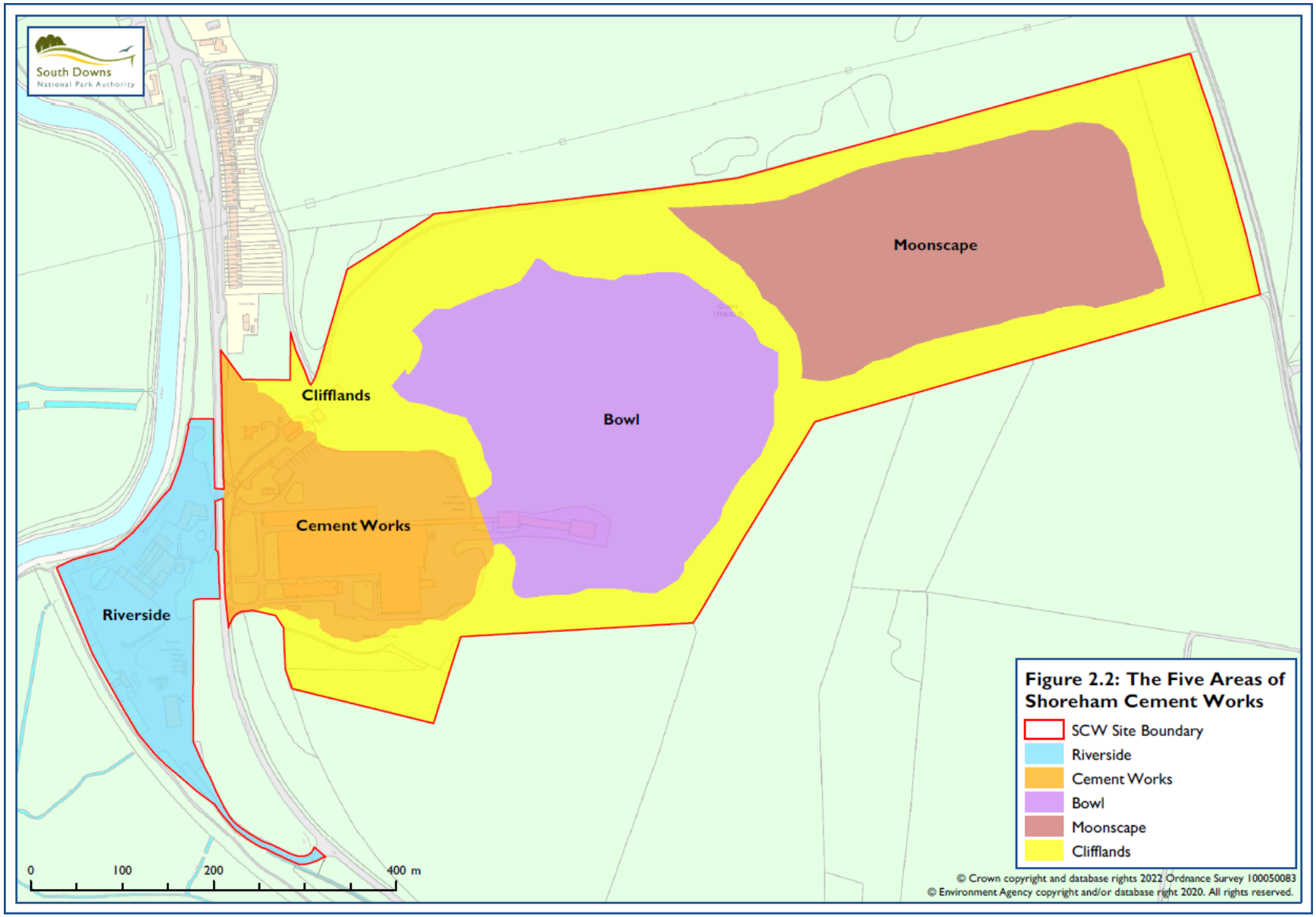


Figure 2.1
A Spatial Portrait of Shoreham Cement Works

Legend

- SDNP Boundary
- District Boundaries
- SCW Site Boundary
- Sussex North Water Resource Zone
- Local Nature Sites
- Landmarks
- External Growth Pressures
- South Downs Way
- Downs Link Path
- A27
- Rail Station
- Railway

South Downs National Park Authority


South Downs
National Park Authority
Moonscape
Bowl
Clifflands
Cement Works
Riverside
0
100
200
400 m
Figure 2.2: The Five Areas of Shoreham Cement Works
SCW Site Boundary
Riverside
Cement Works
Bowl
Moonscape
Clifflands
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South Downs
National Park Authority
Moonscape
Clifflands
Bowl
Cement Works
Riverside
0
100
200
400 m
Figure 2.3: The Five Areas of Shoreham Cement Works with a photographic overlay
SCW Site Boundary
Riverside
Cement Works
Bowl
Moonscape
Clifflands
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3 Re-imagining Shoreham Cement Works

Vision for the future

3.1 Shoreham Cement Works is an extraordinary site and the National Park Authority is looking for an exemplary redevelopment that will build back much better and greener for the National Park. Policy SD56 of the South Downs Local Plan is the high level strategic policy for Shoreham Cement Works and it sets out the following vision for the site:

3.2 *Shoreham Cement Works, as identified on the Policies Map, is an area of significant opportunity for an exemplar sustainable mixed use development, which delivers a substantially enhanced landscape and uses that are compatible with the purposes of the National Park. To help achieve this the National Park Authority will prepare an AAP with the overall aims of:*

a) Enhancing the visual impact of the site from both the nearby and distant public viewpoints;

b) Conserving, enhancing and providing opportunities for understanding the biodiversity, geodiversity, historic significance and cultural heritage of the site;

c) Ensuring the delivery of ecosystems services; and

d) Ensuring that the design of any development is of the highest quality and appropriate to its setting within a national park

3.3 Locally, there are aspirations in the Upper Beeding Neighbourhood Plan to redevelop the Shoreham Cement Works site. The local community want the site to be high quality, sustainably developed and carbon neutral. The Plan notes that uses involving employment, leisure and tourism would be welcomed, which include recreational accommodation, restaurants, theatres, art, ecological and educational facilities.

Objectives

3.4 We have prepared a number of strategic objectives, which outline the direction that the AAP will take in order to achieve the vision. These objectives are the stepping stones between the vision and the policies that will be set out in the Preferred Option. The strategic objectives for the redevelopment of Shoreham Cement Works, subject to feedback from this consultation, are:

a) Exemplary landscape led design, incorporating high quality architecture and a strong sense of place.
b) Conservation and enhancement of some historic assets, and a design that reflects and commemorate its cultural heritage
c) The Biodiversity Emergency to be addressed through landscape-led nature recovery, which conserves and enhances existing on-site biodiversity
d) A sustainable use of natural capital that delivers ecosystem services and contributes positively to human health and wellbeing

e) Opportunities for everyone to discover, enjoy, understand and value this part of the National Park including its landscape character and qualities, biodiversity, geology and industrial heritage
f) A zero carbon and zero waste development that addresses the Climate Change Emergency through mitigation and adaptation
g) A development that complements, but does not compete with the villages and market towns of the National Park and beyond
h) New jobs and homes

Opportunities and constraints of the whole site

3.5 Drawing on the evidence based studies that have been prepared to support the AAP we have considered the opportunities and constraints for the whole site. These are set out in separate sketches forming Appendices 3 and 4 respectively of this document. As with all such plans, many of the constraints are also opportunities. For example, the retention of the chimney would constrain the redevelopment, but also provides an opportunity to conserve and enhance a local landmark and an important habitat for protected species particularly bats.

General Design Principles

3.6 The purpose of this section is to set out site-wide design parameters to guide any future development proposals. The principles below are evidence based and build on the opportunities and constraints. The purpose of these principles is to produce a comprehensive design that is compliant with the Authority's policies and guidance, and facilitates the creation of a high quality place for people to enjoy. A number of questions are set out at the end of this section.

3.6.1. Developable areas and existing buildings

a) The development should be landscape-led and reflect and commemorate the site's cultural heritage.
b) The development should maximise the use of the existing developed areas.
c) The Clifflands should remain largely undeveloped. Any intervention should minimise impacts on biodiversity, geological interest and views and landscape character.
d) Where appropriate and fit for restoration and adaptation, former industrial structures, such as the chimney, should be considered for retention and re-purpose.
e) Features of important industrial heritage, including key industrial machinery and components, should be identified and, where feasible, retained and incorporated on site.

3.6.2. Layout

a) New development should incorporate reference to the location and footprint of existing industrial buildings.

b) Development proposals should conserve and enhance key views from viewpoints and landmarks within the wider area including Adur Valley, Beeding Hill, the A283, Lancing College as illustrated in the Spatial Portrait.
c) Opportunities for views out to the wider landscape should also take account of the visual impact of views in from external locations including the River Arun and the Downs.
d) The development should provide an adequate transition that integrates the development in the landscape and positively contribute to the area's character.
e) The development should consider the relationship between development and the main road in regard to pedestrian and vehicular movements along with other matters that may affect the wider area such as noise, light and pollution.
f) A clear hierarchy of routes should be designed within the site, responding to the sensitivities, contours and characteristic of each area.
g) New buildings should positively respond to the contours of the site avoid siting on steeper ground.
h) Buildings should be located within accessible existing developed areas, where not affected by cliff erosion, uncomfortable lighting environment in terms of glare and shade, and away from ecologically sensitive areas.
i) The development should address the River with due regard to views both in and out, public access and avoidance and mitigation of flood risk.

3.6.3. **Movement**

a) Sustainable means to travel to and from the site to be prioritised over private vehicle use.
b) Active travel infrastructure and facilities should be provided within the site, which should be well connected to and integrated in the wider network. This includes fast, safe and accessible sustainable travel routes to the nearby settlements of Shoreham-by-Sea, Upper Beeding and Steyning including Shoreham-by-Sea railway station, in support of intermodal journeys; this could include a shuttle bus to the train station.
c) Bus stops within the development and on the A283 should be accessible and effectively sheltered.
d) Non-motorised connections with the nearby public right of way network should be maximised, including the Downs Link and the South Downs Way.
e) Vehicular access and parking should make an efficient use of land, minimising landscape impact, avoiding encroachment onto existing buildings worthy of retention and areas that are suitable for development, where possible.
f) The site should be permeable for all users in a safe and comfortable improving permeability within the development, across the A283 and the landscape around.

g) A new/improved underpass under the A283 could be considered.
h) Opportunities to minimise motorised traffic and its impacts within the site should be considered and maximised, promoting non-motorised travel, including low speed streets and shared surfaces.
i) Improvements to the local highway network, including the A283 and other roads, should conserve the rural character of the area including tranquillity and dark skies. It should avoid and minimise unnecessary urbanisation of the area. This also applies to new roads within the site.
j) Transport and parking infrastructure should be well integrated within the site and well-designed. It should contribute to the green and blue infrastructure of the site and should not dominate the public realm.
k) Shared/communal and multifunctional parking facilities should make a more efficient use of land.
l) EV charging points and cycle storage should be available to all occupiers and visitors of the development.

3.6.4. **Sustainability and Resources**

a) Sustainable construction should be embedded from the beginning of the design process in order to be net zero carbon and zero waste in line with Policy SD3 of the Local Plan and the Sustainable Construction SPD.
b) Proposals should maximise opportunities to reuse existing buildings and hardstanding areas on site. When not feasible, materials should be recycled and re-used on site.
c) Buildings and landscape treatment should be orientated and designed to reduce energy need, responding to the microclimate conditions of the site including temperature fluctuations, light reflection, shade, damp and wind.
d) Roofs should be orientated southwards to facilitate photovoltaic and solar thermal panels, which should be integrated into the building fabric where feasible.
e) Opportunities for green roofs and walls should be maximised.
f) A district heating system and ground source heat pumps should be explored.
g) Materials should be durable and adaptable to the microclimate of the site.

3.6.5. **Buildings**

a) The scale of new structures could relate to the scale of existing buildings within each area and so speak of the site's cultural history.
b) Buildings' form, mass and scale on site have the scope to reference the qualities of existing buildings.
c) Building form and scale should respect the wider landscape context and sensitively address the transition between built up and natural areas.

d) Materials should be of high quality and respond to and celebrate the colours and hues of the landscape. They should also be selected for sustainability, durability and efficiency reasons.
e) New buildings would not have to reflect local vernacular architecture.
f) Buildings should have active frontages and could incorporate underground parking.

3.6.6. Green and Blue Infrastructure

a) Existing habitats of value should be retained and protected and opportunities to create appropriate new habitats for wildlife should be taken wherever possible within both developed and undeveloped areas.
b) The development should deliver a network of multifunctional blue and green infrastructure connecting the site and the areas beyond. These should maximise opportunities to connect ecologically sensitive areas from the River Adur to the Moonscape and beyond.
c) Native planting and chalk grassland restoration opportunities should be maximised.

3.6.7. Public Realm

a) Street/open space landscape design, including planting should be used to control microclimates and facilitate natural outdoor/indoor temperature regulation.
b) The public realm should maximise opportunities for place making and contribute to the site's distinctiveness.
c) The reuse of existing materials on site for hard landscaping should be considered where feasible.
d) Multifunctional sustainable drainage systems (SuDS) should be incorporated in the public realm. SuDS should be of a typology that characteristically responds to each area's character.
e) Revisit and enhance existing flood defences and resilience, which shall contribute to a good quality public realm and transition to the open landscape.
f) Streets and open spaces shall be part of the blue and green Infrastructure network.
g) Public realm together with uses and buildings should provide an attractive, inspirational, stimulating and safe experience for visitors and residents across the whole development.
h) Lighting should be located and designed in consideration of the sensitivities of the site within the Dark Night Skies Reserve.
i) There are opportunities for interpretation features of the site's cultural and natural assets, for example, transforming redundant machinery and plant into sculptural pieces and interpretation trails.

Development options

3.7 The Introduction to this document explained that we tested four development scenarios in regards to transport and viability. This work highlighted a number of issues and options that apply either to individual parts of the site or the whole of the site. These issues and options are explored in the following two chapters. We would like to hear your views on these issues and what your preferred option is for the redevelopment of Shoreham Cement Works.

Question 3: Should development be restricted to previously developed areas?

Question 4: Would you like to see materials on site re-used and/or re-cycled for construction?

Question 5: How far do you think the new buildings should reflect the height and massing of the existing buildings?

Question 6: Would you prefer a contemporary or traditional approach to architectural design or a mixture of both?

Question 7: What type of public space, such as public squares, pocket parks and skateboard parks, would you like to see and why?

4 The Five Areas of Shoreham Cement Works

4.1 The five areas of Shoreham Cement Works were introduced in Chapter 2 of this document as part of the spatial portrait and are shown in figure 2.2. This chapter looks at the five areas in more detail exploring their individual opportunities and constraints and then setting out design principles for each area.

4.2 There is a sequential experience as you pass through the different areas moving eastwards away from the main road either by vehicle or on foot. The design question arises as to whether we want to hide, frame or reveal new views?

The Riverside

4.3 The **Riverside** is special because of its riverine location with long views across the Adur Valley. It is a flat area of made-up ground between the River Adur and the A283 and was the site of the original cement works. Most of the area is comprised of hardstanding and a number of former offices for the **Cement Works** now occupied by various industrial and storage uses. The area is linked by a tunnel under the A283 to the **Cement Works**. This is a brownfield site, mostly protected from flooding by embankments. A photo of the area form figure 4.1.

4.4 **Opportunities:** A great opportunity for the whole site is to open up the **Riverside** for public access to the river frontage, possibly with a boardwalk or similar, whilst maintaining adequate flood defences. This could be linked to the Downs Link via an integrated access network incorporating green infrastructure. The redevelopment should exploit views out over the valley to the south and west, possibly with a lookout. All new buildings that face on to the river should make a positive contribution to views into the site from the west.

Figure 4.1: The Riverside looking west

4.5 There are also opportunities to enhance the road frontage. The **Riverside** is the best location for housing, which would generate high values. The Downs Link

follows the **Riverside** offering opportunities for sustainable travel both north and south. An underpass links the **Riverside** to the **Cement Works**.

4.6 **Constraints:** Either a waste water treatment works or pumping station would need to be located here. Although not currently at risk from flooding, a small extent of the southern part of the **Riverside** is predicted to be within flood zone 3a in the future. It contains 3.5m of made ground and has the potential for combination hotspots. There are some but not many buildings that will need to be demolished here.

4.7 **Design principles:**

- Open public access to the river frontage compatible with flood risk mitigation.
- Integrated access network from the **Riverfront** and the Downs Link to the other side of the A283, incorporating Green Infrastructure.
- High contextual density would be appropriate. Buildings should face the River, positively contributing to views into the site and out. High quality architectural solutions would be needed.
- Opportunities should be maximised to provide a meaningful active public realm along the River Arun.
- Take opportunities for views out over the river valley to the south, west and north.
- Vegetation could aim to blend in with new buildings and the landscape, not necessarily screening it completely.
- Safe and comfortable connection to public transport options and the Downs Link should be a priority in the layout and public realm design.

The Cement Works

4.8 The **Cement Works** is special as it contains the post war industrial buildings and chimney designed by cement industry leader Oscar Faber. This part of the site is contained by cliffs to three sides. It can be viewed at close quarters by passing motorists travelling along the Steyning Road. The character is created by the substantial industrial building and cliffs. This imposes a feeling of large-scale on the site, which in turn results in a sense of smallness when stood within it. A photo of the area form figure 4.2.

Figure 4.2: The Cement Works looking south east

4.9 **Opportunities:** The **Cement Works** buildings block views from the main road to the east of the site including the **Bowl** and the **Moonscape**. If they are demolished then any new development is likely to be highly prominent. Any new buildings could make a significant entrance statement that conceals what lies beyond or frames a view further into the site or is subservient to the elevations of the quarry face. The quarry entrance onto the A283 forms a gateway into the site. There is an opportunity for the quarry faces to be featured as a dramatic landscape gateway frame for what lies beyond.

4.10 There are to opportunities improve and/or create a new access with the existing underpass and/or a new roundabout. There are also opportunities to retain some of the historic buildings such as the chimney and the equipment within the buildings such as the kilns. This is a good location for commercial development either on its own or as part of a mixed use scheme with housing. It could also be a location for a visitor attraction linked to the special qualities of the National Park and in particular the industrial heritage of the site.

4.11 **Constraints:** Obviously there are huge demolition costs relating to the **Cement Works** including its slab foundations. There is some made ground and the potential for some hotspots of contamination including asbestos, which also have cost implications.

4.12 **Design principles:**

- Any new buildings could make a significant entrance statement that conceals what lies beyond or frames a view further into the site or is subservient to the elevations of the quarry face.

- High contextual density would be appropriate.
- Microclimate conditions particularly glare and shade should be carefully considered.
- Safe and comfortable connection to the bus stop should be provided.
- There are opportunities to re-use the existing dilapidated elevator/steps to the **Clifflands.**

The Bowl

4.13 The **Bowl** is special as it is a vast amphitheatre of chalk created by the cliffs, which almost encompass the whole space. There is a sense of vast scale and a feeling of a 'secret' or 'hidden' world as the existing buildings and structures peter out. It is dominated by mosaic habitats and small-scale changes in topography. Scrub is largely restricted to the edges of the site and follows the pattern of topography, accentuating the 'bowl' shape created by the cliffs. There is a sense of tranquillity in the **Bowl**, which is pitch black at night. A photo of the area form figure 4.3.

Figure 4.3: The Bowl looking north

4.14 **Opportunities:** the **Bowl** is defined as greenfield or undeveloped land and is relatively accessible from the main road. There is the potential to build lightweight commercial buildings that could be accommodated on the contaminated, made ground and would generate value for the site. The Bowl contains habitats of ecological value including Open Mosaic Habitat and there are important opportunities for enhancement and habitat creation in the north/east of this area. Along with the **Moonscape**, it could be the best opportunity for recreation and tourism, and still be fairly hidden inside the wider landscape. They could both accommodate active recreation with zip lines, mountain biking or toboggans whilst also adding value to the landscape and habitats.

4.15 **Constraints:** The **Bowl** area was licensed as an inert landfill to dispose of highly toxic cement kiln dust from the Cement Works. A former lagoon is also located in the **Bowl**. The substantial land contamination reduces opportunities for significant development within this area.

4.16 **Design principles:**

- Any development should be well integrated within the existing natural environment. It should also maximise opportunities for views through the site.
- A 360 degree view of the **Bowl** and **Clifflands** should be retained.

The Moonscape

4.17 The **Moonscape** is special as it is a vast space, which feels quite other-worldly and lunar. Despite being a quarry site, the sense of human intervention is reduced. It feels very remote and all-encompassing as a result of the cliffs and past quarrying. The constantly changing topography creates numerous ecological niches and the sense that the more you look the more there is to see. The return of nature in this space is awe-inspiring. It is highly tranquil and remote from day-to-day activity. A photo of the area form figure 4.4.

4.18 On a more negative note, the **Moonscape** has been described as 'a substantial scar,' which is visible over a wide area and from a large number of viewpoints including the South Downs Way. The **Clifflands** that surround it on three sides are steep and the **Moonscape** is separated from the **Bowl** by further **Clifflands**.

Figure 4.4: The Moonscape looking north east

4.19 **Opportunities:** the **Moonscape** is defined as greenfield land and has high potential for habitat enhancement and creation. There is no contamination or made ground. Along with the **Bowl**, it could be the best opportunity for recreation and

tourism. Any such development could remain fairly hidden inside the landscape or made into a landmark feature or focal point for the site, albeit subservient and complementary to the cliffs. The **Moonscape** could host active recreation whilst also fostering and enhancing the landscape and habitats. It could also provide nature and geological trails for people to explore the biodiversity and geodiversity of the site.

4.20 **Constraints:** the **Moonscape** is at risk from rock fall from the **Clifflands**. It is remote from the rest of the site and highly sensitive in landscape terms.

4.21 **Design principles:**

- The area could retain its existing character taking opportunities to conserve and enhance its biodiversity and geodiversity value.
- Any development should ensure that its tranquillity and sense of place are conserved.
- A contextually designed connection to the South Downs Way beyond could be explored.

The Clifflands

4.22 The **Clifflands** are special as they encircle the whole site to the east of the Steyning Road and are visible from afar. The **Clifflands** separate the **Cement Works** from the **Bowl** and in turn the **Bowl** from the **Moonscape**. A photo of the area forms figure 4.5.

4.23 They vary in height and steepness considerably. In places this presents any developer with serious issues and constraints and in others the cliffs have been benched to provide a more graduated edge to the quarry. The north-facing cliffs have successional species and include important habitats such as woodland, semi-improved grassland, ruderal herbs, scattered trees and undisturbed mosaic habitats. Hanging vegetation is typical on the southern cliffs which face north.

4.24 The **Clifflands** surround and enclose three quarters of the site and include complex topography. They will provide a theatrical backdrop to any potential development displaying a record of the site's industrial heritage, a geological showpiece of how the South Downs were formed and a haven for wildlife.

Figure 4.5: The Clifflands looking east

4.25 **Opportunities:** the **Clifflands** are home to Peregrine falcons and many species of bats. It may be possible to provide nature and geological trails for people to explore the biodiversity and geodiversity of the site. There is an opportunity to highlight the sensitivity and value of this area for educational purposes. The design challenge would be to provide access and interpretation without disturbance or risk of adverse impact. Ideally such a proposal would also enhance the area's biodiversity value through appropriate management interventions.

4.26 **Constraints:** all of the Clifflands are at risk from rock fall. It is remote from the rest of the site and highly sensitive in terms of landscape, biodiversity and geodiversity.

4.27 **Design principles:**

- These shall remain largely undeveloped.
- Views of the **Clifflands** should be achieved broadly from any other character area.
- No engineered erosion protection measures should be installed and cliffs should remain largely natural.

Q8: Should the redevelopment hide, frame or reveal new views moving eastwards away from the main road or a combination of all three?

5 Issues and Options

5.1 This chapter of the AAP explores a number of cross-cutting themes for Shoreham Cement Works. It explains the main findings of the evidence based studies for each theme. It explores the issues and tensions raised by the evidence both within the five areas and affecting the site as a whole. It sets out various options for each theme and ends with asking specific questions for each theme. There are obvious overlaps between the themes and the chapter should be read as a whole. Interspersed across this chapter are images from other developments across the world. The intention is to illustrate just what could be possible at Shoreham Cement Works.

5A Viability

Evidence

5.2 The SDNPA commissioned a Viability and Deliverability Study[9] from BPS Chartered Surveyors to test several development scenarios. The aims of the study were to understand whether the scenarios were viable and to assess the extent to which affordable housing could be delivered as part of a development scenario.

5.3 Unfortunately BPS were unable to access the site or gather necessary information on, for example, existing businesses. Based on the limited information available, BPS used a nominal Benchmark Land Value for the purpose of running their appraisal, is the value given to existing uses and activities taking place on the site.

5.4 Without significant public funding, any development at Shoreham Cement Works will need to pay for itself. Whilst public funding has not been ruled out, it is critical for the purposes of the AAP to establish a development option which delivers a substantially enhanced landscape and is viable. At the 2003 appeal[10], the planning inspector stated: "there is a fundamental requirement to create a viable scheme. Without viability nothing would happen". Typically, residential development drives value in a development and enables other benefits to be achieved. A balance needs to be struck between the amount of residential development required to enable landscape restoration against any adverse impacts on the nationally protected landscape.

5.5 Bringing forward development on a brownfield site of this scale, with its history of excavation and contamination, has significant costs. The BPS study has drawn on the other evidence studies commissioned in the preparation of the AAP to take account of the likely costs of making the site suitable for development. These include major land remediation, drainage and transport infrastructure costs, which in total, are expected to be in excess of £26 million. There are likely to be other notable development costs such as addressing water neutrality.

[9] Shoreham Cement Works: Financial Viability Assessment, BPS Chartered Surveyors, 2022

[10] Land at Shoreham Quarry, Steyning Road, Upper Beeding Applications and APPEAL BY Callstone Ltd, Ref APP/Y3805/V/02/1100397 & APP/Z3825/A/02/1095343, Office of the Deputy Prime Minister, 2003

Issues

5.6 The primary issue is the challenge of making a proposal viable given the extraordinary costs in preparing the site for development. The BPS study initial testing found all development scenarios, with a policy compliant 50% affordable housing provision, to be in substantial deficit (making a loss). The scenarios were still in deficit with 100% private market housing with no affordable housing provision. Sensitivity analysis undertaken by BPS, shows a 'best case' scenario where Development Scenario 2 makes a surplus (is viable) and Development Scenario 1 is close to breaking even. Development Scenarios 1 and 2 include 400 and 240 homes respectively.

5.7 Affordable housing is a priority for the SDNPA, which is consistent with its socio-economic duty and the Defra Vision & Circular on English National Parks[11]. There is a big affordability gap in the South Downs between the high cost of homes and relatively low local incomes. There are also affordability pressures in the nearby settlements outside the National Park in Adur and Horsham Districts. However, the viability evidence illustrates that delivering affordable housing as part of redevelopment proposals for Shoreham Cement Works will be challenging, and will likely require Government subsidy. It could also be argued that the site is not a suitable location for affordable housing given the distance to local facilities such as schools, health care and shops.

5.8 The density of housing development is an issue for viability. Development Scenarios 1 and 2 include high density residential development at levels normally found in areas of excellent public transport provision. A development option at this density would need public transport investment and measures to deter private car use. Density also has an impact on the profitability of development, with lower density development attracting the highest sale values.

5.9 There are also viability considerations for the potential employment uses. The only employment uses which lead to viability surpluses are B2 General Industrial and B8 Storage and Distribution, due to their relatively low construction costs. All other employment uses (offices, research & development, light industry) reduce the viability of the scenarios. In addition, employment uses located next to homes may detract from their sales values and reduce the overall viability of the scheme.

How the issues affect the five areas

5.10 The **Riverside** is the most profitable area to build homes, with a premium for the riverside location and views to the surrounding countryside. The **Riverside** and **Cement Works** immediately adjacent to the A283 road, are somewhat impacted by noise and air pollution from passing traffic. This is exacerbated in parts of the Riverside, as the road is elevated in relation to this part of the site. Residential sales value in the **Cement Works** will be affected by surrounding commercial uses and

[11] Defra Vision & Circular on English National Parks and the Broads, 2010

the quarry location. Low daylight levels in the southern part of the **Cement Works** will also impact sales values.

Options

5.11 There are a number of options arising from the viability evidence:

- A 100% private market scheme to maximise viability
- A mixed tenure development with a small proportion of onsite affordable homes
- Development required to provide a financial contribution in-lieu of providing onsite affordable housing
- Employment uses promoted to maximise viability (B2 general industrial and/or B8 storage and distribution)

5B Contaminated Land and Demolition

Evidence

5.12 The SDNPA commissioned a number of studies to find out more about contaminated land and demolition. In 2018, JBA Consulting undertook a Preliminary Geotechnical and Geo-Environmental Assessment Report[12] and a Preliminary Building Condition, Safety and Demolition Assessment Report[13]. In 2021, the SDNPA commissioned CGL to undertake a Programme of Works Report for Land Contamination[14]. CGL also managed a separate consultant report - Hazardous Materials (Chemical) and Demolition Costings survey[15] undertaken by Aver.

Biodiverse green roofs on residential and commercial buildings to mitigate runoff and provide habitat for various species (Credit: Susdrain)

5.13 The information contained within the reports is based on site visits, consideration of historical records, published and unpublished records and information from public authorities.

5.14 Within the **Riverside** there is potential for widespread diffuse contamination associated with the made ground plus specific point sources. The underlying geology includes alluvium which has the potential to be a limited source of ground gas. The site operated as a standard wet, water-based process with the kilns being coal-fired so there were no bulk use/storage of petroleum fuels in the process.

5.15 The **Bowl** area was licensed as an inert landfill during the latter half of the twentieth century to dispose primarily of cement kiln dust (CKD). This is a significant by-product material of the cement manufacturing process and is characterised by a very high sulphate and alkaline pH; the fill depth of the CKD is likely to be considerable. CKD is unlikely to be suitable for re-use in areas where future users may be exposed to it, for example, public open spaces or where it may pose a risk to controlled waters without capping or treatment to lower the pH of the CKD materials. It is unlikely to be a suitable medium for landscaping and promoting plant growth.

5.16 Made ground and alluvium deposits can be a source of ground gas where an appreciable depth / organic content is present. If present, degradation of hydrocarbons/organic chemicals can also produce organic vapours and ground gases.

[12] Preliminary Geotechnical and Geo-Environmental Assessment Report, JBA Consulting, 2018
[13] Preliminary Building Condition, Safety and Demolition Assessment Report, JBA Consulting, 2018
[14] Programme of Works Report for Land Contamination, Removal of Existing Buildings and Drainage Investigations at Shoreham Cement Works, CGL, 2022
[15] Hazardous Materials (Chemical) and Demolition Costings survey, Aver, 2022

Elevated concentrations of methane and carbon dioxide were recorded in a location above the former lagoon located in the Bowl.

5.17 The **Moonscape** is vacant and unused. This area is the highest and most recently quarried and is enclosed to the north, east and west by old quarry walls. Overall, this area is considered to present a low risk of contamination.

5.18 In terms of demolition, the survey and report by Aver noted that the buildings generally have tin-sheet roofs, but asbestos-cement cladding to the walls. These surfaces are coated in a layer of solidified cement dust that increases the sheet weights. It is most likely that mechanical demolition of these features will be the appropriate method of asbestos cement sheet recovery. As would be expected for a former cement works, layers of cement dust are present through all of the buildings on ledges/steelwork.

5.19 The site has already been stripped of valuables/cable/non-ferrous items, including transformers and switchgear.

5.20 No asbestos management plan/file has been received, but it would appear that the bulk of the asbestos hazards, excluding cement sheet, have already been removed. Asbestos cement sheet debris is present in many locations, but no great stockpiles of this material were observed.

5.21 No access to the former Laboratory building was possible, but it appears to have been cleared-out/stripped back to a near bare-shell condition. Visually, the former Laboratory building may be reasonably sound, and could potentially be re-used.

Issues

5.22 The cost of remediation, the demolition of existing buildings and the protection of the **Clifflands** will impact on viability, the extent of developable land and the type of development appropriate. The reports commissioned by SDNPA do not include ground investigation work nor the analysis of the investigation results as this level of work is not appropriate for an AAP. Therefore, recommendations are made based on desk based and site walk overs and the full extent of made ground, contamination hotspots and ground gases generation is unknown.

5.23 The **Moonscape** is unused and presents low risk of contamination but much of it is at risk from rock fall.

5.24 The full extent of remediation and clean-up requirements will differ depending on sensitivity of the end user and site layout. The costs of demolishing the existing buildings has been set out in the Aver report but this has been based on a site walkover and not on in-depth survey work.

5.25 A large risk for the demolition is the extent/thickness of slabs and foundations. These are usually very thick in cement works, but breaking-out these foundations can be a large commercial risk. Assumptions can be made, but the true extent of

foundations and slab thicknesses will only be identified on break-out and excavation of the materials. Potentially, these slabs and foundations could be retained in-situ and re-used as part of future use of the site, but undoubtedly some re-working of these surfaces would be required

How the Issues Affect the Five Areas

5.26 The **Riverside** contains some made ground and has the potential for combination hotspots. There are limited demolition requirements in this area.

5.27 The **Cement Works** contains the former cement works buildings and demolition costs are important to the viability of the overall development. There is limited made ground in this location. There is potential for some hotspots of contamination and asbestos containing materials. Further investigation into the potential to re-use slab foundations is required. Detailed ground investigation is recommended at planning application stage to confirm the extent of made ground though the overall risk of contamination is lower than the **Riverside** area. The slope stability levels will need to be considered.

5.28 The **Bowl** contains inert landfill areas with a substantial amount of made ground comprising CKD and other by products of manufacturing process. It also contains the site of the former lagoon. New structures may require foundation solutions such as piled foundations and any route infrastructure may need to avoid areas of contaminated infill. Excavation/sorting and screening plus off-site disposal of all material in the top 300mm (commercial/residential without gardens) and 600mm for residential with gardens is a likely requirement for this area.

5.29 The **Moonscape** is vacant and unused. There are no sources of contamination. Slope stability and rock fall are important issues. Access to this area will need to be considered.

5.30 The potential levels of mitigation and engineering required for highly sensitive land uses (residential) in the **Clifflands** are likely to be greater than those required for less sensitive land uses such as commercial or open space. The **Clifflands** are considered unsuitable for residential uses.

Options

5.31 There are a number of options arising from the contamination and demolition evidence:

- It is likely that the **Riverside** area is most suitable for housing development, with or without gardens, or commercial development.
- The **Cement Works** area is most likely suitable for a mix of housing, with or without gardens, and commercial development.
- Light industrial uses are recommended towards the **Bowl** end of the **Cement Works** area as rock fall issues may impact on where commercial development with higher footfall/traffic movements is located.

- The **Bowl** area is most likely to be suitable for commercial development.
- The **Moonscape** is most likely to be suitable for public open space.
- The **Clifflands** are unsuitable for any development due to cliff stability.

5C Water, Drainage and Flooding

Evidence

5.32 The SDNPA commissioned a number of studies in 2018 and 2021. JBA Consulting undertook a Preliminary Geotechnical and Geo-Environmental Assessment Report[16] and a Preliminary Building Condition, Safety and Demolition Assessment Report[17] in 2018. In 2021, the SDNPA commissioned CGL to undertake a Programme of Works Report for Land Contamination[18] and Motion to prepare a Foul Water Drainage Strategy[19].

5.33 The site is not connected to a Southern Water clean water mains or wastewater sewerage network. There is an existing private system of foul and surface water drains, including outfalls to the River Adur and two existing discharges of treated effluent to the ground and surface water.

5.34 The foul water drainage strategy for the site is that wastewater would drain from high point to low point (**Riverside**). There are two options for the site, which could either be connected to the existing sewer network with a new pumping station or a new waste water treatment works could be provided on site.

5.35 Tidal risk appears to provide the greater flood risk to the site on an event rarity basis. There is no encroachment of Flood Zone 2 or 3 predicted on any of the site areas. For Flood Zone 3a, when climate change allowances are applied, it is predicted to encroach on the southern part of the **Riverside**, at the point of the access road into the area. The flood extents from this event are larger than present day Flood Zone 2 extents. While both fluvial and tidal Flood Zone 3a climate change outputs intersect this part of the site, the extent is larger in the tidal event.

5.36 The flood defences along the River Adur reduce flood risk to the site, so the 'actual risk' is less than indicated by the Flood Zone modelling.

Issues

5.37 The provision of a WTW or pumping station will impact on viability and the extent of developable land and the type of development appropriate in close proximity to these facilities.

5.38 When future Flood Zone 3a is considered, a small extent of **Riverside** is predicted to be within the zone, but this is confined to the southern area of the site.

[16] Preliminary Geotechnical and Geo-Environmental Assessment, JBA Consulting, 2018
[17] Preliminary Building Condition, Safety and Demolition Assessment, JBA Consulting, 2018
[18] Shoreham Cement Works, Programme Of Works Report For Land Contamination, Removal of Existing Buildings and Drainage Investigations, CGL, 2022
[19] Foul Water Drainage Strategy, Motion, 2022

How the Issues Affect the Five Areas

5.39 Highly vulnerable development, with basements or temporary dwellings, is considered appropriate within all parts of the site including the **Riverside** with regards to flooding.

5.40 Commercial uses would be appropriate in the Riverside with regards to drainage. Space is likely to be required in order to locate attenuation, soakaways and other sustainable drainage system (SuDS) elements as the **Riverside** is at the lowest part of the site. Therefore this should be allowed for from the earliest stages of concept design. Dwellings would be appropriate in all parts of the site with regard to drainage.

5.41 Non-residential institutions such as educational buildings/visitor centres would be appropriate for use in all areas with respect to drainage. The **Bowl** is an area of landfill with made ground, therefore it is the least likely area to be able to utilise infiltration drainage. For the **Bowl** and the **Moonscape** areas, the proximity of SuDS features to the existing quarry sides and terraces will also need to be considered, with regard to stability.

Options

5.42 There are a number of options arising from the water, drainage and flooding evidence:

- It is likely that the **Riverside** is suitable for housing or commercial/retail development. It may be the preferred location for the WTW or pumping station.
- Dwellings would be appropriate in all parts of the site with regard to drainage.
- Non-residential institutions such as educational buildings/visitor centres would be appropriate for use in all areas with respect to drainage.

5D Cultural Heritage

Evidence

5.43 The SDNPA commissioned an Industrial Archaeology Study[20] from WSP to provide a comprehensive overall understanding of the heritage significance of the site and the industrial archaeology interest of its buildings and structures. Unfortunately WSP was denied access to the site by the owner. However, a collection of original engineering plans and drawings that had been salvaged from the plant in 2004 came to light that provided invaluable insights into the site. The plans have been placed with the West Sussex Records Office and are available to view on request.

5.44 Cultural heritage forms part of the first purpose of national parks. Shoreham Cement Works forms an important part of the cultural heritage of the South Downs and Policy SD56 of the Local Plan requires the redevelopment to conserve, enhance and provide opportunities for understanding the historic significance and cultural herniated of the site. The **Cement Works** was designed by cement industry leader Oscar Faber, who was a keen advocate for the need to integrate aesthetics and engineering. He liked to show that practical buildings could be beautiful. His more notable works include the Menin Gate in Ypres and the Bank of England in London. During the Second World War he travelled to America to advise Sir Winston Churchill on the Mulberry Harbour project and assisted in its construction.

Buildings and infrastructure of cultural importance are retained and repurposed into a canvas for large scale artworks (Credit: Visit Victoria)

5.45 The history of Shoreham Cement Works dates back to at least the eighteenth century when the location was in use as a chalk quarry and contained lime kiln/s. A cement works was constructed next to the river at the end of the nineteenth century using chalk extracted from the quarry on the other side of the road. A new cement works was reconstructed immediately after the Second World War on the east side of the road, partly concealed within the existing chalk quarry. The new plant was much larger than the previous one and was provided with state-of the-art machinery, most notably two large rotary kilns for processing the cement. After becoming fully operational in 1951, Shoreham launched into cement production quickly becoming a successful plant. By 1968 the plant employed 250 people and the innovative and modern processes at the plant became an exemplar in the industry.

5.46 In the 1960s, the prominence of the plant was reflected through its frequent reception of school children on school trips from both primary and secondary

[20] Shoreham Cement Works: West Sussex Industrial Archaeology Study, WSP, 2022

schools across Sussex and Surrey. Coaches used to bring pupils to the plant where they would be welcomed at the visitor centre. An engineer would then chaperone them around the plant to illustrate cement production processes, the large pieces of equipment and machinery. Special attention would be paid to the wash-mills where fish were kept in the water, a showpiece to demonstrate how clean the production processes were. By the early 1970s the number of employees had increased to 315 and the plant was producing 392,000 tonnes of cement a year. The success of the state-of-the-art plant became an exemplar across Europe and numerous overseas delegations from the Commonwealth and even one from the Soviet Union were given tours.

5.47 The plant closed down in 1991 due to decrease in demand and competition from overseas. The site was vacated by the then owner Blue Circle Group, which left all the present buildings and machinery on the site. The majority of the buildings and structures were kept and mothballed. The main structure that was demolished was the 38-tonne conveyor bridge over Steyning Road, which was removed in May 1992.

5.48 The WSP study concludes that Shoreham Cement works is a site of medium significance, which has a high degree of structural survival despite lying dormant for some years and declining in condition.

Issues

5.49 There are a number of issues relating to the cultural heritage of Shoreham Cement Works. The WSP study explains how important the site was in terms of the scale of production, the number of people employed and the number of visitors to the state-of-the art facilities.

5.50 Firstly, it needs to be considered if any of the existing buildings should be retained as part of the redevelopment. The retention of all of the historic buildings, much of which are in an extreme state of dilapidation, would increase the development costs and thus impact on viability. However, should some of the buildings most notably the chimney be retained? It is a local landmark that can be viewed from a considerable distance of the site.

Kelham Island: Retaining and re-purposing culturally important features of the cement works. (Credit: The Sheffield Star)

5.51 Secondly, it is the machinery and structures, such as the kilns, rather than the buildings that house them that are historically significant. The buildings can only be restored and reused by clearing them of their contents. It could be argued that it is more important to salvage some of the machinery and structures and put them on public view within the site than to restore the buildings that house them.

5.52 The SDNPA requires that a landscape-led approach is taken to the redevelopment of the site. It needs to be considered to what extent the design should reflect and commemorate the site's cultural heritage. This can be done in a number of ways such as the use of materials and the design of buildings.

How the Issues Affect the Five Areas

5.53 The **Riverside** was the site of the original cement works, but very little remains of historic interest. It is the utilitarian **Cement Works** themselves where the most of the historic interest lies and it is here where the new four arm roundabout is proposed. This would obviously require the demolition of most of the buildings. The chimney, which forms a local landmark is located here just outside the footprint of the proposed roundabout. The rest of the site forms a dramatic backdrop to the site, but is of no particular historic interest.

Parque Etxebarria, Bilbao: Retain the chimney and place it centrally in a green space on the site as a sculpture and to reference its industrial history. (Credit: Bilbao Turismo)

Options

5.54 There are a number of options arising from the cultural heritage evidence:

- The demolition of all the buildings would maximise the amount of land available for redevelopment whilst the retention of some of the buildings and/or artefacts they hold would help to conserve and enhance the site's cultural heritage. There is also the issue of energy that is embedded in the existing buildings and their foundations.
- The design of the redevelopment should reflect and commemorate its cultural heritage. The question arises to what extent the design should do this.

Question 9: Should any of the buildings, such as the chimney, be retained on site?

Question 10: To what extent should the design of the redevelopment reflect the site's industrial past?

5E Nature Recovery

Evidence

5.55 The SDNPA commissioned ecology work to provide information about the biodiversity of the site to inform the preparation of the AAP. In 2018, a Preliminary Ecological Appraisal[21] (PEA) and Preliminary Roost Assessment[22] (PRA) (for bats) were undertaken. In 2021, the SDNPA commissioned WSP to provide an update[23] to the PEA with the addition of an Ecological Constraints and Opportunities exercise and a Baseline Habitat Value Assessment for Biodiversity Net Gain (BNG). A further survey will be undertaken in summer 2022 to support the condition assessment information in the BNG baseline. They also undertook a PRA[24] of the Cliffs. A bat activity survey will be undertaken during the spring/summer of 2022.

5.56 The PEA has identified habitats of ecological value including Open Mosaic Habitat (OMH) (consisting of moss, ruderal vegetation and ephemeral pools), calcareous grassland, woodland and the cliff faces. The areas of bare ground / exposed chalk have the potential to become OMH, which is a Habitat of Principle Importance under the Natural Environment and Rural Communities (NERC) Act 2006. The PEA also identified suitable habitat for a range of protected species. This includes roosting, commuting and foraging habitat for bats, scrub and woodland habitat suitable for badger, dormouse and hedgehog, and a range of habitats, notably OMH, for basking, shelter and foraging opportunities for reptiles. Many habitats present are also suitable for bird species. Notably the cliff faces and the post-industrial structure of the cement works provides nesting opportunities for a number of charismatic species such as peregrine falcons and black restarts, both of which are listed on Schedule 1 of the Wildlife and Countryside Act.

Wharram Quarry Nature Reserve: a former chalk quarry that has been transformed into a floristically and invertebrate rich chalk grassland. (Credit: Tom Marshall/ Yorkshire Wildlife Trust)

5.57 The PRA identified that all the cliffs had some suitability for bat roosting, with one cliff face having particularly high suitability and a further six have moderate suitability. These cliff faces were solid cliff faces, relatively unexposed, occasional to numerous

[21] Preliminary Ecological Appraisal for Shoreham Cement Works, The Ecology Consultancy, 2018

[22] Preliminary Roost Assessment, The Ecology Consultancy, 2018

[23] Preliminary Ecological Appraisal for Shoreham Cement Works, WSP, 2022

[24] Preliminary Roost Assessment, WSP, 2022

crevice or void features, suitable amount and type of vegetation cover, and generally set back from disturbance activity on the site.

Issues

5.58 As recognised in the State of Nature Report 2019[25] and the Government's 25 Year Environment Plan[26], biodiversity is declining. The trends of nature depletion are alarming and represents a biodiversity emergency akin and related to the climate change emergency. Nature recovery is a priority for the SDNPA. Conserving and enhancing wildlife is enshrined in the first purpose of the National Park.

5.59 The Government has committed to making a minimum of 10% BNG a legally mandatory requirement of planning permission through the Environment Act 2021. There is currently a transition period for the Government to prepare supporting regulations and guidance. It is expected that BNG will be a legal requirement for planning permissions from November 2023. The Local Plan includes policy SD9 (1)(b) which requires development proposals to identify and incorporate opportunities for net gains for biodiversity. The BNG Technical Advice Note[27] sets out how BNG is to be achieved in the SDNP in accordance with SDLP policy during this interim period.

5.60 The evidence has identified high value habitats and important species are present in many locations across the site. It is likely to be challenging to make provision for development to support a viable scheme whilst seeking to avoid and mitigate any harm, and enhancing biodiversity contributing to nature recovery. BNG should be integrated into the new development from the beginning with new buildings, green roofs and green walls and landscape treatment offering enhanced biodiversity opportunity. More details about how this affects each area of the site is set out in the next section.

5.61 A related challenge is achieving BNG on a site with highly distinctiveness habitat. The majority of this is the cliff faces and scrub atop the cliffs. Despite the relative low extent, OMH and calcareous grassland make notable contributions to the BNG baseline. Conserving and enhancing these areas are key considerations to achieving BNG. Utilising development structures to support nature via green roofs and green walls may make a useful contribution to BNG for the site, but there is potential tension with provision of solar panels for green energy generation.

[25] State of Nature Report, 2019
[26] A Green Future: Our 25 Year Plan to Improve the Environment
[27] Biodiversity Net Gain Technical Advice Notre, SDNPA, 2022

5.62 The unique OMH present, and opportunities for enhancement, have been facilitated by the particular use of the site. The activity has, in a cyclical manner, exposed the chalk and allowed the early succession species to establish when the disturbance has ceased. This cyclical or periodic disturbance creates the unique habitat structure and value for nature. Retaining, enhancing and/or creating more of this type of habitat would support celebration of the scar, the history of the site. However, the appropriate use of the site and management would be an important consideration in how such a celebration could be achieved. Such consideration include implications of access, recreational disturbance and lighting.

Betchworth Quarry: a former limestone quarry that has been restored to regenerate chalk grassland and deciduous woodland. (Credit: Ian Capper)

How the issues affect five areas

5.63 The evidence shows that the **Riverside** is the area with the least high value habitat and therefore has most potential for accommodating development. It is noted that the **Riverside** may offer opportunities to enhance the riparian corridor of the Adur. Some habitat of value is noted along the road corridor, which is a consideration for access of the site.

5.64 In the **Cement Works** area, there are mix of habitats including areas of chalk grassland and woodland. Some of this habitat is located close to the entrance of the site, which is a consideration for access of the site. The **Clifflands** to the south of this area has moderate value for bat roosting and could be affected by change in conditions and use of land next to the cliff. The **Cement Works** buildings have value for bats and birds. The biodiversity value will need to be considered and addressed as part of demolition or reuse of the buildings, including any mitigation that may be required.

Betchworth Quarry: a former lime kiln, which has been retained to become a habitat for bats. (Credit: Hugh Craddock)

5.65 The **Bowl** contains a significant area of OMH in the north/north west of this area. Important opportunities for enhancement and habitat creation have been identified in the north/east of this area. The **Clifflands** on the north / northeast inner section of the **Bowl** has been identified as particularly significant for bat roost suitability. This is adjacent to the OMH and enhancement area noted above which suggests this is a sensitive area and area of opportunity. If habitat is retained and, creation and enhancement opportunities for this area are pursued, careful consideration will need to be given to suitable compatible uses to support management of the habitat; some disturbance may be acceptable but this must be carefully managed.

5.66 The **Moonscape** area has high potential for habitat enhancement and creation. The bare ground / exposed chalk of this section has potential to become OMH. The **Clifflands** at the eastern side of this area are noted for peregrines. There is an area of currently grazed grassland habitat on the edge of the site and adjacent to Mill Hill shown to be of limited value for biodiversity at present. If habitat creation and enhancement opportunities for this area are pursued, careful consideration will need to be given to suitable compatible uses to support management of the habitat; some disturbance may be acceptable but this must be carefully managed.

5.67 All of the **Clifflands** have cliff faces with some suitability for bats. The northern inner section of the Bowl has been identified as having the highest suitability. The eastern cliffs have been noted for peregrines. The cliff tops have also been identified their scrub and chalk grassland habitats which supported a range of protected species, including providing potential commuting corridors. These have been subject to minimal disturbance being set back from recent and current activity and so new development will need to consider this, including sensitive lighting.

Options

5.68 There are a number of options arising from the nature recovery evidence:

- It needs to be considered how much of a priority nature recovery should be as part of the redevelopment of the site. The extent and intensity of development could have an adverse impact on sensitive habitats and protected species.
- The five areas of the site offer different opportunities for nature recovery, for example, the **Riverside** could be conserved and enhanced as a riparian corridor linking with other habitats down and up stream.

Question 11: In which area(s) of the site should the focus be for biodiversity protection, enhancement and creation?

Question 12: Should buildings and structures contribute to nature via green roofs and walls or should these surfaces support solar energy or a mixture?

5F Climate Change

Evidence

5.69 Climate change is happening and will have profound effects on the landscapes and wildlife of the South Downs, as well as for people living, working and visiting the National Park. The built environment is a key source of greenhouse gas emissions and the form of development now and in the future will determine how well we can adapt to climate change as well limiting the worse impacts of global warming.

5.70 Met Office climate projections[28] predict that at Shoreham Cement Works, the hottest summer day temperature will rise to about 36.6C to 41.5C. An increase in the incidence and severity of drought is likely to lead to water shortages locally. Meanwhile, warmer winters will lead to increased seasonal rainfall, with predictions of rainfall on the wettest winter days increasing 52% more than now. The intensity and frequency of extreme storm events is set to increase meaning key infrastructure is at greater risk of storm damage.

5.71 The changing climate does also offer some opportunities locally. Hotter drier summers may mean more visitors, and an extension of the trend for staycations following the pandemic. Longer hours of summer sunlight will also have a positive impact on the potential for solar or PV energy production and lower reliance on the national grid.

5.72 In 2021, the SDNPA commissioned a consumption based carbon footprint assessment[29] of the whole National Park. This provides a detailed picture of greenhouse gas emissions resulting from activity in National Park, including those attributed to residents, visitors and industry. The assessment shows that residents' annual carbon footprint per capita is significantly higher than the UK national average. Private car use dominates the carbon footprint of residents, which is unsurprising given the rural context, but emphasises the need for sustainable transport and measures to encourage a modal shift from the private car to buses, cycling and walking. Also 43% of residents are believed to commute outside the National Park. Providing local job opportunities and facilities for remote-working could help address this.

Issues

5.73 Cement is the key ingredient in concrete and has shaped much of our modern built environment. However, it has a massive carbon footprint. Cement production has ceased at Shoreham Cement Works and redevelopment of the site offers the potential, through innovation and ambition, to transform what was once a major

[28] Information accessed here 03-03-22 What will climate change look like in your area? - BBC News
[29] A greenhouse gas emissions assessment and target recommendations for the South Downs National Park, Small World Consulting Ltd, 2022

source of carbon emissions to a zero carbon development, generating renewable energy and potentially even removing carbon from the atmosphere.

5.74 The buildings on site, being made predominantly of concrete contain significant amounts of embodied energy and should ideally be re-used. This is unlikely to be practical in its entirety for a number of reasons, but as a minimum, the concrete structures and foundations should be recycled for other uses, preferably on site.

5.75 Any redevelopment will need to be matched by substantial investment in sustainable transport, for example, increasing the frequency and accessibility of the existing bus service. Providing car clubs could reduce private car use and there may also be scope to make parts of the site 'car-free' and have parking hubs. Making connections to the South Downs Way and Downs Link will be crucial for promoting walking and cycling links to the wider countryside and nearby settlements.

5.76 The site could offer the potential for a range of onsite renewable energy generation from solar energy in the unshaded areas of the site to potential use of the River Adur for hydro- power or water source heat pumps. There may also be scope to benefit from emerging technology and innovations such as the green hydrogen hub being developed at Shoreham Port. Landscape sensitivity will need to be balanced against renewable energy generation.

5.77 The character of the site, the steep cliffs, exposed quarry and presence of substantial made ground and contamination present particular challenges in adapting to climate change. Buildings will need to be designed to avoid overheating and public open space will need shade to be useable in the summer. However, tree planting is likely to only be suitable in the **Riverside** area. Sustainable drainage will need to be carefully designed to ensure contaminants do not enter groundwater and pollution pathways are not created.

How the issues affect the five areas

5.78 The impacts of both solar glare and radiation experienced within the **Cement Works** and the **Bowl** could be considerable during hot and sunny weather given the steepness of the cliff faces, the exposed chalk and limited shading.

5.79 The site is largely protected by the flood defences on the River Adur, although Flood Zone 3a ('High Probability' of fluvial or tidal flooding), is predicted to encroach on the southern part of the Riverside, at the existing access road into the area.

5.80 Overall the site is at low risk from surface water flooding. However, there is a surface water flow path in the Cement Works at high risk of flooding, located close to the tunnel passing under the A283.

Options

5.81 There are two main options arising from the climate change evidence:

- Existing Local Plan policy requires major development to be zero carbon and zero waste.
- This could be extended to require a zero whole life assessment covering construction, operational and ongoing extensions/repairs. Some offsetting will likely to be needed and any energy demands not met by onsite renewables generation could be required to be met by investment in new renewable energy off-site.

Question 13: What renewable energy generation do you think the site could offer?

Question 14: What opportunities do you think there are for the design of the redevelopment to ensure resilience to climate change?

5G Getting Around

Evidence

5.82 The SDNPA commissioned a Transport Assessment[30] from ADL Traffic & Highways Engineering to assess the effects and viability of each development scenario from a transport perspective. This assessment shows growth in traffic in the surrounding area generally and growth in traffic from site development in all scenarios. The study also assesses changes in the kind of traffic generated.

5.83 The study showed that there would be more private motor vehicles rather than the existing HGV and commercial vehicle levels for most scenarios, with Scenario 1 generating the greatest number of two-way trips in the peak hours (1,102 trips p/day). Scenario 4 would generate the least amount of traffic (735 peak hours two way trips p/day), in line with its smaller residential allotment, though balanced out with additional office space. The more leisure-based Scenario 3 would generate slightly more traffic than Scenario 4 (742 peak hours two-way trips p/day), but the makeup of this traffic shows greater volumes of bus/coach traffic, estimated to be at least 3 p/day along with 190 of the two way trips p/day being for leisure access.

5.84 Shoreham Cement Works is bisected by the A283 Steyning Road and there is an underpass linking the two parts of the site. Detailed examination of the underpass was not within the scope of works for the traffic consultants. Many variants of access were tested, including All Movements Junctions, and a pair of three armed roundabouts at the existing access points. However, the best option in regards to queues and delays for traffic both using the site, and traffic on the A283, is a four armed roundabout located near to the existing access point to the Cement Works area; full details can be found in section 11.0 of the ADL report.

routes across the surrounding landscape, such as the Downs Link and South Downs Way, and also encouraging cycling for recreation and commuting. (Credit: LUC)

5.85 This roundabout could also facilitate the segregation of vehicular traffic that would use the roundabout from pedestrians/cyclists who use the existing underpass; emergency vehicles could also use the underpass. Alternatively, a new and improved underpass could be provided that could accommodate flows of traffic in both directions along with segregated cycling/walking routes. This would allow for a pair of Left-in-Left-out junctions at the existing access points with traffic routing through the site and through an underpass. Either access arrangement should take on board

[30] Shoreham Cement Works Transport Assessment, ADL Traffic & Highways Engineering, 2022

the recommendations in the SDNPA guidance document Roads in the South Downs to ensure they are in keeping with the purposses of the National Park.

5.86 Traffic tensions on surrounding network can be mitigated. In the tested worst-case scenario, Scenario 1 without sustainable transport options, approximately £2.5million worth of works would be required to surrounding junctions/roundabouts. This can be reduced with agreement from West Sussex County Council as two locations show negligible effects from development traffic. Sustainable transport options are available, but it is uncertain how much relief they will provide.

5.87 There is scope for improvements in sustainable access to the site, connecting up with both the South Downs Way and the Downs Link, improving bus connectivity and making use of car club spaces. With investment in digital infrastructure, and a mixed use site, reducing the need to travel and increased home working could also reduce dependence on private motor vehicles.

Milton Keynes: Make a home for nature through the use of bus stops with green roofs. (Credit: Bridgman & Bridgman / Greenscape Magazine)

5.88 Overall, the conclusion of this study is that delivery of the proposed development scenarios is feasible from a transport perspective. However, all the development scenarios would require significant highway improvement measures coupled with reduction in private car usage, through sustainable transport measures.

5.89 It should be noted that the traffic counts for the study were carried out in summer 2021 and so there is uncertainty over the commuting and trip patterns. Further, traffic counts will be carried out, if necessary, before the submission of the AAP for examination.

Issues

5.90 There are a number of transport issues relating to Shoreham Cement Works explored by the ADL study relating to traffic generation, different access solutions and sustainable means of travel.

5.91 In terms of motorised transport the redevelopment would cause a general increase in traffic on the surrounding network. Due to its relatively remote location, the site is predisposed towards motor vehicles which of course contributes to climate change. Scenario 1 would generate the most traffic (1102 peak time two-way movements p/day) whereas Scenario 4 generates the least (735 peak time two-way movements p/day). The leisure based Scenario 3 changes the composition of traffic,

drawing more coaches and tourist traffic to the site (3 coach and 190 car based peak time two-way movements p/day).

5.92 In terms of the access solutions there are landscape effects generated by the different options, for example, the provision of a roundabout would require the clearance of much of the **Cement Works**. The duel use of the new roundabout and the underpass could facilitate segregating motorised and non-motorised traffic. There may also be the possibility of shared surfaces rather than segregated traffic. Some scenarios and access options could result in mixed heavy traffic in residential areas.

5.93 The site is close to both the South Downs Way and the Downs Link, which offers great opportunities to access the site by foot or cycle if well marked links are provided.

How the Issues Affect the Five Areas

5.94 The issues for the Riverside are primarily access related. The roundabout would involve major infrastructure changes and regrading of terrain. The provision of a new and improved underpass would create higher traffic flows through residential areas. As primary residential area, internal routes would need to be informed by Roads in the South Downs and the Manual for Streets.

5.95 Again, the issues for the Cement Works are primarily access related. The roundabout option would involve major infrastructure changes and regrading of terrain. Some of the development scenarios would skew traffic, for example, the leisure scenario has a higher amount of coaches and busses accessing the site. As a potential residential area, internal routes would need to be informed by Roads in the South Downs and the Manual for Streets.

5.96 There are few transport effects on the Bowl and the Moonscape outside of internal routing. In regards to the Clifflands, roads and access need to be located away from cliffs due to safety concerns.

5.97 In all areas walking/cycling access routes would need to be connected up to and through the site, primarily accessing the residential areas and any tourist focused attractions.

Options

5.98 There are a number of options arising from the transport evidence:

- A four arm roundabout located near the existing access to the Cement Works area is suggested as the best option by the transport consultants. The existing underpasses would be retained for walking/cycling and emergency vehicle access.

- There is potential for a left-in-left-out access using existing access points instead of a roundabout. This would require replacing the existing underpass with a larger one that could accommodate two way traffic and walking/cycling access. Full investigation of this option was beyond the scope of the Transport Study.

4-arm roundabout to improve access entering and exiting the site on the A283. (Credit: Nigel Cox)

5.99 Two further options were considered but dismissed by the consultants due to unacceptable impacts on traffic flows. We would, however, be interested in your views too. The first further option was the retention of the two all movements junctions on both sides of the road plus the existing underpass. The other further option was the provision of two three-armed roundabouts plus the existing underpass.

Question 15: What is your view on a new roundabout or any other solutions to access the site?

Question 16: Do you support shared surfaces or segregated routes for vehicular traffic and pedestrians/cyclists for parts of the redeveloped site?

5H A place to visit

Evidence

5.100 The South Downs National Park attracts over 19 million visitors annually, who spend £464 million every year[31]. The most popular activities by visitors are walking and rambling, and visiting tea and public houses, followed with increasing popularity by shopping[32]. Day visitors are the largest proportion of visitors, and when asked a majority of visitors responded very high or high when asked about overall enjoyment of the South Downs National Park. Tourism in this area of the National Park relates closely to nature and the Local Nature Reserves nearby to the site. As there is a substantial evidence base on tourism in the National Park, it was not considered necessary to commission a separate study to support the AAP.

5.101 To the south, this part of the National Park is connected to Shoreham by Sea by a number of paths and right of way[33]. The People and Nature Network (PANN)[34] includes Shoreham Cement Works in the opportunity area of the Adur Blue-Green corridor where there are opportunities for cultural heritage and green infrastructure enhancements. To the north looking towards Upper Beeding and Bramber there are the South Downs Way and Downs Link. There is also the Beeding Hill Car Park, known locally as the Five Ways Car Park, to the northeast of the site.

Issues

5.102 Visiting the National Park and enjoying its special qualities is the second purpose of national parks. The Landscapes Review[35] written by Julian Glover notes that our national landscapes should be "happier, healthier, greener, more beautiful and open to everyone." Proposal 14 highlights the drive for National landscapes to become leaders in supporting sustainable tourism. During and since the pandemic more people than ever have been exploring the National Park. Locally, there are problems with car parking at Beeding Hill Car Park. Visitors regularly park along the South Downs Way and can block entrances to farmers' fields. The site itself is also not well served by public transport, except for a bus service. We already are aware that 70-80% of all of those who visit the National Park do so via private transportation. The PANN[36] notes that the A27 to the south creates a barrier for communities to access the National Park and that there is a deficit in existing accessible natural greenspace in the coastal towns.

[31] South Downs National Park Authority, Tourism Strategy (2015-2020)
[32] Visitor Survey Final report, South Downs National Park Authority, 2018
[33] Access Network and Accessible Natural Greenspace Study, South Downs National Park Authority, 2014
[34] People and Nature Network Full Report, South Downs National Park Authority, 2020
[35] Landscapes Review, Julian Glover, 2019
[36] People and Nature Network – The evidence and action report, South Downs National Park Authority, 2020

5.103 We consider that there should not be an 'off the shelf' approach to this site. That recreation and tourism that may work in other areas, may not be suitable here. We want something that speaks to the special qualities of the National Park, is unique and identifiable as being in the South Downs National Park. We would also want to avoid creating a 'honey pot' site, which would bring too many visitors to the site and degrade visitors overall enjoyment and possibility of returning to the site.

Utilising materials already on the site as devices for interpretation and signage, giving reference to the industrial heritage. (Credit: Fitzpatrick Woolmer Design & Publishing Ltd)

5.104 Various forms of pollution would have a negative effect on people and the natural environment. Littering has the potential to disturb local habitats, wildlife and livestock. Noise would detract from the tranquility of the eastern part of the site. The site is also within an intrinsic zone of darkness in the Dark Sky Reserve and so is susceptible to light pollution.

5.105 The third development scenario formulated as part of this study was leisure led. The floorspace figures for this scenario were based on the planning applications for the Eden Project in Cornwall and Zip World in Snowdonia.

How the Issues Affect the Five Areas

5.106 An overall tension that affects the five areas is the way different uses will be dispersed throughout the site. We need to think about the relationships between uses and their users. There is the potential for conflict, for example, between residential and large scale commercial.

5.107 The **Riverside** is very accessible from the roadside and has close connections with the Downs Link, public transport (Number 2 bus) and the Adur River. Water sports and links to blue infrastructure could be possible here. With café or restaurants for those who are using the Downs Link and South Downs Way for recreation. However, there are concerns over the suitability of water sports in this area due to the velocity of the water and the strength of the current.

5.108 The **Cement Works** is a local landmark in the landscape of the South Downs with its distinctive chimney, which can be seen from afar. Here the industrial heritage of this part of the site could form part of a visitor attraction. A visitor centre, café or restaurant could also work well here.

5.109 The **Bowl** and the **Moonscape** are very sensitive both in terms of landscape and biodiversity. They are currently relatively tranquil as they are located some distance from the main road. They could be the best opportunity for recreation and tourism, and still be fairly hidden inside the landscape.

Zip World, Wales: Zip wire across the old quarry and experience views of the Adur Valley. (Credit: Zip World)

5.110 There are opportunities in the **Bowl, Moonscape and Clifflands** for the quiet enjoyment of the geodiversity and biodiversity of the site. This could be through the provision of nature and geology trails, bird hides and a visitor/education centre.

5.111 The **Clifflands** form a stunning backdrop to Shoreham Cement Works. They form another aspect of the site that are locally significant and act as a landmark. There are questions around implementing any kind of tourism or change to this part of the site, due to the instability of the chalk cliffs. They provide sensitive habitats for bats and peregrine falcons. Whilst the tops of the cliffs are important for nature, there is a section to the east edge of the **Moonscape** area that is lower value grassland. This section of the **Clifflands** could be suitable for recreational or tourism use although it is currently quite disjointed from the rest of the site and is sensitive in terms of landscape

Options

5.112 There are a number of options arising from the tourism evidence:

- Firstly, a sensitive, naturalistic approach to attract visitors would conserve and enhance what is already on site in terms of fauna and flora, natural habitats and wildlife. This option would promote education and the special qualities of the National Park with a big push for biodiversity net gain and ecosystem services. This may include walking and rambling, bird watching, nature trails and star gazing in the dark night sky reserve. A café or small restaurant that would not be intrusive to the landscape mosaic could be suitable. This would be situated in the bowl, moonscape and incorporates elements of the cliffs.
- A second option is to celebrate the chalk. Similar to the first option, but with a focus on geology and particularly the chalk. There could be art and sculpture trails, a museum or an art gallery. This would be situated in the **Bowl** and **Moonscape**, with minimal physical interaction with the **Clifflands.** Rock climbing may be possible on the **Clifflands** as part of this option providing there was robust evidence on the stability of the chalk cliffs. There are several indoor rock climbing facilities in the sub-region but none that offer the outdoor

experience. A cable car could carry visitors from the Downs Link to the South Downs Way thus showcasing the **Clifflands** with minimal physical impact.

- The third option is larger scale tourism, focused on recreation that fits within the landscape.
- Finally, the natural amphitheatre of the **Bowl** could be used for live music and festivals. The whole site could be a suitable location for filming. For films or television.

Dalhalla, Sweden: Open air theatre in old limestone quarry. (Credit: Calle Eklund)

5.113 The Authority considers that a large scale leisure complex that is not bespoke to the National Park and does not relate to its special qualities is unacceptable at Shoreham Cement Works.

Question 17: What visitor attractions would you like to see on the redeveloped site?

Question 18: What visitor attractions would you not like to see on the redeveloped site?

Question 19: What do you think is special about this part of the National Park that could attract visitors and can you suggest how it could be enhanced as part the redevelopment?

5I A place to live

Evidence

5.114 It is accepted that new homes will form part of any redevelopment at Shoreham Cement Works. Residential development is necessary to pay for the landscape restoration but this needs to be carefully planned so the new homes do not to lead to landscape harm. The residential element of the redevelopment offers opportunities and challenges in creating a new, attractive and sustainable place to live.

5.115 There is significant housing pressure in the National Park, where the supply of new homes is constrained by the need to protect the nationally important landscape. Housing need far outstrips housing supply[37]. With limited supply, the provision of new homes in the National Park is focused on addressing local needs and in particular affordable housing needs. There is also unmet housing need arising from the nearby urban areas along the south coast[38] and to a lesser extent from nearby villages in the south of Horsham district.

5.116 Evidence from assessments of the housing market, show there is demand for small and medium sized homes (1-3 beds), a need coming from both younger households starting out and older households looking to downsize. Locally, a housing needs survey[39] undertaken by Upper Beeding Parish Council confirmed a need for older people looking to downsize, and in some cases households seeking sheltered accommodation. The survey also found a need for affordable housing particularly for single person households. No separate evidence was collected on housing need for this AAP.

Retain cultural heritage, such as the chimney, and surround the site with new eco-friendly, affordable apartment blocks. (Credit: Rachel Warne, Andy Sturgeon Design)

Issues

5.117 There is an underlying tension in creating a sustainable place to live at Shoreham Cement Works, given it is 2km from the nearest shop, school or health care facility. On the other hand, the site is not completely remote, as it is under ten minutes' minutes by car from Shoreham-by-Sea railway station and under half an hour to Brighton & Hove City Centre. At the same time there will be a limit on the number of homes that can be built here, given the landscape and environmental constraints

[37] Strategic Housing Market Assessment – South Downs National Park Authority (GL Hearn, 2015) and Housing and Economic Development Needs Assessment (GL Hearn, 2017)
[38] Strategic Housing Market Assessment – Adur District Council & Worthing Borough Council (Iceni, 2020)
[39] Upper Beeding Housing Needs survey, Action in Rural Sussex, 2014

as well as the employment / visitor aspirations for the site. These factors limit the scale of residential development that can take place, which in turn influence the level of community facilities that development could support. Nevertheless, creating a community focus will be important in making this an attractive and sustainable place to live.

5.118 Different quantums of housing were tested as part of the development scenarios. These ranged from just 84 in the dismissed appeal scheme forming scenario 4 to 400 and 240 new homes in the mixed employment and housing schemes in scenarios 2 and 3 respectively. The leisure led scheme forming scenario3 included 200 new homes.

5.119 A multi-functional community space, at the heart of the new homes, could provide a place for residents to meet, attend classes and events, share resources or provide a remote-working hub. Residents will also need a local grocery store as well as areas to exercise and space where children can play safely. The site also offers unique opportunities for residents to connect to nature.

5.120 As discussed in the viability section, whilst there is acute need for affordable housing, delivering affordable homes at this site is very challenging. The evidence also points to the need for sheltered housing but arguably the site's isolated location makes it unsuitable for this type of housing. Another issue will be to what extent a mixed community can be created at the site.

5.121 There are important interconnections between the redevelopment being a place to live and a place to work. Ultrafast broadband will be necessary to support remote working and anecdotal evidence suggests there are currently gaps in mobile signal coverage locally. Some forms of employment activity can be integrated relatively easily within residential areas, for example, small office-based activity, whereas light industrial workshop activity needs careful consideration and design. Larger-scale warehouses and factories would need a clearer separation from residential areas.

5.122 As a place to live, the redevelopment will also have a relationship with nearby settlements. Shoreham Cement Works is positioned roughly midway on an access corridor between Shoreham-by-Sea to the south, and the settlements of Bramber, Steyning and Upper Beeding to the north. This could be a complimentary relationship, with new residents looking to these centres for a range of facilities and services. Equally, the aspiration is for Shoreham Cement Works to become a new destination for these local communities in the vicinity.

Secure and attractive cycle storage close to amenities and transport connections. Promotion of sustainable transport options.) (Credit: Green Roof Shelters Ltd)

How the issues affect the five areas

5.123 As noted in the viability section, the **Riverside** will attract a premium making this the most attractive area for housing. However, land contamination needs to be factored in when planning for a place to live. The **Riverside** has substantial areas of made ground with potential for widespread contamination as well as contamination hot spots, although the contamination assessment does not preclude the creation of residential gardens in this area. There is the expectation that there will be employment development in the **Cement Works** area. The inter-relationship with any new homes also located in this area will need to be carefully considered, taking into account for example traffic and noise impacts. The **Bowl** is the area of most significant contamination, with high levels of toxic cement kiln dust, making this the least suitable area for new homes. Whilst the **Moonscape** has low levels of contamination, it has the highest landscape sensitivity and is remote from transport / utilities infrastructure making residential development here unlikely. The **Clifflands** would be unsuitable for housing because of the risk rock falls; this could be mitigate by substantial netting but this would most likely be unacceptable in landscape terms.

Riverside housing using colours that are in keeping with the landscape. (Credit: Oakland Holdings)

Options

5.124 There are a number of options arising from the housing evidence:

- As a place to live, the redevelopment could include more or less of a range of different housing types, for example, family-sized homes with gardens or apartments with communal gardens / rooftop gardens. The choice of housing types will be constrained by a number of issues particularly contamination.
- Focus housing development in the **Riverside** only or also include housing in the redevelopment of the **Cement Work**s as well.
- There are emerging types of housing development which may grow in predominance and could be relevant to redevelopment at Shoreham Cement Works. For example the growth in Build-to-Rent, may see more people looking for longer term tenancies in preference to buying a home.

Question 20: Who do you think would be interested in living at the redeveloped Shoreham Cement Works?

Question 21: What do you think would help make this a sustainable community where people would like to live?

Question 22: Do you think houses with gardens or flats or a mixture should be built?

5J A place to work

Evidence

5.125 There is a substantial existing evidence base on employment previously prepared both by the Authority and surrounding authorities. Therefore no separate evidence was collected on employment for this AAP.

5.126 Historically, Shoreham Cement Works was allocated in both the Horsham District Core Strategy (2007)[40] and the Allocations of Land Development Plan Document (2007)[41] for restoration, including employment, leisure and/or tourism uses. The Employment Land Review Update[42] prepared by the SDNPA to support the Local Plan identified the site as a potential employment site, but notes that only a small proportion of the overall site is likely to come forward for employment. Policy SD35: Employment Land of the Local Plan sets out an overall employment provision figure of 10.3 hectares for the National Park, but is not dependant on Shoreham Cement Works to meet this need. Although the Inspector dismissed the appeal in 2003, he did confirm the site's potential suitability for employment development saying that it provided an opportunity to meet the needs of the coastal districts rather than Horsham. He thought that the redevelopment of Shoreham Cement Works would probably be the most significant major new employment area in the Coastal Towns Priority Area for Economic Regeneration.

5.127 We have made use of studies prepared by the local authorities covering the site namely Horsham District Council (HDC) and Adur & Worthing District Councils (AWDC). Data included in the HDC (2020) Economic Growth Assessment[43] suggests the need for a balance of housing and jobs as a key objective for the Council without specific sector preference. The AWDC (2019) Economic Profile for Adur[44] and AWDC (2018) Economic Strategy[45] identifies the need for a future focus on technology and innovation, centred, wherever possible, around a greener economy, as this is widely regarded as, not only, a high value sector providing high value businesses offering high value employment opportunities but also contributing to the challenge of climate change. In pursuit of their objectives,

studios and green features. Creating a sense of place (Credit: LUC)

[40] Horsham District Council, Development Framework Core Strategy, 2007
[41] Site Specific Allocations of Land Development Plan Document, Horsham District Council, 2007
[42] South Downs National Park Employment Land Review Update, SDNPA, 2017
[43] Northern West Sussex Economic Growth Assessment Focused Update for Horsham, Horsham District Council, 2020
[44] Economic Profile of Adur, 2019
[45] Adur and Worthing Economic Strategy 2018 to 202

AWDC have targeted alternative fuel technology including hydrogen technology, green technology and investment into innovation. Important work in the vicinity is ongoing on the Sussex Bay Project, which explores kelp restoration and seabed mining, whilst investment work around natural capital is ongoing. This 'direction of travel' is further supported by West Sussex County Council (WSCC) (2020) Economy Reset Plan[46] , which identifies a vision for resetting the economy animated by a focus on particular sectors including "tourism, opportunities to embed zero-carbon and nature-based solutions approach to build on the experience of lockdown to maximise a digital technology led approach." (WSCC, 2020, p.4)

5.128 In summary, it has long been recognised that Shoreham Cement Works could deliver a significant quantum of new employment land and jobs centred on a greener economy. It is difficult to estimate how much land or how many jobs could be provided and it is one of the purposes of this AAP is to address this issue.

Issues

5.129 Policy SD56 of the Local Plan states that positive regard will be given to proposals for a number of commercial uses. These are sustainable tourism/visitor based recreation activities and leisure development, manufacturing, storage and distribution and offices. All of these commercial uses would need to deliver the environmentally-led restoration of the site.

5.130 The four development scenarios included different quantums of employment floorspace. Scenarios 1 and 2 both included 36,200 metres squared of new employment floorspace as part of a mixed use scheme. Scenario 3 is leisure led and so does not include traditional employment floorspace. Scenario 4 is based on the 2003 appeal and includes 16,500 metres squared of new employment floorspace. Each scenario was tested for its impact on traffic movements in the Transport Study. Traffic movements, particularly heavy goods vehicles (HGV) traffic, generated by new commercial development and the ensuing issues of noise, safety and nuisance all need to be considered as part of the mixed use redevelopment.

5.131 It is important to consider the types of jobs as well as the number of jobs. The increased awareness around climate change coupled with the economic fall-out from the pandemic have altered the economic landscape across the country including the south east. Employer and employee attitude and behavioural change to office and home working have contributed to the need to interpret the existing evidence base within this current economic context. Evidence in the form of, the UK Government (2020)[47] Ten Point Plan for a Green Industrial revolution and more locally Adur & Worthing's green economic response, suggest the once acceptable reliance of businesses based in the South Downs National Park to simply exist is no longer deemed adequate. Today, businesses must be seen to positively contribute to the dual crises of modern time namely the biodiversity and climate change emergencies,

[46] Economy Reset Plan 2020-2024, West Sussex County Council
[47] The Ten Point Plan for a Green Industrial Revolution, 2020

and to address recovery arising from the pandemic. We wish to see business and commercial uses thriving in pursuit of a greener economy in line with the UK Governments (2020) aspirations and those of the SDNPA as set out in our Recovery Strategy[48].

5.132 The analysis of the evidence, having regard to the above suggests a shift away from traditional storage or distribution in favour of land use that compliments and attracts green jobs and a preference for sectors that contribute to this agenda.

5.133 High value jobs are important for the National Park's communities and will reduce the very high levels of out-commuting and travel to work movements in the National Park.

5.134 Knowledge intensive businesses are re-locating along the coast from Brighton through 'longshore drift'. With a suitable provision of employment space and infrastructure support, crucially, ultrafast broadband, it is expected that these businesses are attracted to key locations in the National Park. This helps to provide high skills and associated employment, retain young people thereby bringing vibrancy into our towns and isolated rural communities.

5.135 Manufacturing is a significant sector in the SDNP economy; however, not enough of this sector is technologically sensitive i.e. advanced. Supporting the development of more advanced manufacturing in the region will have an economic and environmental benefit.

Create space for warehouses to be utilised for storage, workshops or offices. (Credit: RE-Format LLP & Deacon Design)

5.136 The evidence shows a need for employment space and a reasoned argument for a focus on Advanced Manufacturing, Innovation and Green Technology, wherever possible. Emphasis on the importance of building on the example set by AWDC in terms of supporting a green economy should be communicated and actively explored. Focus on Advanced Manufacturing, Innovation and Green Technology in pursuit of a greener economy is further supported by our Climate Change Adaptation Plan.

5.137 Further to the development of new businesses on the site, it is necessary to consider the relocation of existing employment and storage uses that are not appropriate to a National Park setting.

How the Issues Affect the Five Areas

[48] SDNPA (2020b) South Downs Economic Recovery Strategy

5.138 Consideration should be afforded to the suitable and comparable re-location of existing businesses currently utilising the **Riverside**. It is generally accepted that this area is suitable for housing and therefore, is unlikely to be identified for substantial employment development.

5.139 The **Cement Works** and the **Bowl** are the most suitable locations for substantial commercial development. Ideally, these areas would be identified solely for this use although there is potential for housing to be located in these areas as part of mixed use scheme. If this is the case, careful consideration should be provided to avoid bad neighbour disputes on matters such as traffic and noise.

5.140 It was noted in the contaminated land section that the **Bowl** is heavily constrained by the substantial deposits of concrete kiln dust and is the site of a former lagoon. Developing the **Bowl** would require foundation solutions such as piled foundations and any route infrastructure may need to avoid areas of contaminated infill. This makes the Bowl more suitable for lightweight commercial buildings that could be accommodated on the contaminated made ground and would generate value for the site.

5.141 It is generally accepted that the **Moonscape and Clifflands** are unsuitable for employment development due to landscape, biodiversity and safety constraints.

Options

5.142 There are a number of options arising from the employment evidence:

- Prioritise employment space that is linked to the National Park's priority sectors of farming, forestry and tourism
- Prioritise employment space that is linked to local/ sub regional climate change and nature recovery plans and contributes positively to a greener economy.
- Create high value, high skilled jobs.
- Provide employment floorspace in response to the wider economic need for B8 storage and distribution

Question 23: What sort of businesses would you like to see and why?

Question 24: What sort of businesses would you not like to see and why?

Question 25: Do you think green tech companies should be encouraged to locate here?

5K Landscape

Evidence

5.143 The SDNPA commissioned a Landscape Study[49] from Land Use Consultants (LUC) to begin to understand the characteristics and sensitivities of Shoreham Cement Works and its wider context. The study breaks landscape down into its elements to make it easier to understand and easier to guide positive future change. The Authority has a comprehensive evidence base on landscape, which supported the preparation of the Local Plan most notably the South Downs Landscape Character Assessment[50] and Viewshed Analysis[51].

5.144 The study found that Shoreham Cement Works is a highly sensitive site in both landscape and visual terms; these are mostly physical and natural, visual, perceptual and cultural sensitivities. The site itself is highly visible from the west and together its chimney and cliffs form a well-known local landmark. When considered alongside the other specialist studies we begin to understand the complexities of this site in landscape terms.

5.145 Generally, the site becomes more sensitive towards the east. Close to the A283 and the river Adur the previously developed character of these areas remains. Whilst still sensitive, particularly in visual, heritage and drainage terms much of these sensitivities can be accounted for with careful design. Significant areas of hardstanding and characterful but poor quality built form provide significant opportunities for enhancement in these areas. Further east, experiences of these areas are characterised more strongly by a sense of nature 'taking back' and strong perceptual qualities such as tranquillity. No hardstanding or previously developed land exists here and so opportunities for enhancement are scarce, meaning that development is likely to generate negative effects upon landscape and views.

Issues

5.146 Landscape is the place where people live out their lives. People are at its heart both in shaping it and experiencing it. Landscapes hold different memories and values for different people, so understanding what's important can be difficult. They are also influenced and changed by many things, from economics, to climate change.

5.147 Each element has a pattern and history which when understood together tell us what makes a place distinctive – they produce its character. Character is experienced by people, it can be called sense of place. Character is not simply aesthetics. Usually experiencing character makes you feel something and this is why landscapes and people are so closely linked. It is this distinctive character the Authority are charged with conserving and enhancing. Landscape elements also perform many functions

[49] Landscape Study of Shoreham Cement Works, Land Use Consultants, 2022
[50] South Downs Landscape Character Assessment, LUC, 2020
[51] South Downs National Park: View Characterisation and Analysis, LUC, 2015

which society values, which we call ecosystem services and seek to maximise them through development.

5.148 The site's relative isolation is a significant issue we cannot directly affect. Any new development is likely to generate fairly widespread direct and indirect effect on the landscape including views, ecology, perceptual qualities for, for example increased traffic.

5.149 The issues and tensions are greatest in the central areas of the site where there is the most over-lap between constraints and opportunities. Much of these tensions affect viability to one degree or another. In the central areas heritage, land contamination, ecology and perhaps less obvious constraints such as micro-climate all combine to reduce opportunities to deliver development.

5.150 Further east the site is characterised more strongly by its perceptual qualities and ecological significance suggestive of little or no development. Further west the areas offer more opportunity to receive development, as in these areas negative effects can largely be avoided and mitigated for and then enhanced through design. However developing in these areas is likely to generate a need for significant increases in infrastructure which in turn will negatively affect landscape character, views and experiences.

5.151 The lack of topsoil across much of the site and the potentially harsh climate expected within it, particularly during prolonged hot and dry spells, will significantly constrain any opportunities for 'designed' soft landscaping and certainly the ability to support a verdant landscape sustainably is unlikely.

5.152 The desire to encourage visitors to the site to experience the unique wildlife, character and geology is likely to bring with it a need for infrastructure and facilities – which in turn can negatively affect the important characteristics of this part of the site.

How the Issues Affect the Five Areas

5.153 Reference should be made to the opportunities and constraints plans in chapter 2 of this document.

5.154 **The Riverside** is an uncharacteristic location for housing, being located on the floodplain of the river Adur. The evidence tells us that settlements are characteristically located on the valley sides, on slightly higher ground above the floodplain. However, the site has been previously developed and land has been raised which helps, to some extent, reduce the flood risk. This area is considered most suitable for a residential use and this is the most viable land use. Much of the Riverside's industrial heritage value has been lost including the original cement works and more recently the over-road conveyor belt system. The **Riverside** is the most visually exposed part of the site. It relies upon existing conifer trees, which are an uncharacteristic species and Ash trees, which are susceptible to Ash Die Back for screening. Neither should be retained in the long-term making the site's exposure in

views is likely to become even more apparent. It remains the least sensitive ecologically. The viability of this site may be affected by the need for significant infrastructure here to provide vehicular access to both sides of the site; would reduce the availability of land for housing and constrain to a degree the site's design.

5.155 The **Cement Works** is influenced by its surrounding cliffs to the north, south and wrapping around the site's eastern edge, which reduce the area available for development. The **Cement Works** area will also be affected by the potential need for significant infrastructure to provide vehicular access to both sides of the site. Again, this will reduce the availability of land for housing and constrain to a degree the site's design. Visually the current buildings recede into their surrounding context making them less obvious in medium to long-distance views and blocking views further into the site where existing industrial workings take place. It is also experienced by the most people passing by on the Steyning Road. Employment uses here are likely to be most viable, whilst this area can take large buildings from a landscape and visual point of view, their design still needs to be highly sensitive.

5.156 The **Bowl** is currently mostly hidden as it sits behind the **Cement Works** and the **Clifflands**. It includes large areas of contaminated land and is highly sensitive ecologically. It may be suitable for lightweight commercial buildings, but due to contamination it is unlikely to be suitable for residential development. This area is heavily constrained and acts as a transition between the road and existing development and the highly ecological tranquil area at the back of the site.

5.157 The **Moonscape** is highly sensitive visually and ecologically. It has strong perceptual qualities, affording long and impressive views across the valley; it feels deeply secluded and with high levels of tranquillity. Whilst the **Moonscape** supports significant ecological value, it is also the least contaminated part of the site, making it from this point of view the cheapest to develop. However, this cost saving is likely to come with hidden costs to landscape and views, and in particular ecology.

5.158 The **Clifflands** play an important huge part in characterising the site. It is impossible to under estimate the site's history of extraction when stood within it or nearby. Chalk is a relatively friable material and the cliffs, due to their steep sides have the potential to fall. This fact impacts many of the other areas as development can only occur a safe distance from the foot of the cliffs. Netting the cliffs will negatively affect the views and the unique wildlife that they support. The rear cliff face is the most visible, particularly in the longest distance views from the west. Not only do they support significant wildlife, the cliffs also hold regional/national geological value.

Options

5.159 All the options set out in this document have different impacts on the landscape. The first purpose of the Authority is to conserve and enhance its scenic beauty, wildlife and cultural heritage,

6 The Way Forward

Choosing a Preferred Option

6.1 We have explored all the issues and options for both the whole site and the five individual areas. We now have to think about what is the best possible plan for Shoreham Cement Works, which will deliver a significantly enhanced landscape and still enable a development proposal that is feasible, attractive and viable.

6.2 We do hope that you have been able to answer some or all of the questions we have asked. The Preferred Option that we will publish in a few months' time cannot comply with everyone's answers to all the questions. It will instead offer a hybrid solution that draws on everyone's responses.

Sustainability Appraisal

6.3 The Sustainability Appraisal (SA) has considered the relative sustainability of all the different options under the theme headings and can be read in full in section 4 and Appendix E of that report. A brief summary of the relative sustainability assessment conclusions at this stage is as follows:

- Cultural Heritage: on balance, the most sustainable option is to retain the chimney.
- Nature Recovery: overall, the appraisal shows that biodiversity protection, enhancement and creation is best focussed in The Bowl, The Moonscape and Clifflands. Also, overall, a mixture of both solar energy and green roofs/walls is the supported and most sustainable option.
- Getting Around: In terms of objectives relating to economy and employment, community and housing, option of a new roundabout is supported at this stage. None of the options, have a positive impact on biodiversity although it is likely that new access arrangements will be located away from areas of high biodiversity value. In terms of landscape impact, a new roundabout and new left in-left out junctions are least supported although this is not an absolute final conclusion as details of design, layout and siting of the new access/roundabout are unknown at this stage. Access arrangements that will result in the removal of existing buildings score less favourably when assessed against the cultural heritage objectives.
- Getting Around: The option to provide segregated routes for traffic and pedestrians/cyclists is supported at this stage.
- A Place to Visit: The options to provide a sensitive, naturalistic approach to visitor attractions and celebrate the chalk with an emphasis on geology are considered to represent the type of tourism supported within the National Park

- A Place to Live: Overall, all three options are considered to be of equal value against most of the sustainability objectives.

- A Place to Work: For many of the objectives there is not a clear link between the options because details of any commercial development is unknown at this stage in terms of layout, location and access arrangements.

- Landscape and Design: the option that development should maximise the use of the whole site is most supported.

6.4 The SA also looked at the potential effects, both positive and negative, which may occur as a result of the in combination effects of the AAP and other plans and proposals in the area. These included increases in traffic flows and congestion, cumulative impacts on biodiversity, impacts on flood risk and improvements to accessibility

6.5 The SA notes that there a number of potential mitigation measures. These will be set out in detail at the next stage of the AAP when the preferred option is presented.

Preferred Option Consultation and Examination

6.5 Once we have considered all your answers to our questions and any other evidence we need to gather, most notably on water neutrality and transport, we will publish our Preferred Option for the redevelopment of Shoreham Cement Works. We will consult on that with you for another eight weeks and then submit it for independent examination. The intention is to adopt the final AAP in 2023.

Planning applications

6.6 This draft AAP and the evidence that supports it will be a material consideration for any application that is submitted for the redevelopment of the site along with the adopted Local Plan policy.

Question 26: Are there any particular ideas, issues or policies you would like to see in the Preferred Option AAP?

Question 27: Have you got any other comments on Shoreham Cement Works?

Question 28: Based on the Issues and options set out in this document, what are your three top priorities for the redevelopment of Shoreham Cement Works that should feature in the Preferred Option and why?

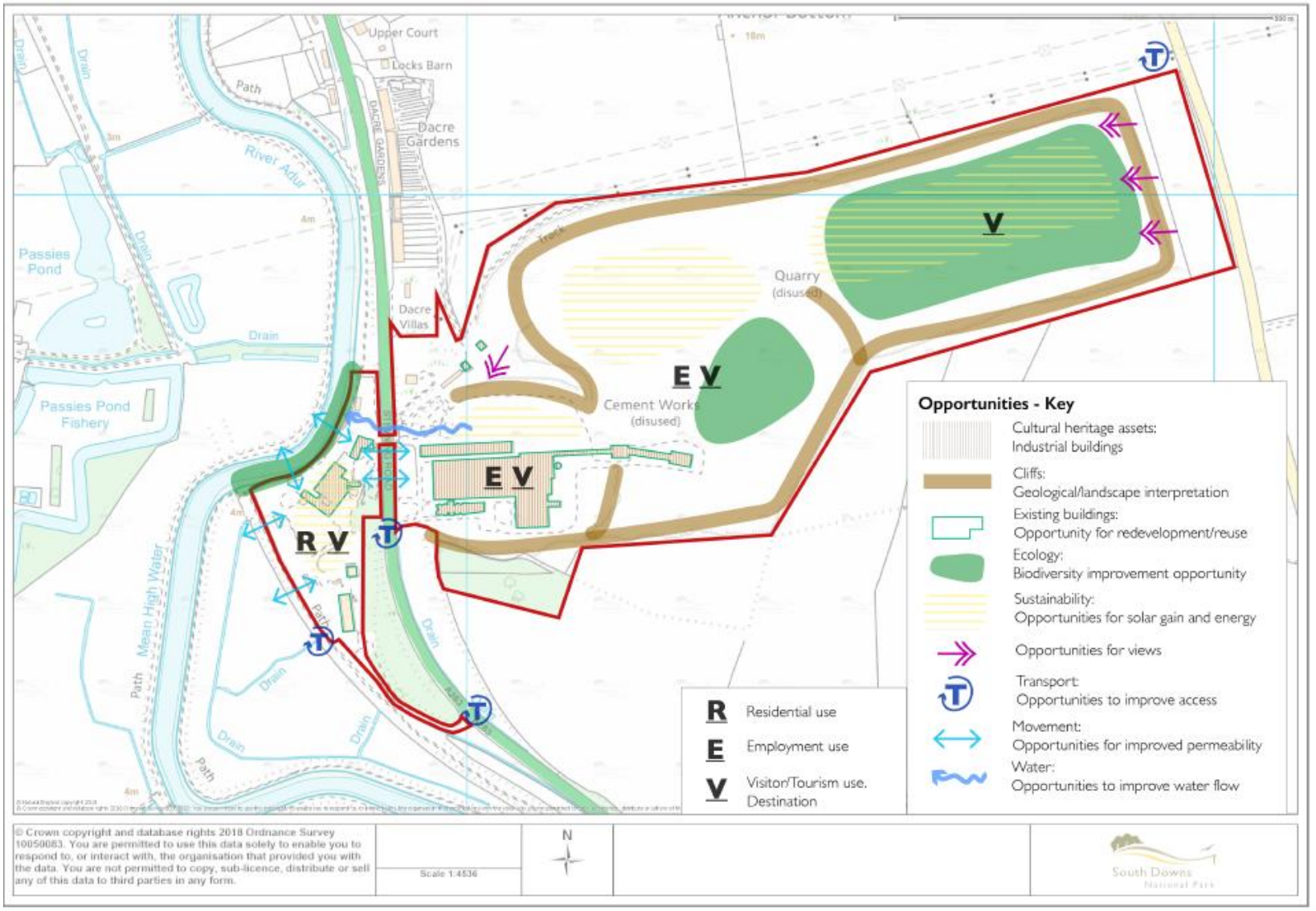
Appendix 1: Planning Timeline

Year	Action	Outcome
1946	Interim development application for the mining and working of chalk	Permission granted in 1946; extended in 1950 and 1969
1992	Application for the extraction of chalk following the closure of the cement works in 1991	Extant permissions for the extraction of chalk up to 2042 followed by a basic restoration scheme
2003	Appeal made against the non-determination by Horsham District Council of an application for a major mixed-use development comprising residential, office, industrial, storage and distribution, hotel and other uses, landscaping, open space and highway works	Appeal dismissed
2011	SDNPA becomes the local planning authority, minerals planning authority and waste planning authority for the whole site	n/a
2014-2020	Various applications for the importation, storage and treatment of inert materials to produce recycled/secondary aggregates to the east of the A283	Permission granted
2014-2020	Various applications for the continued temporary use of buildings to the west of the A283 for B1, B2 and B8 uses	Permission granted
2019	SCW allocated as a strategic site for an exemplar sustainable mixed use development	SDLP adopted
2019	Work starts on the SCW AAP, but pauses due to the pandemic	Evidence gathering
2022	Issues & Options consultation on the SCW AAP	Public consultation
2023	Preferred Options consultation on the SCW AAP	Public consultation
2023	Examination and adoption of a sound and legally compliant AAP	Adopt AAP
??	Pre-application discussions on SCW guided by the AAP	TBC
??	Request for a Screening and Scoping Opinion to determine whether the proposed development at SCW constitutes Environmental Impact Assessment (EIA) Development	TBC
??	Application for the redevelopment of SCW guided by the AAP. This is likely to include an EIA, which will help the formulation of the application.	TBC

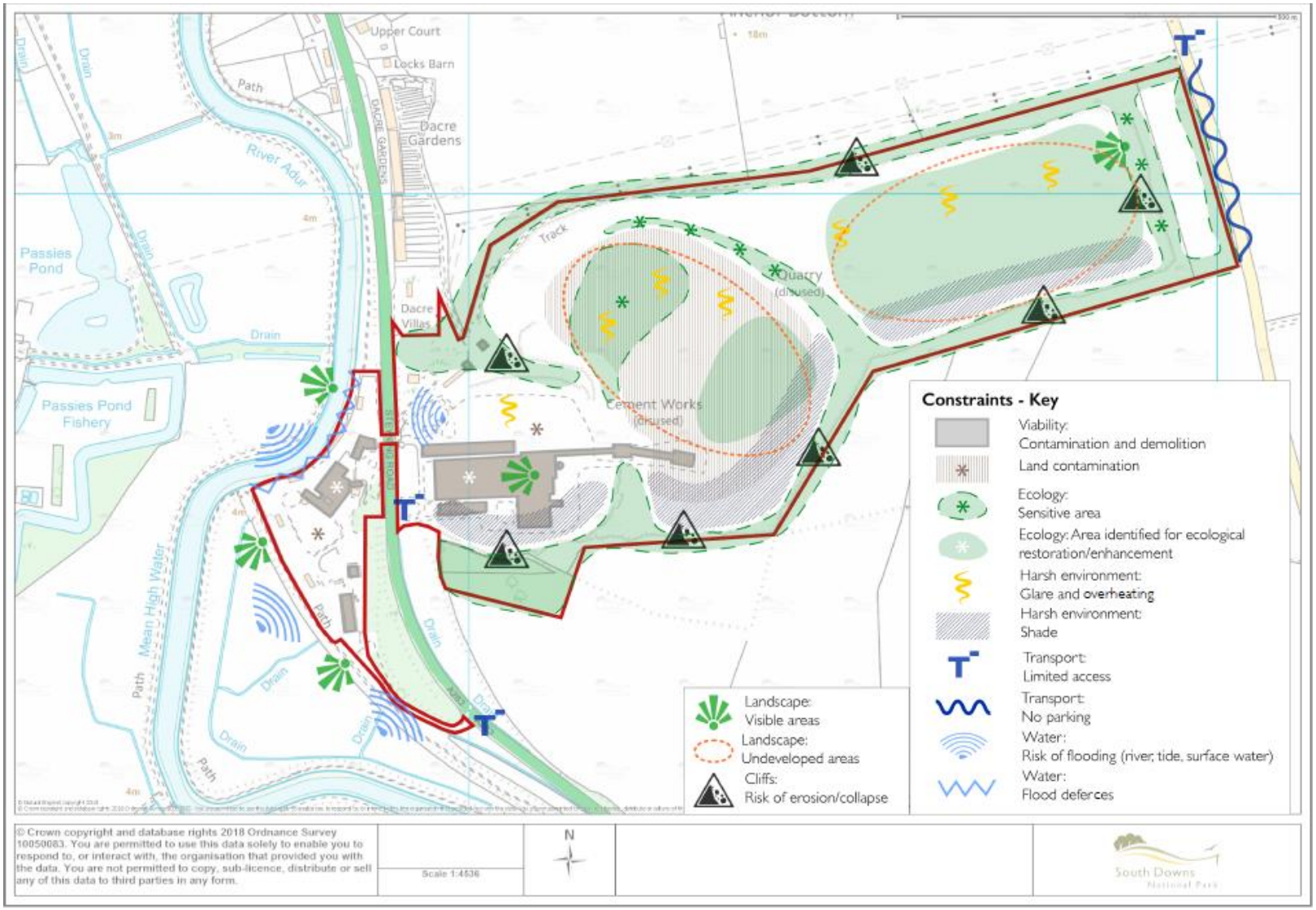
Appendix 2: Development Scenarios

Current Use Class	Former Use Class	1	2	3	4
		Housing/employment led	Housing/employment led	Leisure led	Appeal scheme
B2: General industrial	B2	16,200	16,200	0	13,250
B8: Storage or distribution	B8	20,000	20,000	0	13,250
C1: Hotel*	C1	7,500	7,500	7,500	7,500
E(a): Retail	A1	0	0	500	0
E(b): Consumption of food & drink on premises	A3	0	0	1,500	1,500
E(d): Indoor sport, recreation & fitness**	D2	0	0	18,500	0
E(g)(i): Offices	B1(a)	0	0	0	12,000
E(g)(ii): Research & Development / E(g)(iii) Industrial processes	B1 (b/c)	32,000	32,000	32,000	0
F1: Learning & non-residential institution	D1	2,000	2,000	10,000	0
F2(a): Local shop	A1	280	280	280	0
C3: Dwellings	C3	400	240	200	84
Total commercial floorspace		77,980	77,980	70,280	47,500
Total homes		400	240	200	84
* possibility of sui generis for hostel					
* *possibility of sui generis for live music venue					
Notes:					
Floorspace of hotel kept constant at 7,500 m2. This is approx equivalent to a 116 bed hotel based on the TRICS database					
Floorspace of a local shop kept constant in first 3 scenarios. Floorspace of 280 m2 is the maximum allowed under this use class.					
The employment floorspace figurre for the appeal scheme has been split equally between B2 and B8					
The E(b): Consumption of food & drink on premises in scenario 3 is a pub/restaurant but is not sui generis drinking establishment					

Appendix 3: Opportunities at Shoreham Cement Works



Appendix 4: Constraints at Shoreham Cement Works



Glossary

Advanced manufacturing: Use of innovative technologies to create existing products and the creation of new products. Advanced manufacturing can include production activities that depend on information, automation, computation, software, sensing, and networking.

All Movements Junction: A junction where all movements required to access or egress from the junction are permitted. A driver may turn left or right from the junction to the adjoining road, or may turn left or right to access the junction from the adjoining road.

B2 General industrial: Use for industrial process other than one falling within class E(g) excluding incineration purposes, chemical treatment or landfill or hazardous waste

B8 Storage or distribution: This use class includes open air storage.

Benchmark land value: A development is viable if the market value of the site is equal to or higher than the benchmark land value. This is the minimum value at which it is considered that the landowner has received a competitive return.

Biodiversity net gain: An approach to development and/or land management, that aims to leave the natural environment in a measurably better state than it was beforehand.

Blue Infrastructure: Networks or features within a network which relate to water including rivers, streams, ponds and lakes.

Concrete kiln dust (CKD): This is a fine-grained, solid, highly alkaline waste removed from cement kiln exhaust gas by air pollution control devices.

Downs Link: A shared-use path from the North Downs Way at St Martha's Hill, Surrey to Shoreham-by-Sea, West Sussex.

Green Infrastructure: A network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities.

Heritage asset: A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. Heritage asset includes designated heritage assets and assets identified by the local planning authority (including local listing).

Honey Pot site: Places with special interest or appeal that are very popular with visitors. They often get overcrowded at peak times.

Landscape character: What makes an area unique. It can be defined as a distinct, recognisable and consistent pattern of elements, be it natural (soil, landform) and/or human, for example, settlement and development, in the landscape that makes one landscape different from another, rather than better or worse.

Landscape-led design: is strongly informed by understanding the essential character of the site and its context (the landscape), creates development which speaks of its location, responds to local character and fits well into its environment. It needs to conserve and

enhance the natural beauty, wildlife and cultural heritage of the area and create sustainable and successful places for people

Left-in-Left-out Junction: A junction where the only movement permitted for both access and egress is a left turn. This prevents drivers from needing to cross a lane of traffic to access or egress from the junction.

Made ground: Land where natural and undisturbed soils have largely been replaced by man-made or artificial materials. It may be composed of a variety of materials including imported natural soils and rocks with or without residues of industrial processes such as concrete kiln dust or demolition material such as crushed brick or concrete.

Medium significance: Heritage assets with a district value or interest for education or cultural appreciation

Open mosaic habitat (OMH): This priority habitat consists of a patchwork of bare, previously disturbed ground and vegetated areas which can be in the process of changing from one vegetation type to another. Typical of this habitat are areas of grassland, tall ruderal plant species, damp areas, patches of scrub and invasive species, both native and non-native. The previous disturbance is often industrial, such as mining, although the habitat can include old quarries or building sites, areas of spoil from old coal mines, disused railway lines and urban brownfield land.

Policies Map: This accompanies the Local Plan and is a spatial expression of Local Plan, Neighbourhood Plan and Minerals and Waste Plan policies. The Policies Map illustrates the policies in map form.

Riparian corridor: The area adjacent to a waterway such as a river.

South Downs Way: A long distance footpath and bridleway running along the South Downs. It is one of 16 National Trails in England and Wales and the only one contained entirely within a national park. The trail runs for 160 km from Winchester in Hampshire to Eastbourne in East Sussex, with about 4,150 m of ascent and descent.

Water neutrality: Development that takes place which does not increase the rate of water abstraction for drinking water supplies above existing levels.

South Downs
National Park Authority

Shoreham Cement Works
Area Action Plan
Issues & Options Consultation
Sustainability Appraisal

May 2022

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Appendix A	**Local Plan Sustainability Appraisal of Policy SD56**
Appendix B	**Development Scenarios**
Appendix C	**Scoping Report**
Appendix D	**Themes and Issues**
Appendix E	**Appraisal of Issues**
Appendix F	**Appraisal of Development Scenarios**

1. INTRODUCTION

Background

1.1 The South Downs National Park Authority (SDNPA) is undertaking a Sustainability Appraisal (SA) in support of the emerging Shoreham Cement Works (SCW) Area Action Plan (AAP). A Sustainability Appraisal is a mechanism for considering and communicating the likely effects of a draft plan, and alternatives, with a view to avoiding and mitigating adverse effects and maximising the positives. An SA of a Local Plan is a legal requirement[1] and once adopted the AAP will form part of the development plan for South Downs National Park.

1.2 The SDNPA is the local planning authority for the site and area but it does not own the Cement Works. It is a privately owned site by the Dudman Group of companies. Shoreham Cement Works covers 44 hectares and includes an inactive chalk quarry and semi-derelict works. The site is located in West Sussex; about 5 km to the north of Shoreham-by-Sea and 2 km south of Upper Beeding village and is dissected by the Steyning Road (A283).

1.3 It is not the role of SA to determine preferred options, but to identify, describe and evaluate the significant effects of the options presented. It is inherently problematic to produce an SA at this stage in the process as there are no actual policies to appraise. A full SA will be undertaken at the next stage (the Preferred Options stage).

The Sustainability Appraisal Explained

1.4 An SA is undertaken in line with the procedures prescribed by the Environmental Assessment of Plans and Programmes Regulations 2004 (the SEA Regulations) which transpose into national law European Union Directive 2001/42/EC 'on the assessment of the effects of certain plans and programmes on the environment'. An SA widens the scope of the assessment to explicitly include social and economic issues (so not just environmental issues).

1.5 The SEA Regulations require that an environmental report (an SA report) is published for consultation alongside a draft plan that 'identifies, describes and evaluates' the likely significant effects of implementing 'the plan, and reasonable alternatives'. The environmental report must then be taken into account, alongside consultation responses, when finalising the plan. This draft SA Report serves that purpose. Through this approach, the SA for the AAP seeks to maximise the plan's contribution to sustainable development.

1.6 Section 19 of the Planning and Compulsory Purchase Act 2004 requires a local planning authority to carry out a SA of each of the proposals in a plan during its preparation. More generally, section 39 of the Act requires that the authority preparing a plan must do so "with the objective of contributing to the achievement of sustainable development"

The South Downs Local Plan and Local Plan SA

1.7 The South Downs Local Plan was adopted in 2019[2]. It is the statutory development plan for the whole National Park, along with the minerals and waste plans and 'made' (adopted) Neighbourhood Development Plans (NDP). The planning system in this country is plan-led and statute states that decisions on planning applications must be taken in accordance with the development plan unless material considerations indicate otherwise. Accordingly, this AAP will be used in the determination of planning applications.

[1] The Town and Country Planning (Local Planning) (England) Regulations 2012 require that an SA Report must be published for consultation alongside the 'Proposed Submission' plan document

[2] https://www.southdowns.gov.uk/wp-content/uploads/2019/07/SD_LocalPlan_2019_17Wb.pdf

1.8 Policy SD56[3] of the South Downs Local Plan is the high level strategic policy for Shoreham Cement Works and it sets out the following vision for the site:

Shoreham Cement Works, as identified on the Policies Map, is an area of significant opportunity for an exemplar sustainable mixed use development, which delivers a substantially enhanced landscape and uses that are compatible with the purposes of the National Park. To help achieve this the National Park Authority will prepare an AAP with the overall aims of:

a) Enhancing the visual impact of the site from both the nearby and distant public viewpoints;

b) Conserving, enhancing and providing opportunities for understanding the biodiversity, geodiversity, historic significance and cultural heritage of the site;

c) Ensuring the delivery of ecosystems services; and

d) Ensuring that the design of any development is of the highest quality and appropriate to its setting within a national park

1.9 An SA for the South Downs Local Plan was undertaken by AECOM[4] and iterations of the SA supported each stage of plan preparation. As part of this work, the SA appraised the allocation of Shoreham Cement Works under Policy SD56. A copy of the appraisal table is attached as Appendix A and is set out from page A58 of the SA Appendices[5]. The SA of the Local Plan also undertook an appraisal of a number of strategic level alternative options for the site[6]. This can be found in the main SA report. Four options were considered for the site through the SA process, linked to different uses for the site relating to land use classes. These are:

- Option 1a: Housing led approach to redevelopment of the site, delivering 350 homes (C3 use)
- Option 1b: Housing led approach to redevelopment of the site, delivering 600 homes (C3 use)
- Option 2: Employment led approach to the redevelopment of the site, focused on 'B' uses, with 80% B uses and 20% A, C1 and D uses
- Option 3: Leisure / tourism led approach to the redevelopment of the site, focused on 'A', 'C' and 'D' uses, 80% A, C1 and D uses and 20% B uses

1.10 The appraisal findings in relation to the four options were organised by the twelve sustainability themes. For each sustainability theme, a commentary on the likely effects was presented. Options were also ranked numerically reflecting their relative sustainability performance. The SDNPA considered that given the significant negative visual impact the site has on the National Park and the complexity of delivering any development, its preferred approach is to seek a mixed use development which delivers a significantly enhanced landscape and uses compatible with the purposes of the National Park, namely tourism / visitor based recreational activities and employment uses.

1.11 In addition, the preferred approach also seeks to resist 'more development than is necessary to secure and deliver the environmentally led restoration of the site'. In this context the preferred approach will help to both protect and support enhancements to the landscape character, biodiversity, and cultural heritage.

[3] https://www.southdowns.gov.uk/wp-content/uploads/2018/06/Chapter8-Strategic-Sites.pdf
[4] https://www.southdowns.gov.uk/planning-policy/south-downs-local-plan/local-plan-evidence-base/evidence-and-supporting-documents/sustainability-appraisal/
https://www.southdowns.gov.uk/planning-policy/south-downs-local-plan/local-plan-evidence-base/key-evidence/
[5] https://www.southdowns.gov.uk/wp-content/uploads/2018/04/SDLP-04-Sustainability-Appraisal-Report-Appendices.pdf
[6] https://www.southdowns.gov.uk/wp-content/uploads/2019/07/Sustainability-Appraisal-Report-and-Addendum.pdf

1.12 To help achieve this, the Local Plan proposed producing an Area Action Plan (AAP), which will also be accompanied by its own SA process. This approach would help to ensure the numerous opportunities for a high quality and sustainable development are realised and any potential negative effects are avoided and mitigated.

1.13 Whilst the SA work undertaken for Policy SD56 in the Local Plan is of importance as part of the evidence base for the AAP and this report, there is a requirement to undertake a new and specific SA for the iterative process of considering Issues and Options and the Preferred option based on the recent research and evidence gathering exercise for the site.

The Shoreham Cement Works Site and the AAP

1.14 Shoreham Cement Works is a 44-hectare site that includes an inactive chalk quarry and semi-derelict works. It is the most prominent site within the National Park in a key location where it is at its narrowest. Despite being an important part of the social and industrial heritage of the area, the site has a significant negative visual impact on the National Park, particularly from public rights of way and wider viewpoints, including the South Downs Way and the Downs Link cycle route[7].

1.15 The SDNPA is consulting on an 'Issues and Options Consultation Document'. The document is the initial stage in developing the AAP. A special website has been created for this consultation, which can be accessed on https://www.southdowns.gov.uk/area-action-plan-shoreham-cement-works/

1.16 The AAP sets out how the National Park Authority will manage development at Shoreham Cement Works up to 2033. This is based on the statutory purposes and duty for national parks as specified in the National Parks and Access to Countryside Act 1949, as amended by the Environment Act 1995.

1.17 The AAP introduces a new way of looking at Shoreham Cement Works. It suggests dividing the site into five main areas based on its geology, topography, hydrology, and built form. These areas are the Riverside, the Cement Works, the Bowl, the Moonscape and the Clifflands. The first four areas are identified going west to east, but the Cliffs surround most of the site to the east of the main road. Each area has different opportunities and constraints and the AAP sets out bespoke design principles and potential uses for each area.

1.18 A number of strategic objectives, which outline the direction that the AAP will take in order to achieve the vision have been prepared. These objectives are the stepping stones between the vision for the site and the policies that will be set out in the Preferred Option.

1.19 The strategic objectives for the redevelopment of Shoreham Cement Works are:

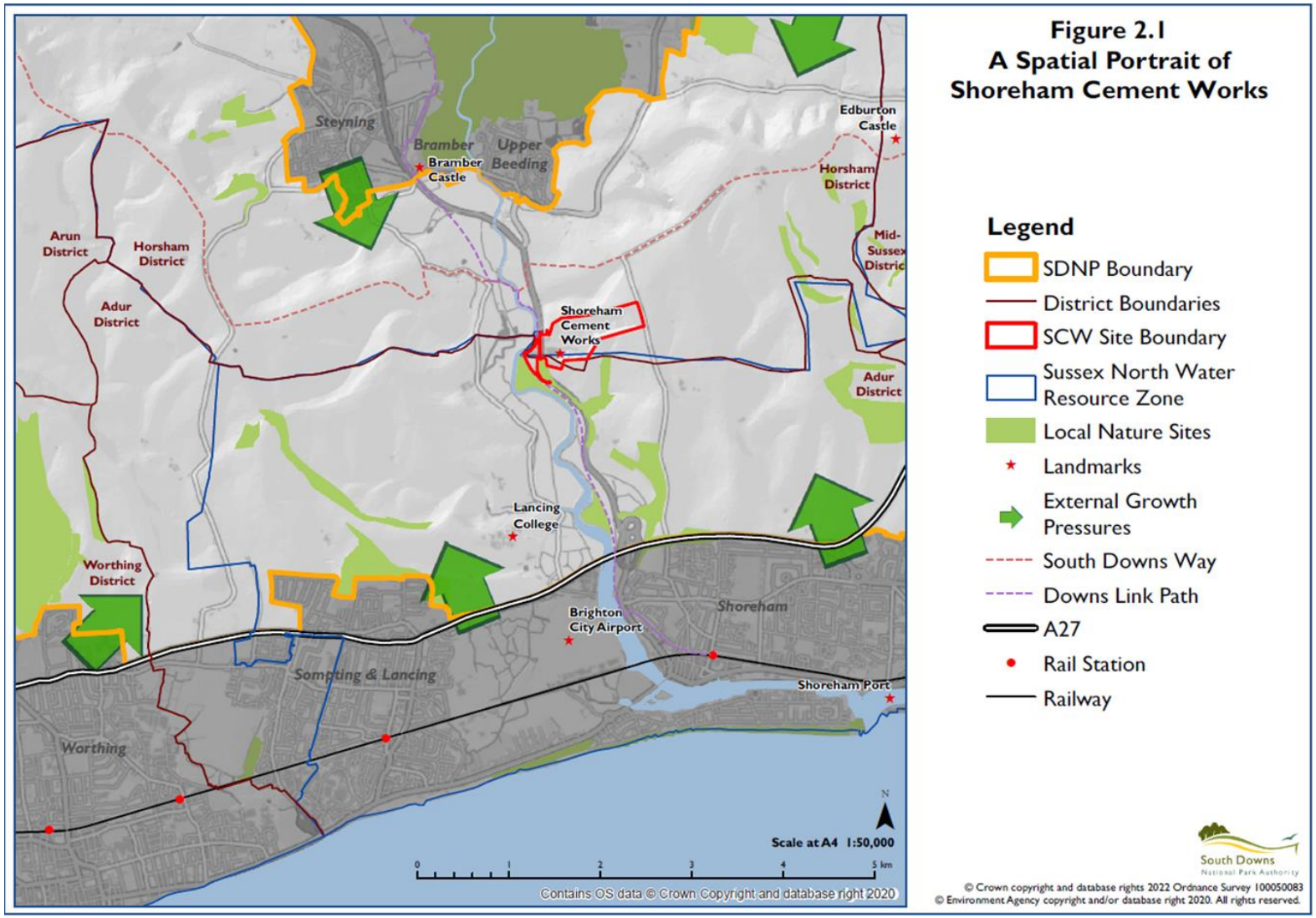
a) Exemplary landscape led design, incorporating high quality architecture and a strong sense of place.
b) Conservation and enhancement of some historic assets, and a design that reflects and commemorate its cultural heritage
c) The Biodiversity Emergency to be addressed through landscape-led nature recovery, which conserves and enhances existing on-site biodiversity
d) A sustainable use of natural capital that delivers ecosystem services and contributes positively to human health and wellbeing
e) Opportunities for everyone to discover, enjoy, understand and value this part of the National Park including its landscape character and qualities, biodiversity, geology and industrial heritage
f) A zero carbon and zero waste development that addresses the Climate Change Emergency through mitigation and adaptation

[7] https://www.southdowns.gov.uk/wp-content/uploads/2018/06/Chapter8-Strategic-Sites.pdf

g) A development that complements, but does not compete with the villages and market towns of the National Park and beyond
h) New jobs and homes

1.20 The following spatial portrait is set out in the AAP – see map 1 below.

Map 1 *– Spatial Portrait*



1.21 A number of potential development scenarios were prepared for the AAP. They follow on from the scenarios set out in the SA of the Local Plan and further work was done on the landscape-led capacity of the site to extrapolate the development quantums. Details of these are set out in Section 3 of this report and in Appendix B – Development Scenarios.

2. THE SCOPE OF THE SA

SA Methodology

2.1 The approach adopted for this report follows guidance produced by the Government on the strategic environmental assessment and SA[8]. SA is integral to the preparation and development of development plan documents, to identify how sustainable development is being addressed, so the SA should be written at the same time that work starts on developing the plan.

2.2 There are five stages to the SA process[9]. Each stage has a number of associated tasks, as outlined below. Figure 1 below illustrates the five stages and the associated tasks of the SA process.

2.3 *Stage A* involves setting the context and objectives, establishing the baseline and deciding on the scope of the appraisal. This is set out in the Scoping Report (see below).

2.4 *Stage B* involves developing and refining alternatives and assessing the effects. This assessment is an iterative process that will take place at each stage of the production of the SCW AAP.

2.5 *Stages C and D* - these stages involve preparing and consulting on the SA report. Following public consultation, a revised version of the AAP and SA will be produced. This will take account of consultation responses received at this stage. Any significant changes to the plan will be assessed at this stage.

[8] https://www.gov.uk/guidance/strategic-environmental-assessment-and-sustainability-appraisal

[9] https://www.gov.uk/guidance/strategic-environmental-assessment-and-sustainability-appraisal#Sustainability-appraisal-process

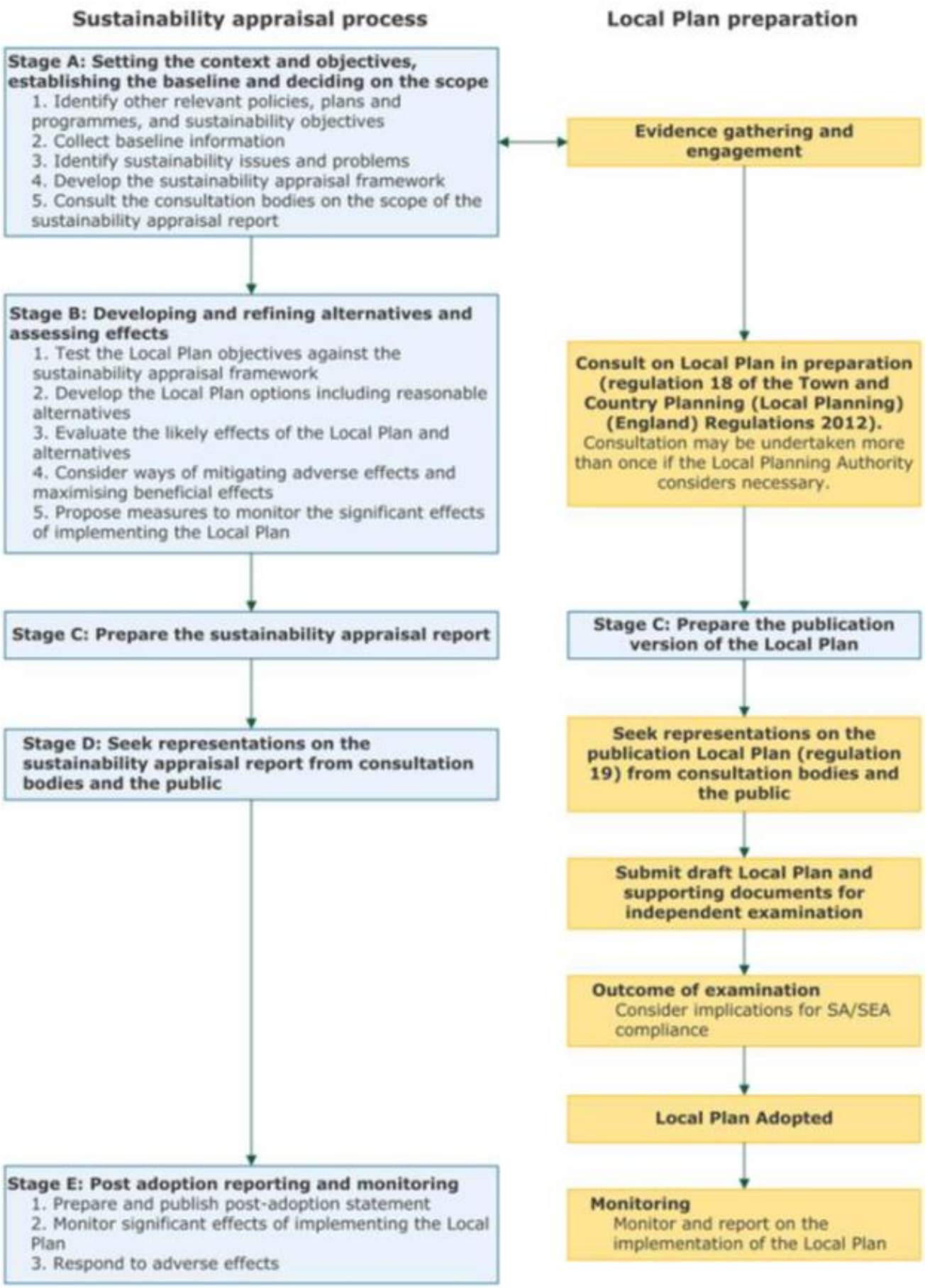


Figure 1 *SA process and stages*

The Scoping Report

2.6 The scoping stage (Stage A – see above figure) needs to identify the scope and level of detail of the information to be included in the SA report. It should set out the context, objectives and approach of the assessment; and identify relevant environmental, economic and social issues and objectives.

2.7 Although the scoping stage is a key stage in the process, a formal scoping report is not required by law but is a useful way of presenting information at the scoping stage. A key aim of the scoping procedure is to help ensure the SA process is proportionate and relevant to the plan being assessed.

2.8 A SA scoping report for the AAP was prepared in 2021. In August/September 2021, The National Park Authority consulted the statutory bodies - namely the Environment Agency, Natural England and Historic England, the two local authorities in which the site is located (Horsham and Adur District Councils), West Sussex County Council and the local parish council (Upper Beeding Parish Council). The Scoping Report was subsequently updated following comments from the consultees and feedback from these groups has informed the SA of this Issues & Options document.

2.9 The full version of the Scoping Report is attached as Appendix C – Scoping Report. This sets out the key plans, programmes or policies (PPPs) likely to influence the approach taken to redevelop the Shoreham Cement Works site (see page 6 onwards) and the collection of baseline information (see page 12 onwards).

2.10 The baseline information focussed on the following topic areas:

- Landscape
- Biodiversity
- Archaeological and Cultural Heritage
- Climate Change including Flooding
- Health and well-being
- Economy and Employment
- Communities and Housing
- Transport and Sustainable Travel
- Water, Air, Soil and Geology

2.11 Historic England and the Environment Agency made representations on the consultation version of the Scoping Report. There were no comments from Natural England. Comments were also received from West Sussex County Council, Adur District Council, Horsham District Council and Upper Beeding Parish Council. The final version of the Scoping Report, as attached in Appendix C has taken on board all comments received.

The SA Framework

2.12 The SA for the South Downs Local Plan lists 12 sustainability objectives. Since the local plan sets the principle and key requirements for the development of the site and the AAP, it provides a starting point in identifying sustainability objectives that are relevant to the development of this Plan. These objectives have then been reviewed in light of the key sustainability issues emerging from the collection of baseline data and their relevance to the AAP. A number have consequently been excluded or adapted.

2.13 The following table (Table 1) links the SA objectives of the South Downs Local Plan and the objectives for the SA of the AAP. The Sustainability Topics are shaded in blue and these are referred to within this SA and accompanying appendices.

Table 1 – *Sustainability Appraisal Framework (AAP SA objectives shaded dark grey)*

No.	***Sustainability Topic***	***South Downs Local Plan SA objective(s)***	***Shoreham Cement Works Area Action Plan SA objective(s)***	***Decision aiding questions[10]***
1	Landscape	To conserve and enhance landscape character.	**Objective 1** 1.1 To conserve, enhance and restore the landscape of the site.	Will the option retain or accommodate features of important industrial heritage, including elements such as key industrial machinery and components? Where appropriate, does the location, form and massing of any new mixed use development reference the form and massing of existing buildings in Shoreham Cement Works? Do the materials used in the building of new mixed-use development reference the existing site materials (chalk) and respond to the cultural value of the site, whilst exploring the opportunity for the use of new and innovative materials? Will the option ensure that any new development in the Local Landscape Character Area (LLCA) is particularly cognisant of visibility into the LLCA and views across the River Adur Valley and sensitive skylines?

[10] Some of the objectives and decision adding questions have been refined since the final version of the scoping report

No.	*Sustainability Topic*	*South Downs Local Plan SA objective(s)*	*Shoreham Cement Works Area Action Plan SA objective(s)*	*Decision aiding questions[10]*
2	Biodiversity	To conserve and enhance the region's biodiversity.	**Objective 2** 2.1 Conserve and enhance protected and priority species and habitats that occur on the site as identified in the Preliminary PEA and PRA 2018 and any subsequent survey recommendations set out in further work during 2021/2022. **Objective 3** 2.2 The development should contribute to nature recovery through biodiversity net gain and other delivery mechanisms as informed by the site's ecological context.	Will the option contribute to the enhancement of the biodiversity opportunity area including conserving, restoring and creating chalk grassland and farmland bird species? Will the option adequately conserve and enhance protected and priority species and habitats identified in the Preliminary Ecological Appraisal and further associated studies? Will the option result in at least 10% net biodiversity gain?
3	Archaeological and cultural heritage	Conserve and enhance the historic environment, heritage assets and their settings. To encourage increased engagement in cultural activity across all sections of the community in the SDNP and promote sustainable tourism	**Objective 4** 3.1 To conserve key features of the industrial heritage of the site, (this may include the chimney and others as identified in studies and assessments undertaken in 2021 on cultural heritage and existing buildings). **Objective 5** 3.2 To ensure the development delivers sustainable tourism (see Economy and Employment theme).	Will the option promote sensitive re-use of important buildings? Will current and future generations be able to understand the history of the site in relation to chalk extraction, cement production and regeneration?

No.	*Sustainability Topic*	*South Downs Local Plan SA objective(s)*	*Shoreham Cement Works Area Action Plan SA objective(s)*	*Decision aiding questions[10]*
4	Climate change including flooding	To address the causes of climate change through reducing emissions of greenhouse gases and the consequences through adaptation measures. To ensure the SDNP communities are prepared for the impacts of climate change.	**Objective 6** 4.1 Minimise the risk of flooding to new and existing development. **Objective 7** 4.2 Maximise the use of low carbon and renewable energy within the site. **Objective 8** 4.3 Minimise the impacts on health of both solar glare and radiation experienced within the quarry site. **Objective 9** 4.4 Minimise water consumption and maximise grey water recycling to reduce pressure on local water supplies. **Objective 10** 4.5 Makes best possible use of existing materials and resources already on the site.	Will the option reduce the risk of flooding from all sources to future development? Will the option help to reduce the rate of run-off? Will the option encourage Sustainable Drainage Schemes (SuDs)? Will the option ensure that increased flooding extremes can be withstood? Will the option reduce the need for energy use? Will the option facilitate the generation / use of renewable energy?

No.	*Sustainability Topic*	*South Downs Local Plan SA objective(s)*	*Shoreham Cement Works Area Action Plan SA objective(s)*	*Decision aiding questions[10]*
5	Health and Wellbeing	To improve the health and well-being of the population and reduce inequalities in health and well-being.	**Objective 11** 5.1 To improve the health and well-being of the population and reduce inequalities in health and well-being. **Objective 12** 5.2 To promote the 15 minute neighbourhood concept that will enable people to meet most of their daily needs within a 15 minute walk, cycle or public transport links from their home.	Will the option help to improve the health of the community? Will the option encourage healthy lifestyles? Will the option improve access to accessible natural green space? Will the option help overcome social exclusion? Will the option help address the issues of deprivation and poverty? Will the option promote social and health cohesiveness.
6	Economy and Employment	To encourage development of the rural economy in a manner that balances agricultural and other business interests to maintain a living, valued landscape. To deliver sustainable tourism.	**Objective 13** 6.1 Development that provides for small / medium business enterprises particularly in the core sectors of Visitor Economy, Land-based, Food & Drink, Knowledge Economy and Advanced Manufacturing. **Objective 14** 6.2 To deliver sustainable tourism which promotes a modal shift from private to public transport, diversifies and improves the tourism offer and improves the knowledge and custodianship of visitors.	Will the option encourage a range of jobs that are accessible to local people? Will the option support the clusters or network of knowledge driven, creative or high technology industries? Will the option increase the likelihood of local jobs being filled by local people? Will the option ensure that the viability, vitality and competitiveness of nearby town and village centres are not harmed? Will the option encourage diversity and quality of employment? Will the option provide employment floor space and attract a range of employment options including green technologies and higher value added businesses.

No.	*Sustainability Topic*	*South Downs Local Plan SA objective(s)*	*Shoreham Cement Works Area Action Plan SA objective(s)*	*Decision aiding questions[10]*
7	Community and Housing	To ensure that everyone has the opportunity to live in a good quality, affordable home, suitable to their need and which optimises the scope for environmental sustainability. To improve accessibility to all services and facilities. To create and sustain vibrant communities which recognise the needs and contributions of all individuals.	**Objective 15** 7.1 Contribute towards affordable homes. **Objective 16** 7.2 Ensure any homes are of a suitable size and type to meet identified local needs. **Objective 17** 7.3 Ensure residents have convenient and sustainable access to day-to-day local services. **Objective18** 7.4 A mixed community where children can play freely and social isolation is the exception. **Objective 19** 7.5 Development that does not harm the viability of services and facilities in surrounding communities in particular Upper Beeding, Steyning and Shoreham.	Will the option boost the supply of affordable homes? Will the option promote improvements in the availability and quality of the housing stock? Will the option negatively impact on existing local facilities?

No.	*Sustainability Topic*	*South Downs Local Plan SA objective(s)*	*Shoreham Cement Works Area Action Plan SA objective(s)*	*Decision aiding questions[10]*
8	Transport and travel	To improve the efficiency of transport networks by enhancing the proportion of travel by sustainable modes and by promoting policies which reduce the need to travel.	**Objective 20** 8.1 Provide convenient access to a range of sustainable modes of transport to and from the site. **Objective 21** 8.2 Minimise the impact of required highways schemes on the landscape, biodiversity, heritage and riverine environment. **Objective 22** 8.2 Seek to improve the current non-motorised transport infrastructure in the vicinity of the site and the links to neighbouring settlements.	Will the option reduce the need to travel, especially by private motorised vehicles? Will the option help provide/improve/link up walking / cycling / public transport infrastructure? Will the option be accommodated within the existing public transport constraints? Will the option improve access to the countryside and historic environments? Will the option improve access to key services (education, employment, recreation, health, community services, cultural assets)? Will the option have an impact on landscape, biodiversity, heritage and riverine environment? Can the impact be mitigated adequately?

No.	*Sustainability Topic*	*South Downs Local Plan SA objective(s)*	*Shoreham Cement Works Area Action Plan SA objective(s)*	*Decision aiding questions[10]*
9	Water, air, soil and geology	-	**Objective 23** 9.1 No reduction in water quality of rivers and aquifers. **Objective 24** 9.2 Reduce congestion or minimise unavoidable increases in congestion. **Objective 25** 9.3 Prevent soil erosion and compaction. **Objective 26** 9.4 Protect and provide access to key parts of site to enable people to appreciate the chalk geology. **Objective 27** 9.5 To adequately clean up/remediate the site once the extent of land contamination is known and to ensure buildings are demolished and cleared in accordance with relevant guidance. To re-use materials where possible	Will the option improve water quality and maintain an adequate supply of water? Will the option reduce pollution of groundwater, watercourses and rivers from run-off / point-sources? Will the option provide adequate utilities infrastructure to service development to avoid unacceptable impacts on the environment? Will the option safeguard water resources to maintain an adequate level of river and ground water? Will current and future generations understand the history of the site in relation to chalk extraction, cement production and regeneration?

3. AAP ISSUES AND OPTIONS DOCUMENT

Introduction

3.1 The Area Action Plan (AAP) will be the development plan for Shoreham Cement Works. It is being prepared by the South Downs National Park Authority (SDNPA), which is the local planning authority for the site. The current stage of the plan is the production of the Issues & Options version and this will be subject to a public consultation exercise early summer 2022. This section of the SA sets out the work undertaken for the AAP. The information is taken from the AAP and includes the themes that have emerged from the evidence base.

3.2 The AAP contains a number of site-wide design parameters to guide any future development proposals. The principles are evidence based and build on the opportunities and constraints identified within the AAP. The purpose of these principles is to produce a comprehensive design that is compliant with the Authority's policies and guidance, and facilitates the creation of a high quality place for people to enjoy. The parameters are set out under these headings: Developable areas and existing buildings, layout, movement, sustainability & resources, buildings, green & blue infrastructure and public realm.

3.3 The Issues & Options version of the AAP is set out as follows:

- *Introduction*: introduces the AAP and talks about planning in a national park
- *Shoreham Cement Works Now*: paints a spatial portrait of the site and its surroundings today
- *Re-imagining Shoreham Cement Works*: sets out the vision and objectives for redevelopment, current opportunities and constraints and overarching design principles
- *The Five Areas of Shoreham Cement Works*: explores what makes each of the five areas special, their individual opportunities and constraints and design principles
- *Issues and Options*: explores the issues and options for a number of cross-cutting themes such as contaminated land and cultural heritage
- *The Way Forward*: talks about choosing a preferred option.

3.4 This Issues & Options document does not contain any policies, which instead will feature in the Preferred Option version of the Plan.

3.5 The AAP can be found on this website: South Downs National Park Authority Website

Background Studies

3.6 Key documents and studies relevant to the site and the wider area are outlined in the Scoping Report. These are existing documents produced by local and national government and other stakeholders. Please see Appendix C – Scoping Report.

3.7 However, specific evidence base studies have been completed for the AAP. A number of studies were undertaken in 2018 and several further ones in 2021/2022. These provide evidence, research and recommendations for the SCW and can be accessed on the SDNPA website.

Consultation to date

3.8 Through the consultation exercise on the Scoping Report, we have received representations from a number of stakeholder groups. This includes to the two local authorities covered by the site and West Sussex County Council.

3.9 There are two main community groups with an interest in the site and, as part of the work on the AAP, SDNPA is working closely with both. Firstly, the Parish Council for Upper Beeding where the site is located and secondly the Shoreham Society, which represents people living to the south of the site in the town of Shoreham-by-Sea.

3.10 Topic specific consultation was undertaken by the consultants working on the background papers. These are outlined in each of the relevant documents.

3.11 Extensive consultation took place as part of the South Downs Local Plan work leading up to the adoption of the Plan in 2019. Comments and representations were received on the Cement Works site and the Policy within the Local Plan. Details on this can be found on the National Park's website[11]:

Scenarios

3.12 A number of potential development scenarios have been prepared for the Issues and Options AAP. They follow on from the scenarios set out in the Sustainability Appraisal of the Local Plan. The detailed figures are set out in Appendix B of this document.

3.13 For the purposes of the SA – a 'do nothing' scenario is included. Essentially it is considered that most of the SA objectives would be more effectively met by one of the four scenarios and not under the 'do nothing option'. If the AAP is not implemented (do nothing situation) then it must be assumed that there will be no change to the current baseline information as set out in the Scoping Report.

3.14 The scenarios (headings only – see Appendix B for details) are as follows:

Scenario 1	Mixed use scheme with employment and 400 new homes
Scenario 2	Mixed use scheme with employment and 240 new homes
Scenario 3	Mixed use leisure led scheme with and 200 new homes
Scenario 4	Mixed use scheme with employment and 84 new homes (dismissed appeal scheme[12])
Scenario 5	Do Nothing option

Areas and Themes

3.15 The five areas of Shoreham Cement Works are introduced in the AAP Figure 2 below sets out the details of the areas. Further information on the areas can be located within the AAP document.

3.16 There are a number of cross-cutting themes for Shoreham Cement Works as detailed within the Issues and Options AAP. It explains the main findings of the evidence based studies for each theme. It explores the issues and tensions raised by the evidence both within the five areas and affecting the site as a whole and it sets out various options for each theme. Appendix D – Themes, Issues and Options - provides a summary of the information within the AAP. The key headlines are outlined below.

3.17 **Viability Theme -**There are a number of options arising from the viability evidence. These include a 100% private market scheme to maximise viability, a mixed tenure development with a small proportion of onsite affordable homes, development required to provide a

[11] https://www.southdowns.gov.uk/planning-policy/south-downs-local-plan/local-plan-evidence-base/core-document-library/submission-documents/

[12] Appeal in 2003 made against the non-determination by Horsham District Council of an application for a major mixed-use development comprising residential, office, industrial, storage and distribution, hotel and other uses, landscaping, open space and highway works. Applications SU/124/02 and UB/43/02. Appeal Ref: APP/Y3805/V/02/1100397 & APP/Z3825/A/02/1095343.

financial contribution in-lieu of providing onsite affordable housing and employment uses promoted to maximise viability (B2 general industrial and/or B8 storage and distribution).

3.18 For **Contaminated Land and Demolition Theme –** the options arising from the evidence state that it is likely that the Riverside area is most suitable for housing development, with or without gardens, or commercial development. The Cement Works area is most likely suitable for a mix of housing, with or without gardens, and commercial development. Light industrial uses are recommended towards the Bowl end of the Cement Works area as rock fall issues may impact on where commercial development with higher footfall/traffic movements is located. The Bowl area is most likely to be suitable for commercial development.

3.19 **Water, Drainage and Flooding Theme** - there are a number of options arising from the water, drainage and flooding evidence. It is likely that the Riverside is suitable for housing or commercial/retail development. It may be the preferred location for the waste treatment works or pumping station. Dwellings would be appropriate in all parts of the site with regard to drainage.

3.20 For **Cultural Heritage Theme** the options include consideration that the demolition of all the buildings would maximise the amount of land available for redevelopment whilst the retention of some of the buildings and/or artefacts they hold would help to conserve and enhance the site's cultural heritage. In addition, the redevelopment should reflect and commemorate its cultural heritage. The question arises to what extent the design should do this.

3.21 **Nature Recovery Theme –** options include consideration of how much of a priority nature recovery should be as part of the redevelopment of the site. The extent and intensity of development could have an adverse impact on sensitive habitats and protected species. The five areas of the site offer different opportunities for nature recovery, for example, the Riverside could be conserved and enhanced as a riparian corridor linking with other habitats down and up stream.

3.22 For **Climate Change Theme,** there are two main options arising from the climate change evidence. Existing Local Plan policy requires major development to be zero carbon and zero waste. This could be extended to require a zero whole life assessment covering construction, operational and ongoing extensions/repairs. Some offsetting will likely to be needed and any energy demands not met by onsite renewables generation could be required to be met by investment in new renewable energy off-site.

3.23 **Getting Around Theme -** There are a number of options arising from the transport evidence: A four arm roundabout located near the existing access to the Cement Works area is suggested as the best option by the transport consultants. The existing underpasses would be retained for walking/cycling and emergency vehicle access. There is potential for a left-in-left-out access using existing access points instead of a roundabout. This would require replacing the existing underpass with a larger one that could accommodate two way traffic and walking/cycling access.

3.24 **A Place to Visit Theme –** a number of options have been put forward. Firstly, a sensitive, naturalistic approach to attract visitors would conserve and enhance what is already on site in terms of fauna and flora, natural habitats and wildlife. This would be situated in the bowl, moonscape and incorporates elements of the cliffs. A second option is to celebrate the chalk. Similar to the first option, but with a focus on geology and particularly the chalk. This would be situated in the Bowl and Moonscape, with minimal physical interaction with the Clifflands. The third option is larger scale tourism, focused on recreation that fits within the landscape. Possible attractions are zip wires, toboggan runs and mountain biking. Finally, the natural amphitheatre of the Bowl could be used for live music and festivals. The whole site could be a suitable location for filming.

3.25 **A Place to Live Theme –** there are a number of options arising from the housing evidence: As a place to live, the redevelopment could include more or less of a range of different housing types, for example, family-sized homes with gardens or apartments with communal gardens / rooftop gardens. The choice of housing types will be constrained by a number of issues particularly contamination. Focus housing development in the Riverside only or also include housing in the redevelopment of the Cement Works as well.

3.26 **A Place to Work Theme –** options considered include prioritising employment space that is linked to the National Park's priority sectors of farming, forestry and tourism, employment space that is linked to local/ sub regional climate change and nature recovery plans and contributes positively to a greener economy.

3.27 **Landscape Theme –** all possible options have different impacts on the landscape. The first purpose of the Authority is to conserve and enhance its scenic beauty, wildlife and cultural heritage This area is considered most suitable for a residential use and this is the most viable land use. Much of the Riverside's industrial heritage value has been lost including the original cement works and more recently the over-road conveyor belt system. The Riverside is the most visually exposed part of the site. The site's relative isolation is a significant issue we cannot directly affect. Any new development is likely to generate fairly widespread direct and indirect effect on the landscape including views, ecology, perceptual qualities for, for example increased traffic.

Figure 2 *– The Five Areas*

3.28 In summary, the AAP explored all the issues and options for both the whole site and the five individual areas. The next stage of preparing the AAP is to consider a range of possible options for Shoreham Cement Works, which will deliver a significantly enhanced landscape and still enable a development proposal that is both feasible, attractive and viable. The Issues highlighted above and the various options for the site will need to be considered within this SA. This is outlined in the next section.

4. THE SA FINDINGS AT THIS STAGE

Introduction

4.1 This Chapter presents the appraisal of options as set out in the Issues and Options AAP document. It provides the key part to the SA and includes the following:

- Compatibility of SA objectives,
- The appraisal of options,
- Reasonable alternatives for (a)Themes and associated questions and (b)Development scenarios,
- Reasonable alternatives,
- Cumulative impacts.

4.2 The conclusion of the assessments set out in this chapter will influence and direct the emergence of a preferred option for SCW.

Compatibility of the SA objectives

4.3 The SA objectives have been tested against each other to identify any potential conflicts and problems with the internal compatibility that may arise between objectives. The compatibility matrix is shown in Table 3 below.

4.4 The yellow shading relates to objectives that generally do not have a strong relationship. For example - objective 1 (to conserve, enhance and restore the landscape of the site) and objective 11 (To improve the health and well-being of the population and reduce inequalities in health and well-being).The green score relates to objectives that have limited, manageable and avoidable impacts. Examples of this include objective 3 (the development should contribute to nature recovery through biodiversity net gain and other delivery mechanisms as informed by the site's ecological context) and objective 21 (minimise the impact of required highways schemes on the landscape, biodiversity, heritage and riverine environment). For some objectives there may well be a positive relationship between them.

4.5 The red score relates to a potential conflict. In many cases, this is because of the impact of development or new infrastructure may have on the objectives of protecting and enhancing landscape and biodiversity. An example is objective 2 (conserve and enhance protected and priority species and habitats that occur on the site as identified in the Preliminary PEA and PRA 2018 and any subsequent survey recommendations set out in further work during 2021/2022) and objective 16 (ensure any homes are of a suitable size and type to meet identified local needs)

4.6 These potential conflicts will be considered as part of the SA process and in decision making in the preparation of the AAP. It may be possible to mitigate some or all of these potential conflicts.

***Table 3**: Appraisal of SA Objectives*

	Objectives																										
Objectives	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**
Objective 1 To conserve, enhance and restore the landscape of the site.																											
Objective 2 Conserve and enhance protected and priority species and habitats that occur on the site as identified in the Preliminary PEA and PRA 2018 and any subsequent survey recommendations set out in further work during 2021/2022																											
Objective 3 The development should contribute to nature recovery through biodiversity net gain and other delivery mechanisms as informed by the site's ecological context																											
Objective 4. To conserve key features of the industrial heritage of the site, (this may include the chimney and others as identified in studies and assessments undertaken in 2021 on cultural heritage and existing buildings).																											
Objective 5. To ensure the development delivers sustainable tourism (see Economy and Employment theme).																											
Objective 6. Minimise the risk of flooding to new and existing development.																											
Objective 7. Maximise the use of low carbon and renewable energy within the site																											
Objective 8.Minimise the impacts on health of both solar glare and radiation experienced within the quarry site.																											
Objective 9.Minimise water consumption and maximise grey water recycling to reduce pressure on local water supplies.																											
Objective 10. Makes best possible use of existing materials and resources already on the site																											
Objective 11.To improve the health and well-being of the population and reduce inequalities in health and well-being.																											

	Objectives																											
Objectives	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**
Objective 12.To promote the 15 minute neighbourhood concept that will enable people to meet most of their daily needs within a 15 minute walk, cycle or public transport links from their home.																											
Objective 13. Development that provides for small / medium business enterprises particularly in the core sectors of Visitor Economy, Land-based, Food & Drink, Knowledge Economy and Advanced Manufacturing																											
Objective 14. To deliver sustainable tourism which promotes a modal shift from private to public transport, diversifies and improves the tourism offer and improves the knowledge and custodianship of visitors																											
Objective 15. Contribute towards affordable homes																											
Objective 16. Ensure any homes are of a suitable size and type to meet identified local needs																											
Objective 17. Ensure residents have convenient and sustainable access to day-to-day local services.																											
Objective 18. A mixed community where children can play freely and social isolation is the exception																											
Objective 19. Development that does not harm the viability of services and facilities in surrounding communities in particular Upper Beeding, Steyning and Shoreham.																											
Objective 20. Provide convenient access to a range of sustainable modes of transport to and from the site.																											
Objective 21. Minimise the impact of required highways schemes on the landscape, biodiversity, heritage and riverine environment																											
Objective 22. Seek to improve the current non-motorised transport infrastructure in the																											

	Objectives																										
Objectives	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**
vicinity of the site and the links to neighbouring settlements																											
Objective 23. No reduction in water quality of rivers and aquifers.																											
Objective 24. Reduce congestion or minimise unavoidable increases in congestion																											
Objective 25 Prevent soil erosion and compaction.																											
Objective 26 Protect and provide access to key parts of site to enable people to appreciate the chalk geology.																											
Objective 27 To adequately clean up/remediate the site once the extent of land contamination is known and to ensure buildings are demolished and cleared in accordance with relevant guidance. To re-use materials where possible																											

Green: has limited, manageable or avoidable impacts Yellow:: has no relation to the other objective. Red: potential conflict

Themes and Issues presented in the AAP

4.7 The Issues and Options AAP presents a discussion of evidence, issues and options across 11 themes. The Themes are set out in **Appendix D**. The AAP presents 28 questions to focus on at this stage of plan development. Not all of the questions fall under a theme and therefore, not all of them can be appraised through the SA. Those that are to be appraised are as follows (grouped under the relevant theme heading).

Table 4 *– Issues Included in the AAP*[13]

Theme	Issue	
Viability		No questions/issues[14]
Contaminated Land and Demolition		No questions/issues
Water, Drainage and Flooding		No questions/issues
Cultural Heritage	a	Should any of the buildings, such as the chimney, be retained on site?
	b	To what extent should the design of the redevelopment reflect the site's industrial past?
Nature Recovery	c	In which area(s) of the site should the focus be for biodiversity protection, enhancement and creation?
	d	Should buildings and structures contribute to nature via green roofs and walls or should these surfaces support solar energy or a mixture?
Climate Change	e	What renewable energy generation do you think the site could offer?
	f	What opportunities do you think there are for the design of the redevelopment to ensure resilience to climate change?
Getting around	g	What is your view on a new roundabout or any other solutions to access the site?
	h	Do you support shared surfaces or segregated routes for vehicular traffic and pedestrians/cyclists for parts of the redeveloped site?
A Place to Visit	i	What visitor attractions would you like to see on the site?
	j	What visitor attractions would you not like to see on the site?
	k	What do you think is special about this part of the National Park that could attract visitors and can you suggest how it could be enhanced as part the redevelopment?
A Place to Live	l	Who do you think would be interested in living at the redeveloped Shoreham Cement Works?
	m	What do you think would help make this a sustainable community where people would like to live?
	n	Do you think houses with gardens or flats or a mixture should be built?
A Place to Work	o	What sort of businesses would you like to see and why?
	p	What sort of businesses would you not like to see and why?

[13] Please note, for the purposes of the SA process, the order of the issues/questions has changed from the list set out at the start of the AAP. This is because the SA orders the questions in accordance to the Themes/Issues and Options headings. Please see Section 5 of the AAP.

[14] There are no issues/questions relating to Contaminated Land and Drainage and Viability as the evidence underpinning these issues is technical with limited scope to include questions for discussion.

	q	Do you think green tech companies should be encouraged to locate here?
Landscape & Design	r	Should development be restricted to previously developed areas?
	s	Would you like to see materials on site re-used or re-cycled for construction?
	t	How far do you think the new buildings should reflect the height and massing of the existing buildings?
	u	Would you prefer a contemporary or traditional approach to architectural design or a mixture of both?
	v	What type of public space, such as public squares, pocket parks and skateboard parks, would you like to see and why?
	w	Should the redevelopment hide, frame or reveal new views moving eastwards away from the main road or a combination of all three?

Assessment of Reasonable Alternatives

4.8 The SEA Regulations are not prescriptive as to what constitutes a reasonable alternative, stating only that the SA Report should present an appraisal of the *'plan and reasonable alternatives taking into account the objectives and geographical scope of the plan'*.

4.9 The issues that have been appraised against the SA Framework are set out in Appendix E **–** Appraisal of Issues and this provides a commentary for each. A summary is included at the end of this Chapter. Appendix E sets out the reasonable alternatives/options for each of the issues.

4.10 For several of the issues covered, the threshold for reasonable alternatives to be considered is very low – especially those that are unlikely to have a significant bearing upon sustainability objectives. In addition, issues that are considered 'open ended' in order to seek opinions through public consultation exercise – are not appraised. The issues below are not included in Appendix E - a commentary is provided.

Issue

e	**What renewable energy generation do you think the site could offer?**
	This an open ended issue and it is unlikely any appraisal against the SA objectives will highlight a preferred option. The list of reasonable alternatives is extensive and many of them will be relevant to the site.
f	**What opportunities do you think there are for the design of the redevelopment to ensure resilience to climate change?**
	This issue is open ended with a number of options that are unlikely to be adequately appraised against the objectives. The list of alternatives will be extensive.
k	**What do you think is special about this part of the National Park that could attract visitors and can you suggest how it could be enhanced as part the redevelopment**
	This issue is also open ended and any list of alternatives will be extensive. It will not be possible to appraise this against the objectives.
l	**Who do you think would be interested in living at the redeveloped Shoreham Cement Works?**
	As above – this is an open ended issue and the results and suggestions will be wide ranging. It would not be possible to appraise them against each other.
m	**What do you think would help make this a sustainable community where people would like to live?**
	As above – this is an open ended issue and the results and suggestions will be wide ranging. It would not be possible to appraise them against each other.

s	**Would you like to see materials on site re-used or re-cycled for construction?**
	The options for this issue are closed and the assessment will be between re-used or re-cycled or none of these. The objectives cannot adequately assess these options and the detailed information as to how the materials will be used is unavailable.
v	**What type of public space, such as public squares, pocket parks and skateboard parks, would you like to see and why?**
	This a wide ranging issue and an open ended question with many different types of open space that could be included as options. This could result in a restricted discussion and consideration of all the reasonable alternatives.

4.11 The appraisal of a preferred option will be the focus of the next version of the SA. This will enable the combined effects of proposals to be considered as the AAP develops.

Discussion of Possible Preferred Options

4.12 This provides a summary of the appraisal set out in Appendix E. It is organised below under the theme headings and provides a discussion on the relative sustainability assessment conclusions at this stage.

Cultural Heritage

Should any of the buildings, such as the chimney, be retained on site?

To what extent should the design of the redevelopment reflect the site's industrial past?

4.13 On balance, the most sustainable option is to retain the chimney (option 1c - the existing chimney should be retained on site). Options 1b and 1c are equal in their preference rating. When assessed against two of the topics (travel & transport and water, air, soil & geology) option 1b is supported – that is to remove all of the buildings including the chimney. When assessed against topics landscape and archaeological & cultural heritage – option 1c (to retain the chimney) is supported. The chimney is identified in the Landscape evidence of being of local important and highly visible. It therefore, carries a cultural significance for the local area. However, retaining the chimney may have an impact on access and development space, creating a blockage within the site that has to be worked around. It is considered that layout, design, creating access points can be undertaken carefully whilst retaining the chimney.

4.14 It is possible to retain some buildings on site and to design new ones to reflect the industrial past and cultural heritage of the site. However, at this stage in the process, option 1a (the designs of the development should reflect the site's industrial history – to what extent?) was seen as the supported option. It is considered that retaining some or many of the existing buildings on site will restrict elements of the redevelopment and serve no real purpose in conserving the historical heritage of the site.

Nature Recovery

In which area(s) of the site should the focus be for biodiversity protection, enhancement and creation?

Should buildings and structures contribute to nature via green roofs and walls or should these surfaces support solar energy or a mixture?

4.15 Overall, the appraisal shows that biodiversity protection, enhancement and creation is best focussed in The Bowl, The Moonscape and Clifflands. These areas are shown to contain areas of habitat that can be protected/enhanced as a priority/ where possible and

opportunities for habitat creation. Whilst the Riverside and Cement Works contain buildings that are recommended for retention, they tend to be surrounded by areas of low quality habitat of limited value.

4.16 Overall, a mixture of both solar energy and green roofs/walls is the supported and most sustainable option. This includes archaeology and cultural heritage, health & wellbeing, employment, housing and travel and transport. For landscape and biodiversity objectives – option 1a is supported as it will have a direct and positive impact.

Getting Around

What is your view on a new roundabout or any other solutions to access the site?

Do you support shared surfaces or segregated routes for vehicular traffic and pedestrians/cyclists for parts of the redeveloped site?

4.17 In terms of objectives relating to economy and employment, community and housing, option 1a (a new roundabout) is supported at this stage. None of the options, have a positive impact on biodiversity although it is likely that new access arrangements will be located away from areas of high biodiversity value. In terms of landscape impact, options 1a and 1b (new roundabout and new left in-left out) are least supported although this is not an absolute final conclusion as details of design, layout and siting of the new access/roundabout are unknown at this stage. Access arrangements that will result in the removal of existing buildings score less favourably when assessed against the cultural heritage objectives.

4.18 The option to provide segregated routes for traffic and pedestrians/cyclists is supported at this stage. This is because the existing underpass will be retained with the roundabout option and will also provide a direct link into the site from the Downs Link. It also ensures that there is a separation with heavy commercial traffic. However, the two options are not mutually exclusive and there may be some sections of the internal road network that is shared.

A Place to Visit

What visitor attractions would you like to see on the site?

What visitor attractions would you not like to see on the site?

4.19 Options 1a and 1b (a sensitive, naturalistic approach to visitor attractions – i.e. education/biodiversity/bird watching etc and celebrate the chalk with an emphasis on geology) are considered to represent the type of tourism supported within the National Park i.e. tourism that focusses on the natural environment together with providing an educational resource. Tourism that attracts people who are interested in geology or wildlife fits well with the ethos of the National Park.

4.20 However all types of tourism will need to be carefully managed in terms of disturbance, access and transport and numbers. Large scale tourism options such as zip wire and concerts/theatre area are likely to encourage visitors from a wider catchment area that may cause traffic congestion and noise/air/light pollution. These may also have a negative impact on residential development.

A Place to Live

Do you think houses with gardens or flats or a mixture should be built?

4.21 Overall, the three options (provide a range of housing types including family housing with gardens, provide apartments with communal gardens, provide different types of housing such as self-build or build to rent) are considered to be of equal value against most of the

sustainability objectives. In particular, they offer the chance to develop a range of different residential types that would help create a balanced community. Further details of the design, layout and scale of development are required before the options can be accurately appraised against the objectives. The key sustainability issue is whether importing soil to create gardens/open space is not ideal and will need to be considered in detail.

A Place to Work

What sort of businesses would you like to see and why?

What sort of businesses would you not like to see and why?

Do you think green tech companies should be encouraged to locate here

4.22 For many of the objectives there is not a clear link between the options because details of any commercial development is unknown at this stage (in terms of layout, location and access arrangements). However, for several of the objectives – option 1d (provide employment floorspace for B8 uses) is the least preferable due to possible congestion (likely to encourage the use large, heavy goods vehicles) and limited support for the National Park's core sectors.

4.23 Option 1a (prioritise business space that is linked to the National Park's priority sectors) is slightly more preferable than the options of 1b and 1c (prioritise business space that contributes positively to a greener economy and create high value/high skilled jobs) but in several cases, all three are considered acceptable.

4.24 The options are balanced between supporting and encouraging green tech companies and not. However, where it is appraised that green tech companies should not be encouraged – this is based around the generation of traffic (which would be the same for any type of business sector). Supporting green tech companies will have a positive impact on climate change, health & wellbeing and the economy.

Landscape and Design

Should development be restricted to previously developed areas?

How far do you think the new buildings should reflect the height and massing of the existing buildings?

Would you prefer a contemporary or traditional approach to architectural design or a mixture of both?

Should the redevelopment hide, frame or reveal new views moving eastwards away from the main road or a combination of all three?

4.25 On balance, option 1b (development should maximise the use of the whole site [all areas including the Bowl/the Moonscape/Clifflands]) is most supported. This is because for a number of the objectives, the whole of the site offers the best opportunity to deliver a number of the SA objectives. For landscape – option 1a (the development should maximise the use of the existing developed areas only [the Riverside/the Cement Works])is the best option as other parts of the site are to be protected and enhanced. The same goes for biodiversity and nature recovery. However in order to achieve the tourism offer presented by the site and for access and other facilities such as open space and recreation to be realised, the whole site should be identified.

4.26 The options considered are – 'the scale of new structures should be restricted by the scale of the existing buildings in each area' and 'new structures do not need to be restricted by the scale of the existing buildings and can be higher/large in places' In many cases, there is no firm link between the options and objectives. However, for the themes of Landscape,

Climate Change and Community/Housing – option 1a (the scale of new structures should be restricted by the scale of the existing buildings in each area) is the preferred option.

4.27 This appraisal supported the option of encouraging a contemporary approach to architectural design. Essentially, this style will offer modern and innovative ways of ensuring nature recovery, landscape enhancement, future proofing against climate change and supporting modern living and business. It will also encourage tourism and visitors who appreciate contemporary development.

4.28 As the technical details of the design and layout of the developments and the location of uses across the site is unknown, it is hard to establish whether redevelopment should hide, frame or reveal new views and therefore option 1a ((the development should hide new views) has greatest support. In terms of landscape, revealing new views may provide an opportunity to create a new and positive impact on the local area.

Appraisal of the Development Scenarios

4.29 Appendix F – Appraisal of Development Scenarios considers the five development scenarios[15] as appraised against the SA objectives. All of the scenarios are assessed and a summary is provided below. Much of the information in Appendix F is taken from the SA to the South Downs Local Plan as there is insufficient detail at this stage to draw on how the various scenarios impact on the sustainability objectives.

Do Nothing (Scenario 5)

4.30 The Do Nothing scenario is considered to be the least sustainable option as it offers little in terms of positive impact when appraised against the sustainability objectives. It effectively means the site will remain as it is. When assessed against cultural heritage objectives – there may be some benefit, but in all other cases, it will have a negative impact.

Scenarios 1, 2 and 4

4.31 These scenarios have been grouped together as they contain a mix of residential and employment land. Scenario 1 offers a mixed development option with the inclusion of 400 homes. Due to the site's relative distance from existing services and facilities and limited accessibility to public transport networks, the scenarios are likely to encourage a degree of car use and dependency. They have the potential to support economic growth through significant employment provision but will lead to an increase in commuter traffic in the vicinity.

4.32 As scenario 1 includes the greater number of new houses, it has the potential to lead to significant impacts on habitats and species without appropriate design and layout and the integration of infrastructure which supports ecological networks in the area.

4.33 Recently the issue of water neutrality has emerged in the Sussex North Water Resource (Supply) Zone (WRZ)[16]. The Shoreham Cement Works site is located just within the Sussex North WRZ and, as set out in the HRA Screening[17], a likely significant effect on the SAC, SPA and Ramsar site cannot be dismissed in combination with other developments.

4.34 Scenario 1 has the potential to retain some/small parts of the cement works buildings and offer a cultural heritage educational resources for the local community but the land take for housing and other uses may result in limited opportunities to retain the existing buildings. This is the same for scenario 2.

[15] See Appendix B for the details of the scenarios

[16] 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

[17] Habitats Regulations Assessment (HRA) Screening Statement: Test of Likely Significant Effects, SDNPA, 2022

4.35 Scenario 4 contains less floorspace for both types of uses and may offer a greater opportunity to retain heritage and industrial buildings.

4.36 All scenarios have the potential to lead to positive impacts on climate change through design and layout details and depending on the location of development, proposed residential should not be susceptible to flooding.

4.37 Scenarios 1,2 and 4 offer the option of providing mixed use communities that will benefit the health and wellbeing of residents and employees. Depending on site layout and design, the location of different uses and the allocation of space for local services/open space and recreation facilities – all scenarios should incorporate positive wellbeing experiences. However, Scenarios 1 and 2 also include an element of B8 and this may lead to increased access from heavy vehicles and thus have a negative impact on local air quality.

4.38 All of the scenarios have the potential to have impacts on landscape character, biodiversity and the cultural history environment. In this context, potential effects depend on the design and layout of new development, the retention of distinct features contributing to local character, and elements such as the integration of high quality green infrastructure provision.

4.39 Scenarios 1-4 have the potential to support small / medium business enterprises particularly in the core sectors of the Visitor Economy, Land-based Food & Drink, Knowledge Economy and Advanced Manufacturing. Scenario 4 offers lower employment floorspace and could potentially exclude some of the key sectors of importance to the National Park.

Scenario 3

4.40 Scenario 3 includes a mixed use development with housing, employment and a leisure/recreational based focus. It has the potential to provide the broadest range of sustainability benefits for the National Park. This includes - enhancing opportunities for recreation and leisure, with associated benefits for health and wellbeing; promoting sustainable transport use; supporting the wider economic vitality of the National Park, including the visitor economy; and increasing cultural activity.

4.41 However the scenario provides for only 200 houses and this may not be sufficient to create a local community with a range of housing types and a 15 minute neighbourhood concept (see objective 12).

4.42 The details of any leisure scheme will need to be known before it is clear what the impact on the landscape will be. Whilst high quality design can lessen any impact, any housing proposed would still have an impact on tranquillity and the dark skies reserve.

4.43 Scenario 3 may lead to less employment/heavy vehicle movement than scenarios 1, 2 and 4 which include employment uses. However, depending on the type of leisure facility – this could increase the use of the site by private vehicles.

4.44 This scenario has most potential to enhance uses of existing attractions (including the South Downs Way) which will support leisure and recreational activities with benefits for health and wellbeing. The site currently has poor access to services and facilities, as well as public transport networks. It includes an element of leisure use which may have a positive impact on encouraging tourism and educational visits to appreciate the chalk geology. A lower number of new homes will enable most of the site to remain untouched and this may also have a positive impact on water, air and soil.

4.45 Due to the location of the site, the scenarios proposed are unlikely to lead to significant effects on the vitality of existing settlements, with the possible exception of localised benefits to Upper Beeding. However, scenario 3 does include a greater amount of retail floorspace. Although the intention is that this should complement the leisure offer onsite it may have an impact on local towns/settlements.

Cumulative Impacts

4.46 The SEA Directive requires an assessment of secondary, cumulative and synergistic effects, which should be incorporated into the SA. Collectively these effects are called cumulative impacts. Cumulative effects arise, for instance, where several developments each have insignificant effects, but together have a significant effect; or where several individual effects (for example noise, dust and visual) have a combined effect.

4.47 A detailed cumulative effects assessment will be carried out at the draft AAP stage and reported as part of the formal SA report. The main difficulty encountered at the moment is the lack of detail due to the AAP being at Issues and Options stage. It is to be expected that a fairly high level assessment of options takes place in the SA at this point in the planning policy process. Cumulative impacts will be assessed when policies for the Cement Works site are considered in draft. In addition, the quantum or development will have been established. This process will set out 'intra-plan' impacts.

4.48 At the next stage in the process, the assessment of impacts will consider the in-combination effects of plan policies and cumulative effects of the AAP with the South Downs Local Plan and other plans and policies in the wider sub-region. Whilst the geographic scope of the AAP only addresses the Cement Works site, the in-combination effects of new development proposed through the adopted or emerging Local Plans for the Local Planning Authorities adjoining or in close proximity to the site have the potential to lead to cumulative effects. This includes relating to adopted or emerging Local Plan documents for Adur/Worthing and Horsham and possibly Brighton & Hove City.

4.49 The combination of Local Plan proposals and other proposals and activities being taken forward in the wider area has the potential to lead to cumulative effects. Examples include:

- Proposed road schemes, such as that on the A27 at the Monks Farm development and commercial development at Shoreham Airport.
- Proposals to increase visitor numbers in the SDNP and areas close to National Park boundaries.
- Matters relating to water neutrality.

4.50 In regards to water neutrality, Natural England issued a position statement in September 2021 to the local planning authorities 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'*. The Shoreham Cement Works site is located just within the Sussex North WRZ and, as set out in the HRA Screening[18], a likely significant effect on the SAC, SPA and Ramsar site cannot be dismissed in combination with other developments.

4.51 The HRA Screening for the AAP states that 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, 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.

4.52 Potential effects (both positive and negative) which may occur as a result of the in combination effects of the AAP and other plans and proposals in the area (including the National Park Local Plan) could include the following[19]:

[18] Habitats Regulations Assessment (HRA) Screening Statement: Test of Likely Significant Effects, SDNPA, 2022
[19] Sustainability Appraisal (SA) for the South Downs Local Plan 2018
https://www.southdowns.gov.uk/wp-content/uploads/2018/04/SDLP-04-Sustainability-Appraisal-Report.pdf

- Increases in traffic flows and congestion from the in combination effects of development and an increase in visitor numbers, with potential impacts on air and noise quality and landscape character. However the in combination effects of proposals on enhancing public transport and pedestrian and cycle infrastructure may help limit potential negative effects and secure positive effects in this regard. Cumulative impacts were considered as part of the Transport Assessment study work.
- Cumulative impacts on biodiversity. This is from the in combination effects of new development and associated infrastructure on species and habitats, including biodiversity corridors.
- Impacts on flood risk from the in combination effects of new development, including relating to surface water and fluvial flooding.
- Improvements to accessibility resulting from the in combination effects of enhancements to public transport and walking and cycling networks.

Proposed Mitigation

4.53 A number of mitigation measures for the site are set out in the SA to the South Downs Local Plan[20]. In addition, policies within the Local Plan and national planning guidance and policy will provide measures to mitigate and address potential negative impacts of development on the sustainability objectives.

4.54 The Local Plan SA states that 'the policy (SD56) has the potential to lead to significant positive effects on landscape quality, the setting of the historic environment, the rural economy (including the tourism and visitor economy) and cultural activity. With appropriate planning for green infrastructure networks, there is also the potential for significant biodiversity enhancements to take place'. The AAP will help ensure potential negative effects are avoided and mitigated and enable the numerous opportunities for the high quality and sustainable development the site to be realised

4.55 Proposed mitigation measures will be set out in detail at the next stage of the AAP when the preferred option is presented.

[20] https://www.southdowns.gov.uk/wp-content/uploads/2018/04/SDLP-04-Sustainability-Appraisal-Report-Appendices.pdf

5.0 THE WAY FORWARD

5.1 The AAP has explored a number of issues and options for both the whole site and the five individual areas. The next stage is the consideration of the preferred option for Shoreham Cement Works, which will deliver a significantly enhanced landscape and still enable a development proposal that is feasible, attractive and viable.

5.2 It is not the role of SA to determine preferred options, but to identify, describe and evaluate the significant effects of the options presented. The current stage of the SA process should be used to generate discussion on the identified trade-offs between sustainability considerations. If a trade-off is made it will often be the case that there is the potential to mitigate negative effects or redress missed opportunities.

Preferred Option

5.3 Subsequent to the current consultation on the AAP Issues and Options report, it is the National Park Authority's intention to prepare and then consult on a 'Preferred Option' draft plan. Development of the Preferred Option will be informed by the findings of this report, further evidence gathering and representations made through the current consultation.

5.4 A key part of the development of the Preferred Option will be the appraisal of further alternative options for the AAP and cumulative impacts. The current SA is an important part of the process in identifying and appraising reasonable alternatives to inform the preferred option for the site.

5.5 To support the Preferred Options draft plan, an SA Report will be prepared and will be presented for consultation alongside the Preferred Options.

5.6 The Preferred Option and its SA will form the proposed Submission Version of the AAP. This will be published so that final representations can be made prior to the Plan being submitted for examination.

Monitoring

5.7 The SEA Directive states that '*member states shall monitor the significant environmental effects of the implementation of plans and programmes…..'*. The purpose of monitoring is to measure the significant sustainability effects of a plan, as well as to measure success against the plan's objectives.

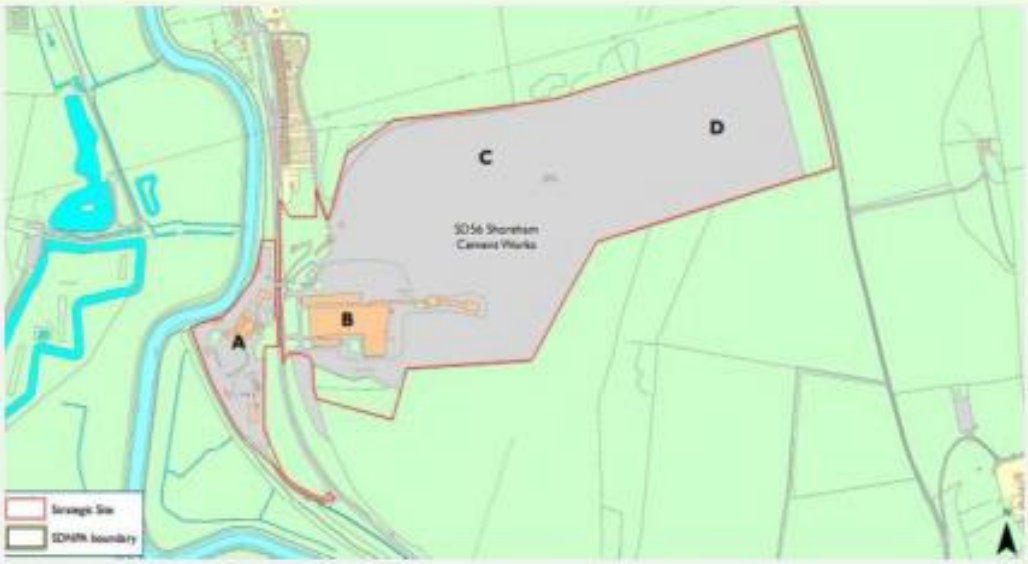
5.8 It is proposed that a monitoring framework is set up that focusses on those aspects of the environment that are likely to be negatively impacted upon, where the impact is uncertain or where particular opportunities for improvement might arise.

5.9 The framework will be provided in the SA for the preferred option and refined as part of the iterative process of developing the final submission AAP.

APPENDIX A

LOCAL PLAN APPRAISAL TABLE FOR SHOREHAM CEMENT WORKS

Strategic Site Policy SD56: Shoreham Cement Works



Approximate size of site: 48 ha

Mixed use brownfield development and part minerals workings with restoration conditions attached

Sustainability Theme	Rating	Commentary
Landscape	+	The Strategic Site, which is a disused cement works, currently has a significant effect on landscape quality in the area. This affects views from a wide area, including from much of the South Downs Way to the west. The Strategic Site's current effect on the wider landscape quality of the South Downs National Park is further accentuated by its prominent location at the narrowest part of the National Park. In this context there is considerable opportunity for the policy associated with the Strategic Site to lead to significant improvements in landscape quality in the area. This is recognised by the policy, which highlights that an AAP will be prepared for the site which will enhance the visual impact of the site from both nearby and distant public viewpoints and enhance and providing opportunities for understanding the historic significance and cultural heritage of the site. The policy also highlights that that the '*National Park Authority will resist more development than is necessary to secure and deliver the environmentally-led restoration of the site*' and seeks to ensure that '*the design of any development is of the highest quality and appropriate to its setting within a National Park.*' In this context the policy for the site will help both protect and support enhancements to landscape character in the area.

Climate Change Adaptation	+	The majority of the site is sufficiently elevated as to be at no fluvial/tidal risk now or in the future. No flood risk is shown for the site for either fluvial or tidal scenarios with current defences. However, a small area that largely coincides with the access track heading north west from the A283 and the western most boundary are identified as susceptible to fluvial flooding with climate change allowances. Most of site is not mapped as being at risk of surface water flooding. However, the lowermost part of the site adjacent to the existing access, and the wider road network in the vicinity is at risk of surface water flooding. Given the limited area of the site at risk of flooding now or in the future, the development of the AAP for the site will help ensure that areas of flood risk can be avoided and flood risk issues on the site can be appropriately addressed. The policy supports on-site green infrastructure improvements. This will support climate change adaptation through helping to limit the effects of extreme weather events and regulating surface water run-off. Enhancements will also help increase the resilience of ecological networks to the effects of climate change through making provision for habitat management and enhancing biodiversity corridors.
Biodiversity	+	The Strategic Site is located adjacent to the Beeding Hill to Newtimber Hill SSSI, which is located to the north. The SSSI unit adjacent to the site has been evaluated to be in a 'favourable' condition. The former cement works is located within the SSSI's Impact Risk Zone for 'all planning applications-except householder applications'. As such, the development of the Strategic Site raises the possibility of adverse effects on the SSSI without avoidance and mitigation measures. The SSSI is situated on the scarp slope of the South Downs and is a site of both geological and biological importance. Three nationally uncommon habitats are represented: south-east chalk grassland, juniper scrub and calcareous pedunculate oak-ashbeech woodland. The site supports a rich community of invertebrates, especially harvestmen and has some uncommon butterflies and moths.[49] Protected bird species are present at Area D of the site. A Regionally Important Geological Site is also located in Area D. The site comprises a range of BAP Priority Habitats, including good quality semi-improved grassland, deciduous woodland and lowland calcareous grassland. The site is located within the Brighton and Lewes Downs Biosphere Reserve, which is part of a global network of Biosphere Reserves recognised by UNESCO as *'special places for testing interdisciplinary approaches to understanding and managing changes and interactions between social and ecological systems, including conflict prevention and management of biodiversity'*. The policy acknowledges these various biodiversity and geodiversity constraints and opportunities through seeking to highlight that an '*exemplar sustainable mixed use development*' will be delivered at the site '*which delivers a substantially enhanced landscape and uses that are compatible with the purposes of the National Park'*. The policy's support for the preparation of an AAP for the site will also enable biodiversity issues to be appropriately addressed. The policy also specifically seeks to ensure that biodiversity is conserved and enhanced and opportunities for understanding the biodiversity value of the site are taken.

Cultural Heritage	+	Cross Dyke on Beeding Hill Scheduled Monument is located on the northern boundary of the Strategic Site. The site is also located approximately 800m from the shrunken medieval settlement at Old Erringham Scheduled Monument, which is located to the south of the site. As discussed under the Landscape Sustainability Theme, the Strategic Site currently has a significant effect on landscape quality in the area, with associated effects on the setting of the historic environment. In this context there is considerable opportunity for the policy associated with the Strategic Site to lead to significant improvements in landscape quality in the area. This is recognised by the policy, which highlights that the '*National Park Authority will resist more development than is necessary to secure and deliver the environmentally-led restoration of the site*' and seeks to ensure that '*the design of any development is of the highest quality and appropriate to its setting within a National Park.*' This will support enhancements to views to and from historic environment assets and support their setting. The policy also seeks to *'conserve and enhance opportunities for understanding the…geodiversity, historic significance and cultural heritage of the site.'* The policy therefore offers opportunities for recognising and conserving the intrinsic cultural heritage value of some of the buildings and structures of the disused cement works; however it should be noted that there is uncertainty as to their value.
Cultural Activity	+	The policy for the Strategic Site seeks to promote tourism and the visitor economy through making provision for visitor accommodation and leisure/tourism use.
Health and Wellbeing	+	Remediation of the site has the potential to lead to improved leisure and recreation opportunities, and enhancement of the existing leisure and recreational offer of the area (including the South Downs Way). The policy's focus on sustainable travel and additional provision for leisure/tourism use will support some opportunities for healthy lifestyles.
Vitality of Communities		Due to the location of the site, the proposals for the Strategic Site are unlikely to lead to significant effects on the vitality of existing settlements, with the possible exception of localised benefits to Upper Beeding
Accessibility	?	The site is located at distance from services, facilities and amenities. This is recognised by the policy, which does not propose significant housing allocations and seeks to promote sustainable transport use.
Sustainable Transport	+	Whilst the site is located away from main public transport routes, the policy seeks to improve accessibility and support sustainable transport use.
Housing		The site is located at distance from local services, facilities and amenities. These are located 2-3km away at Upper Beeding and Steyning. This is recognised by the policy, which does not propose significant housing allocations.

Climate Change Mitigation	-	Based on national and regional trends, in terms of greenhouse gas emissions, road transport is an increasingly significant contributor to emissions. The extent to which new development has the potential to support climate change mitigation through facilitating a reduced level of car dependency is therefore a key element. In this context the policy promotes the use of sustainable modes transport. In terms of non-transport emissions from the site, the policy new development to provide renewable energy provision It is, however, difficult to come to a conclusion as to the likely level of greenhouse gas emissions likely to originate from the site prior to detailed masterplanning.
Local Economy	+	The policy seeks to support a range of activities relating to the visitor and tourism economy. The significant improvements to landscape quality and the quality of the public realm in the area facilitated by the policy will support the visitor economy, including through improving views from the South Downs Way. The policy also seeks to facilitate provision for B2 and B8 business uses '*to support the local economy, with a focus on environmentally sustainable activities*' and seeks to provide '*opportunities for entrepreneurship*'. This will support emerging sectors of the economy.

Summary of appraisal

Summary: Strategic Site Policy SD56: Shoreham Cement Works

Through a comprehensive redevelopment of a currently underused area which contributes to a poor quality public realm and significant effects on visual amenity, the proposed policy for the Shoreham Cement Works will bring a range of positive effects for landscape quality and the fabric and setting of the historic environment. The policy will also support biodiversity enhancements, which will help limit potential effects on the numerous designated and non-designated ecological assets present in the area.

The policy will support the visitor and tourism economy, and new sectors of the economy. The policy also recognises the existing constraints of the site in relation to accessibility by sustainable transport modes.

A commitment to prepare an AAP for the site (which will be accompanied by an SA process) will help ensure potential negative effects are avoided and mitigated and enable the numerous opportunities for the high quality and sustainable development the site to be realised.

Potential significant effects?

The policy has the potential to lead to significant positive effects on landscape quality, the setting of the historic environment, the rural economy (including the tourism and visitor economy) and cultural activity. With appropriate planning for green infrastructure networks, there is also the potential for significant biodiversity enhancements to take place. No significant negative effects are anticipated.

Recommendations

No recommendations.

Key			
Likely adverse effect	-	Likely positive effect	+
Neutral/no effect		Uncertain effects	?

APPENDIX B
DEVELOPMENT SCENARIOS

Current Use Class	Former Use Class	1	2	3	4
		Housing/employment led	Housing/employment led	Leisure led	Appeal scheme
B2: General industrial	B2	16,200	16,200	0	13,250
B8: Storage or distribution	B8	20,000	20,000	0	13,250
C1: Hotel*	C1	7,500	7,500	7,500	7,500
E(a): Retail	A1	0	0	500	0
E(b): Consumption of food & drink on premises	A3	0	0	1,500	1,500
E(d): Indoor sport, recreation & fitness**	D2	0	0	18,500	0
E(g)(i): Offices	B1(a)	0	0	0	12,000
E(g)(ii): Research & Development / E(g)(iii) Industrial processes	B1 (b/c)	32,000	32,000	32,000	0
F1: Learning & non-residential institution	D1	2,000	2,000	10,000	0
F2(a): Local shop	A1	280	280	280	0
C3: Dwellings	C3	400	240	200	84
Total commercial floorspace		77,980	77,980	70,280	47,500
Total homes		400	240	200	84
* possibility of sui generis for hostel					
* *possibility of sui generis for live music venue					
Notes:					
Floorspace of hotel kept constant at 7,500 m2. This is approx equivalent to a 116 bed hotel based on the TRICS database					
Floorspace of a local shop kept constant in first 3 scenarios. Floorspace of 280 m2 is the maximum allowed under this use class.					
The employment floorspace figurre for the appeal scheme has been split equally between B2 and B8					
The E(b): Consumption of food & drink on premises in scenario 3 is a pub/restaurant but is not sui generis drinking establishment					

APPENDIX C
SCOPING REPORT

South Downs National Park Authority

Shoreham Cement Works Area Action Plan

Sustainability Appraisal / Strategic Environmental Assessment

UPDATED SCOPING REPORT

SEPTEMBER 2021

Introduction

1.1 The South Downs National Park Authority (SDNPA) is required to ensure that sustainable development is promoted throughout a plan's preparation. To assist in this process the SDNPA must prepare a report assessing the sustainability of plans it prepares through undertaking a Sustainability Appraisal (SA) and a Strategic Environmental Assessment (SEA). The aim of the report is to make a plan more sustainable and more responsive to its environmental effects, by identifying its likely significant environmental, social and economic impacts and ways of minimising its negative impacts. To be effective, the appraisal process must be fully integrated into the plan making process and applied at each stage of document production. It will also be used to monitor the effectiveness of the plan during its implementation.

Information

The aim of a Sustainability Appraisal (SA) is to promote sustainable development by assessing how well or otherwise a plan will help achieve environmental, economic and social objectives.

1.2 To undertake the SA/SEA process the following five stages should be completed:

Stage A - Setting the context and objectives, establishing the baseline and deciding the scope;
Stage B - Developing and refining alternatives and assessing effects;
Stage C – Preparing the sustainability appraisal report;
Stage D – Seeking representations on the sustainability appraisal report; and
Stage E – Post adoption reporting and monitoring.

Information

A Strategic Environmental Assessment or SEA is an assessment required when preparing a Plan to ensure that a high level of protection is given to the environment.

1.3 This **Scoping Report** forms the first stage, Stage A and is split into 5 areas of work as outlined in the table below. The aim is to bring together the evidence base early in the plan-making process in order to identify significant problems, act as a base for future assessment, monitor the effects and inform the identification of reasonable alternatives to what is being proposed.

A1: Identifying other relevant plans, programmes and sustainability objectives;

A2: Collecting baseline information;

A3: Identifying sustainability issues and problems;

A4: Developing the SA framework which will be used to test policy and allocation options in the plan;

A5: Consult the consultation bodies on the scope of the sustainability appraisal report

1.4 It is usual practice to combine the processes of SEA and SA, as they share a number of similarities. Whilst there are formalised approaches for both SA and SEA, only through the SEA is there a legal obligation to perform certain activities.

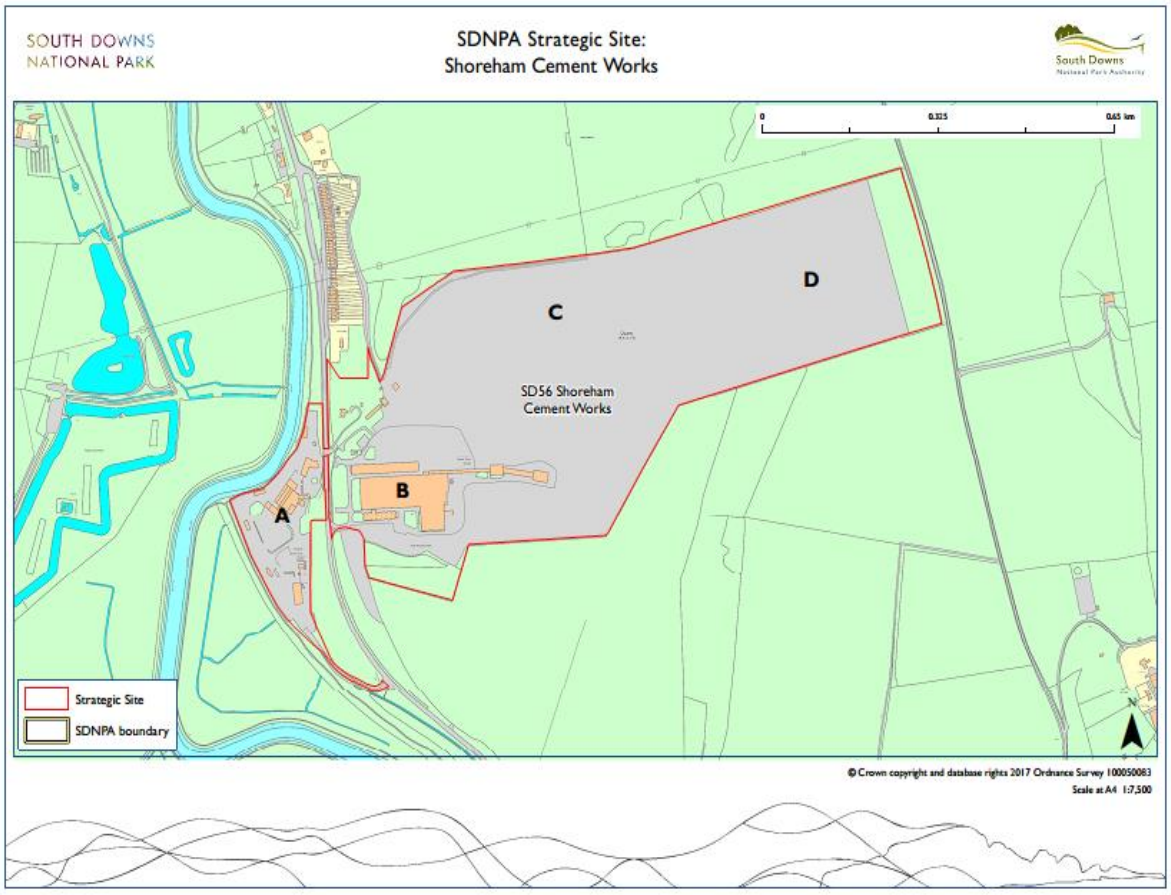
Compliance with the SEA Directive
Where this report addresses the requirements of the SEA Directive, for clarity this will be set out in a box like this.

The Shoreham Cement Works site and Area Action Plan (AAP)

Compliance with the SEA Directive

Outline the contents, main objectives of the plan and relationship to other plans (Annex 1 (a) of the Directive)

1.5 Shoreham Cement Works[21] 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.



1.6 Large-scale cement production began on the site at the end of the 19th Century. The buildings were completed in 1948-50, permission having first been granted for chalk extraction in 1946. Chalk extraction and cement production ceased in 1991, but the permission (for Area C) was kept alive by an application for registration of the old mining permission in 1992. This extant permission for the extraction of chalk runs to 2042, when a basic restoration scheme would have to be implemented.

1.7 Shoreham Cement Works is an inactive chalk quarry with remaining chalk reserves which are safeguarded by Policy M9 of the West Sussex Joint Minerals Local Plan[22]. It also has an

[21] The site is known locally as Beeding Cement Works. However as the Policy in the South Downs Local Plan refers to the site as Shoreham Cement Works and as the AAP sits under this policy – the name of the site remains as Shoreham Cement Works within this document.

[22] http://www2.westsussex.gov.uk/ssr/mlp_adoption.pdf

aggregate recycling facility which is safeguarded by Policy W2 of the West Sussex Waste Local Plan[23].

1.8 Existing use rights exist for general industrial uses within existing buildings and for associated uses (such as storage) taking place in the open air. Areas A and B can be classed as brownfield land, but not Areas C and D, since minerals sites are excluded from the National Planning Policy Framework (NPPF) definition of previously developed land.

1.9 The whole site is in single private ownership and the SDNPA is the sole Local Planning Authority.

1.10 The site lies across the boundary of Adur District (northern part of the site west of the A283) and Horsham District (east of the A283 and southern part of the site west of the A283;). Prior to the creation of the SDNPA in 2011, the site was allocated for a mix of uses in the Horsham District Core Strategy (2007) and in the Horsham District Site Specific Allocations Development Plan Document (2007)[24]. As part of the site is within Adur District, it was also identified within the Adur Local Plan (1996) for leisure and recreation uses. However, since 2011 the South Downs National Park Authority has been the relevant planning authority and therefore the entire site is addressed within the adopted South Downs Local Plan 2019.

1.11 Upper Beeding Parish Council has a made **Neighbourhood Plan**. The Parish covers a large proportion of the Cement Works site. The Upper Beeding Parish Neighbourhood Plan 2018-2031. The Plan contains a non-statutory community aspiration for the Cement works site (Community Aspiration 1)[25].

The Area Action Plan

1.12 Shoreham Cement Works site is allocated under Policy SD56 of the adopted **South Downs Local Plan (SDLP)**[26] for a mixed use development which delivers a substantially enhanced landscape and uses that are compatible with the purposes of the National Park. The policy states that 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 full text of Policy SD56 is contained in **Appendix 1** of this report.

1.14 Drawing on existing and new evidence, along with input from the site owners and the local community, the AAP will address in more detail the constraints and opportunities present. These include land restoration, environmental impacts, transport, flood risk, cultural and

[23] https://www.westsussex.gov.uk/media/3241/waste_local_plan_april2014.pdf

[24] It should be noted that these documents favoured employment uses on the site, and that previous mixed use applications with significant residential uses were not permitted.

[25] https://www.horsham.gov.uk/planning/neighbourhood-planning/upper-beeding

[26] https://www.southdowns.gov.uk/planning-policy/south-downs-local-plan/

heritage possibilities, design considerations, viability (including identifying possible partnership funding to enable delivery of a scheme) and phasing of delivery over a number of years.

1.15 The Sustainability Appraisal[27] of the SDLP appraised some development options on the site. The SA process undertook an appraisal of a number of strategic-level alternative options for the site. The purpose was to explore the likely sustainability implications and trade-offs that would be required if different approaches to development of the site are taken. In this context four options were considered for the site through the SA process, linked to different uses for the site. The options were:

- Option 1a: Housing-led approach to redevelopment of the site, delivering 350 homes.
- Option 1b: Housing-led approach to redevelopment of the site, delivering 600 homes.
- Option 2: Employment-led approach to the redevelopment of the site.
- Option 3: Leisure / tourism-led approach to the redevelopment of the site.

1.16 The following is a summary of the option appraisal as set out in the SA:

In relation to the housing options (Options 1a and b), the site's relative distance from existing services and facilities and the site's poor accessibility to public transport networks will encourage a significant degree of car use and dependency.
The limited size of housing delivery facilitated through these options is also unlikely to support the provision of a broad range of amenities.
Therefore, while the options will help meet housing need in the National Park, the options perform poorly in against many of the SA Objectives.

Whilst Option 2 has the potential to support economic growth through significant employment provision, the option has the potential to lead to significant increases in commuter traffic in the vicinity and has less potential to support improvements to the landscape character. It will also limit opportunities to facilitate development types which support the purposes of the National Park

Overall Option 3 has the potential to provide the broadest range of sustainability benefits for the National Park. This includes in relation to: enhancing opportunities for recreation and leisure, with associated benefits for health and wellbeing; promoting sustainable transport use; supporting the wider economic vitality of the National Park, including the visitor economy; and increasing cultural activity. The option also recognises the existing constraints relating to the site's distance from existing services and facilities and of the site's poor accessibility to public transport networks.

All of the options have the potential to have impacts on landscape character, biodiversity and the historic environment. In this context, potential effects depend on the design and layout of new development, the retention of distinct features contributing to local character, and elements such as the integration of high quality green infrastructure provision.

Previous AAP Scoping Report

1.17 An earlier iteration of the AAP Scoping Report was published and circulated in September 2018 and this Report is an updated version of the original document. It is considered necessary to review and update the Scoping Report as three years have lapsed between the two versions, plus the 2018 report pre-dated the adoption of the South Downs Local Plan.

[27] https://www.southdowns.gov.uk/planning-policy/south-downs-local-plan/local-plan-evidence-base/evidence-and-supporting-documents/sustainability-appraisal/

In addition, whilst responses were received from several of the local authorities, there appears to have been no representations from the Environment Agency and Natural England. A review and updated version was therefore, considered important.

Stage A1 – Identify relevant plans, programmes and sustainability objectives

Compliance with the SEA Directive

The environmental protection objectives established at international, [European] Community or [national] level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation (Annex 1 (e) of the SEA Directive)

1.18 A plan will be influenced in various ways by other plans or programmes and by external objectives such as those laid down in policies or legislation.

1.19 The statutory purposes and duty for national parks as specified in the National Parks and Access to Countryside Act 1949, as amended by the Environment Act 1995 are set out here. They sit above all plans, programmes and policies in the South Downs National Park.

1.20 Table A1 illustrates the key plans, programmes or policies (PPPs) likely to influence the approach taken to redevelop the Shoreham Cement Works site. This list does not repeat many of the higher level regional / national or international plans that have already been considered through the preparation and appraisal of Policy SD56 of the Local Plan.

The National Park purposes are:

1. To conserve and enhance the natural beauty, wildlife and cultural heritage of the area.
2. To promote opportunities for the understanding and enjoyment of the special qualities of the National Park by the public.

The National Park Authority also has a duty to seek to foster the economic and social well-being of the local communities within the National Park.

1.21 The South Downs Local Plan and this AAP sets out how the National Park Authority will manage development of the site. The timeframe for the AAP is 2023 – 2038.

Table A1.1: Most influential Plans, Programmes and Policies

Plan	Key issues / messages
National and Sub-Regional	
National Planning Policy Framework (2021) [28]	*Set out under each topic in subsequent baseline section.*
Vision and Circular on English National Parks and the Broads (2010)	Provides guidance to national park authorities on how to achieve their purposes and duty.
DEFRA 25 Year Environment Plan 2018	A plan to improve the UK's air and water quality and protect threatened plants, trees and wildlife species. It establishes an extensive set of targets and objectives.

[28] For each of the topic areas a brief summary of the NPPF and South Downs Local Plan policies are included for the purposes of the Scoping Report. A list of relevant evidence documents are listed in each section.

Plan	Key issues / messages
National and Sub-Regional	
The Climate Change Act 2008	This introduced a statutory target of reducing greenhouse gas emissions. Initially a target was set of reducing carbon emissions by 80 per cent below 1990 levels by 2050 with an interim target of 34% by 2020. In June 2019 legislation was passed requiring the UK to bring all greenhouse gas emissions to net zero by 2050 and in 2021, the government committed to reducing emissions by 78% by 2035 compared to 1990 levels.
The Environment Bill	The Environment Bill continues through Parliament and is to receive Royal Assent – the final step in the process of becoming law – in autumn 2021.
South Downs Local Plan 2019[29]	*Set out under each topic in subsequent baseline section.*
South Downs National Park Partnership Management Plan[30]	The South Downs Local Plan builds on the framework of the South Downs National Park Partnership Management Plan (PMP). The PMP sets out the overarching five-year strategy for the management of the South Downs National Park. It is a plan that sets out to shape the future of your South Downs National Park.
WSCC, 2011. The West Sussex Transport Plan 2011-2026[31]	The West Sussex Transport Plan 2011-26 (LTP3) sets the strategy for guiding future investment in highways and transport infrastructure. The Plan includes four strategies that guide the approach to maintaining, managing and investing in transport. The plan is currently under review.
WSCC, 2016. West Sussex Walking and Cycling Strategy 2016 - 2026[32]	The West Sussex Walking and Cycling Strategy sets out the County Council's aims and objectives for walking and cycling together with our priorities for investment in infrastructure improvements.
SDNPA Cycling and Walking Strategy 2017-2024[33]	This is the first Cycling and Walking Strategy for the South Downs National Park Authority (SDNPA). It sets out the aim and direction for the future of cycling and walking activities and supports infrastructure coming forward in the National Park.
South Downs Habitats Regulations Assessment 2018 of the South Downs Local Plan[34]	The objective of the assessment is to identify any aspects of the Local Plan that would cause an adverse effect on the integrity of International Sites, also known as Natura 2000 sites or European sites (Special Areas of

[29] https://www.southdowns.gov.uk/wp-content/uploads/2019/07/SD_LocalPlan_2019_17Wb.pdf
[30] https://www.southdowns.gov.uk/partnership-management-plan/
[31] https://www.westsussex.gov.uk/about-the-council/policies-and-reports/roads-and-travel-policy-and-reports/west-sussex-transport-plan/
[32] https://www.westsussex.gov.uk/about-the-council/policies-and-reports/roads-and-travel-policy-and-reports/west-sussex-walking-and-cycling-strategy-2016-2026/
[33] https://www.southdowns.gov.uk/wp-content/uploads/2018/07/SDNPA-Cycling-and-Walking-Strategy-2017-2024.pdf
[34] https://www.southdowns.gov.uk/wp-content/uploads/2018/04/SDLP-05-Habitats-Regulations-Assement-2018.pdf

Plan	Key issues / messages
National and Sub-Regional	
	Conservation / Special Protection Areas) and Ramsar sites, either in isolation or in combination with other plans and projects; and, to advise on appropriate policy mechanisms for delivering mitigation where such effects are identified.
South Downs Tourism Strategy 2015 - 2020[35]	The National Park has approximately 46 million visitor days per year, making it the most popular Protected Landscape in the country which generates an income of nearly £5 billion and supports some 12,000 jobs. The strategy establishes 7 sustainable tourism objectives which address the following: the visitor experience and offer; visitor pressures; sustainable practice by tourism providers; visitors means of access to the National Park and fostering custodianship; visitors contribution to the local economy.
SDNPA Climate Change Strategy & Action Plan[36]	The Strategy and Plan confirms the Authority's commitment to address the climate and nature emergency by committing to the South Downs National Park Authority becoming a 'Net-Zero' Organisation by 2030, agreeing an action plan which includes a commitment to working with our constituent Local Authorities and other partners, and committing to working towards the South Downs National Park becoming 'Net-Zero with Nature' by 2040.
People and Nature Network Plan Evidence and Action Report 2020[37]	The People and Nature Network (PANN) aims to deliver benefits not only to the environment but also to the development of better places to live, work and invest. The People and Nature Network (PANN) – Evidence and Action Report is a technical document produced as part of a coordinated and cross-sectoral approach to environmental master planning and regeneration. It sets out the evidence used in the preparation of the PANN and also sets out the high level development and delivery processes for the recommended actions. The document identifies spatial 'hotspots' for focused action by partners and strategic principles to be used across the network area. These are called Natural Capital Investment Areas (NCIAs).
SDNPA 2018 Economic Profile and SDNPA 2020 updated Economic Profile[38]	The 2020 report contains an update of the key data in the South Downs Economic Profile 2018. The South Downs National Park (SDNP) has a relatively large and diverse

[35] https://www.southdowns.gov.uk/wp-content/uploads/2017/06/Sustainable-Tourism-Strategy-2015-20.pdf
[36] https://www.southdowns.gov.uk/national-park-authority/our-work/climate-change-adaptation-plan-strategy/
[37] https://www.southdowns.gov.uk/wp-content/uploads/2020/07/PANN-Actions-Evidence-Report_2020_FINAL.pdf
[38] https://www.southdowns.gov.uk/wp-content/uploads/2021/02/2018-Economic-Profile-.pdf
https://www.southdowns.gov.uk/wp-content/uploads/2021/02/2020-Economic-Profile-up-date.pdf

Plan	Key issues / messages
National and Sub-Regional	
	business population comprising a range of industry sectors, in addition to the land-based industries and the visitor economy.
Local	
The Adur Local Plan was adopted in 2017. This provides planning policy for that part of Adur District outside of the National Park. The local planning authority are about to embark on a review of the 2017 Local Plan. The Horsham District Planning Framework 2015 covers the parts of the District outside of the National Park.	
Upper Beeding Neighbourhood Development Plan[39]	Sets a series of objectives / wishes from the community for development of the site which are provided in Community Aspiration 1. The Plan provides a range of policies covering the parish. The Plan was made in June 2021.

Initial identification of Sustainability Objectives

1.22 The SA[40] for the South Downs Local Plan listed 12 objectives and a number of sub-objectives as set out below (in Table A1.2). The Local Plan provides a valuable starting point in identifying relevant sustainability objectives for the SA of the AAP. The direct relevance of a number of the objectives to the AAP varies and therefore they will be adapted, excluded or subsumed within others in order to form the new set against which the AAP is tested. These are set out in Section 5 of this Report (Stage A4).

Table A1.2: South Downs Local Plan SA Objectives

Sustainability topic	South Downs Local Plan SA Objective	Sub-objective
Landscape	To conserve and enhance landscape character.	1.1: Provide resilience to the landscape character in response to climate change. 1.2 Extend the area of dark night skies and the assessed tranquillity of the National Park. 1.3 Seek to meet the 'Broad Management Objective and Landscape Guidelines' set out in the South Downs Integrated Landscape Character Assessment.
Climate Change Adaptation	To ensure the SDNP communities are prepared for the impacts of climate change.	2.1: Minimise the risk of flooding to new development through application of the sequential and exception tests. 2.2: Promote the uptake of sustainable drainage systems.

[39] https://www.upperbeeding-pc.gov.uk/wp-content/uploads/2021/03/Upper-Beeding-Referendum-Version-March-2021.pdf
[40] https://www.southdowns.gov.uk/wp-content/uploads/2018/04/SDLP-04-Sustainability-Appraisal-Report.pdf

Sustainability topic	South Downs Local Plan SA Objective	Sub-objective
		2.3: The achievement of integrated coastal zone management 2.4: Address both water resource and demand issues in the context of National Park purposes in partnership with water companies
Biodiversity	To conserve and enhance the region's biodiversity.	3.1: Maintain a functioning ecological network and improve the resilience of natural systems, flora, fauna, soils and semi-natural habitat. 3.2: Conserve, enhance, restore, expand and reconnect areas of priority habitat ('Bigger, better, more and joined').
Cultural Heritage	Conserve and enhance the historic environment, heritage assets and their settings.	4.1: Achieve repair and / or enhancement of heritage assets currently identified as "at risk" to the extent that this status no longer applies. 4.2: Help the HE adapt to changing conditions arising from CC (warmer, wetter, infestations etc.)
Cultural Activity	To encourage increased engagement in cultural activity across all sections of the community in the SDNP and promote sustainable tourism.	5.1: A sustainable tourism strategy that supports recreation businesses.
Health and Wellbeing	To improve the health and well-being of the population and reduce inequalities in health and well-being.	6.1: Optimise the benefits that the natural environment offers to contribute to the health and well-being of both residents of the National Park and visitors to the SDNP. 6.2: Use environmental and building standards to ensure that places promote health and wellbeing. 6.3: To contribute to a reduction in all aspects of rural crime through effective enforcement in partnership with other enforcement agencies.
Vitality of Communities	To create and sustain vibrant communities which recognise the needs and contributions of all individuals.	7.1: Supporting communities where children grow up and go to school. 7.2: Supporting and empowering local communities to shape their own community (recognising the value of community and neighbourhood planning). 7.3: Support schemes aimed at extending involvement of all members of society in the SDNP.
Accessibility	To improve accessibility to all services and facilities.	8.1: Encourage the development of appropriate services and facilities in development schemes, based upon local plan evidence, via community rights tools, CIL and direct developer contributions (S106).
Sustainable transport	To improve the efficiency of transport networks by	9.1: Provide sustainable access to services.

Sustainability topic	South Downs Local Plan SA Objective	Sub-objective
	enhancing the proportion of travel by sustainable modes and by promoting policies which reduce the need to travel.	9.2: Work with other partners to develop a high quality, safe access network and better links between bus and trains and cycling opportunities. 9.3: Minimising the impact of vehicle infrastructure on landscape and communities. 9.4: A sustainable transport infrastructure for 2020 and beyond.
Housing	To ensure that everyone has the opportunity to live in a good quality, affordable home, suitable to their need and which optimises the scope for environmental sustainability.	10.1: Support rural communities by providing affordable housing for local people which meets the needs of communities now and in the future. 10.2: Create communities characterised by integrated development which takes account of local housing needs and delivers the widest possible range of benefits consistent with National Park purposes & duty. 10.3: To make suitable provision for transit and permanent traveller sites based upon projected need. 10.4: Make appropriate provision for the accommodation needs of older generations.
Climate Change Mitigation	To address the causes of climate change through reducing emissions of greenhouse gases and the consequences through adaptation measures.	11.1: Promote appropriate retrofitting and upgrading of the existing housing stock and other buildings informed by the sense of place. 11.2: Supporting communities with the right low carbon / renewable infrastructure in the right place. 11.3: Extension of wood planting, where appropriate both for carbon storage opportunities and to provide woodfuel sources.
Local Economy	To encourage development of the rural economy in a manner that balances agricultural and other business interests to maintain a living, valued landscape.	12.1: Encourage development of appropriate infrastructure throughout the area to encourage small business, communities & tourism in the Park. 12.2: Encourage local industry and maintenance of a living cultural skills base that forms part of heritage now and into the future. 12.3: Recognise and support core sectors of the South Downs economy such as food production, tourism and land management. 12.4: Promote agri-environmental businesses and diversification that focuses on ecosystem services and enhancement of the local supply chain. 12.5: Market towns to provide services to the rural hinterland.

Stage A2 – Collecting baseline information and Stage A3 – Identifying sustainability issues and problems

Compliance with the SEA Directive

The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan. (Annex I (b))

The environmental characteristics of areas likely to be significantly affected. (Annex I (C))

Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of particular environmental importance, such as areas designated as SPAs and SACs. (Annex I (d))

1.23 It is important to identify the current state of the environment in order to judge the impact and effectiveness of the plan during implementation. This is achieved by collecting baseline data that will provide a starting point for predicting and monitoring social, economic and environmental effects and identifying sustainability issues within the area. It focuses on key issues that the plan can have a significant effect on.

1.24 The SEA Directive also requires consideration of the likely evolution of the area without implementation of the plan or programme. However, it is important to note that this situation would not result in a complete policy vacuum as the site is allocated in the South Downs Local Plan. Policy SD56 is a high level policy, which sets out an extensive set of criteria with which any development proposal would need to comply in order to granted panning permission.

1.25 The collection of baseline information is grouped by topic and is closely linked to that collected and included in the South Downs Local Plan SA. Each topic follows a similar structure, starting with a brief overview of the planning policy context set out in the NPPF[41], a list of the key and relevant South Downs Local Plan policies and then a summary of key baseline information. Following this are the key sustainability issues and likely evolution without the AAP. Finally gaps in the current evidence base are identified along with source of potential further information.

[41] https://www.gov.uk/government/publications/national-planning-policy-framework--2

Landscape

Planning Policy Context

1.26 At the national level, the National Planning Policy Framework (NPPF): States that great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks. (Paragraph 176). Gives recognition to the intrinsic character and beauty of the countryside, ensuring that developments respond to local character, integrating new development into the natural environment, protecting and enhancing valued landscapes, setting strategic priorities and criteria based policies for protected landscape areas, identifying and protecting areas of tranquillity, limiting the impact of light pollution on intrinsically dark landscapes, and requiring landscape character assessments.

1.27 This is further strengthened by the English National Parks Vision and Circular (2010) which states that in their role as Local Planning Authorities, National Park Authorities are expected to follow and promote with partners and stakeholders the principles of the European Landscape Convention in all decisions and discussions concerning planning, management, and protection.

1.28 At the local level, the SDLP uses the European Landscape Convention (ELC) 2004 definition of landscape as: "an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors".

1.29 All of the policies within the SDLP refer to and encompass landscape and landscape impact. The following policies within the South Downs Local Plan directly and specifically relate to landscape character:

- SD4: Landscape Character
- SD6: Safeguarding Views
- SD7: Relative tranquillity
- SD8: Dark Night Skies

1.30 The purpose of the policies is to set out how development proposals will be expected to conserve and enhance the various aspects of the landscape character of the National Park. They are derived from national and international policy and the South Downs National Park Partnership Management Plan (PMP).

Current evidence base

South Downs Landscape Character Assessment (LCA) 2020

https://www.southdowns.gov.uk/landscape-design-conservation/south-downs-landscape-character-assessment/south-downs-landscape-character-assessment-2020/

South Downs Integrated Landscape Character Assessment (SDILCA) 2011

https://www.southdowns.gov.uk/landscape-design-conservation/south-downs-landscape-character-assessment/previous-integrated-landscape-character-assessments-ilcas/south-downs-integrated-landscape-character-assessment-icla-2011/

Viewshed Characterisation Study 2015

https://www.southdowns.gov.uk/wp-content/uploads/2015/10/Viewshed-Study-Report.pdf

SDNPA Tranquillity Study 2017

https://www.southdowns.gov.uk/wp-content/uploads/2017/03/13-04-17-South-Downs-National-Park-Tranquillity-Study.pdf

Dark Skies Technical Advice Note

https://www.southdowns.gov.uk/wp-content/uploads/2018/04/TLL-10-SDNPA-Dark-Skies-Technical-Advice-Note-2018.pdf

Sussex Historic Landscape Characterisation 2010

https://www.westsussex.gov.uk/media/1776/sussex_hlc_volume_4.pdf

Baseline Information

1.31 The South Downs contains a rich and complex landscape character, with significant local variation and contrast. In total there are 49 local level character areas. Agricultural intensification has resulted in an increase in arable and improved grassland crops, and a decline in species rich chalk grassland. Market forces and visitor pressure are also influencing the landscape and there has been a notable increase in the number of vineyards in recent years.

1.32 The open downland is particularly vulnerable to urban edge pressures extending from the heavily built-up areas and coastal fringe adjoining the National Park housing 1.5 million people as well as from the 110,000 people living in the market towns, villages, hamlets and rural areas within the National Park boundary.

1.33 The key landscape character areas (see Figure 1) in which the Shoreham Cement Works site lies are the Adur Valley Side (brown wash), Adur Floodplain (blue wash) and Adur to Ouse Open Downs - (purple wash). Key characteristics of each as relevant to the site are contained in **Appendix 2**.

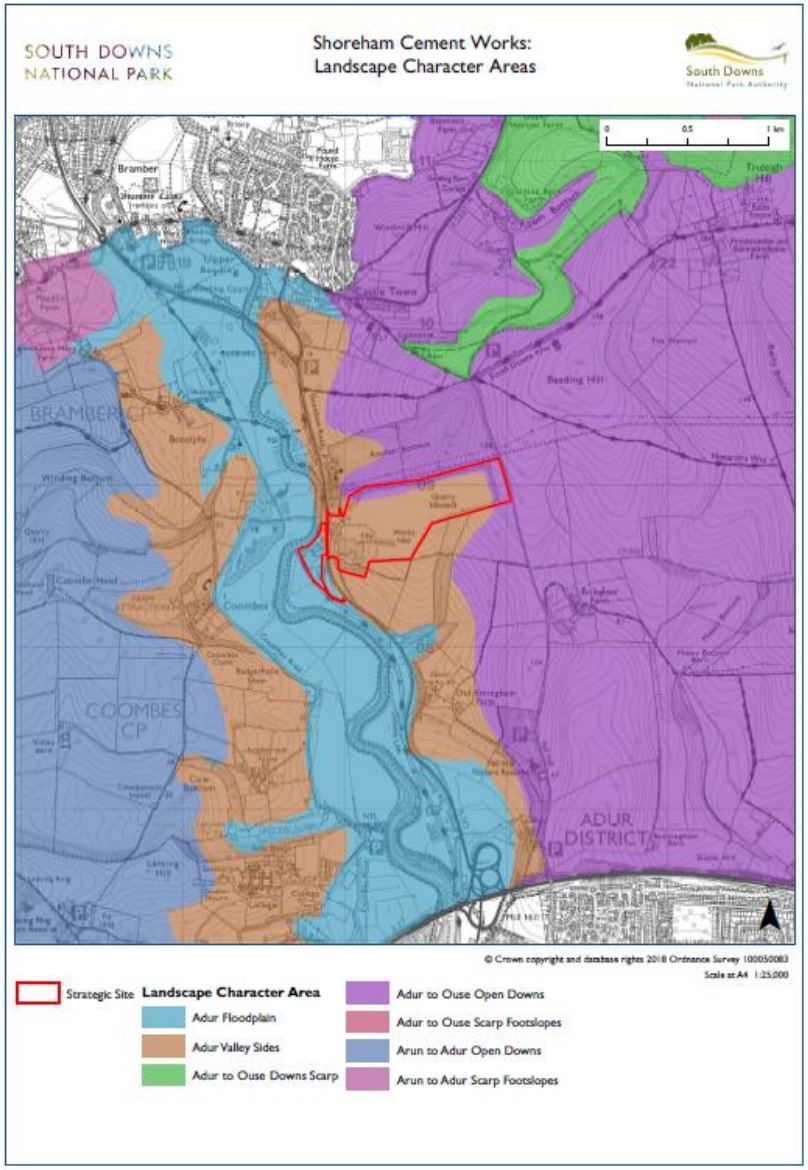


Figure 1 Landscape Character Areas

1.34 The **Sussex Historic Landscape Characterisation 2010** study provides an understanding of the historical and cultural origins of today's landscape and the processes of land use change that have shaped it. At the site specific scale it should be used as a first stage in researching a specific site, providing a historic landscape character context. The Shoreham Cement Works site is assessed as having an industrial character. It is surrounded by modern fields, recent enclosures and the valley floor. Anchor Bottom to the north is characterised as unenclosed, containing a nationally rare habitat and often being a relic from a system of traditional land use.

1.35 Tranquillity is considered to be a state of calm, quietude and is associated with a feeling of peace. It relates to quality of life, and there is good scientific evidence that it also helps to promote health and well-being. It is a perceptual quality of the landscape, and is influenced by things that people can both see and hear in the landscape around them. The **2017 Tranquillity Study** involved an assessment of both positive and negative tranquillity factors which were then scored and mapped. The Shoreham Cement Works area was assessed as having an intermediate level of tranquillity. These are the areas often most vulnerable to change, where further harm should be avoided and every opportunity taken to enhance it.

1.36 In 2016 the SDNP was designated as an **International Dark Sky Association Reserve**. The Shoreham Cement Works site sits within zone E1a Intrinsic Rural Darkness which contains some of the darkest areas within the National Park.

1.37 Key landmarks in and around the site have been identified as the Cement Works tower and Lancing College Chapel to the south.

Summary of key sustainability issues:	**Likely evolution of the area without the AAP**
Loss of diversity in landscape character. Loss of important features of the historic landscape character. Urban edge and visitor pressures leading to landscape damage. Levels of tranquillity are very vulnerable. Degradation of dark night skies.	The landscape of the South Downs is already highly protected through National legislation and policy. Although this would continue, opportunities to enhance the landscape are unlikely to arise without the AAP. Development of sites close to the National Park boundary in this area will add to the level of activity, visual intrusion, lighting, urbanising features, traffic etc that can be experienced from within the National Park. Urban edge pressures e.g. clutter, rubbish etc will continue. Increasing recreational pressures, including recreational car traffic, demand for new facilities and loss of the feeling of remoteness will continue. The Shoreham Cement Works site will remain in its current use or could be developed in a less favourable manner resulting in reduced landscape restoration and enhancement.

What other evidence will we be collecting?

1.38 There is already significant baseline information but a further more detailed site specific landscape assessment incorporating a landscape strategy for the site will be developed as part of the AAP. Consultants will be instructed during 2021 to undertake a Landscape Character Assessment, and Sensitivity & Capacity Study. The purpose of the Landscape Study is to apply best practice to generate a robust and comprehensive landscape and visual baseline, define and identify enhancement opportunities, inform the potential development scenarios, and influence a Design Code.

Biodiversity

Policy Context

1.39 At the national level the NPPF:

- Establishes the need to plan for biodiversity at a landscape scale across local authority boundaries, identifying the local ecological network and promoting the preservation, restoration and re-creation of priority habitats, ecological networks and the recovery of priority species population, linked to national and local targets.
- States that the conservation of wildlife and cultural heritage are important considerations in all (protected) areas, and should be given great weight in National Parks and the Broads (Para 176).
- States that planning permission should be refused if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for. Development should also be refused if it results in the loss or deterioration of irreplaceable habitats (Para 180) unless the need for and benefits of the development in that location clearly outweigh the loss.

1.40 At the local level, the following policies within the South Downs Local Plan directly relate to biodiversity:

- SD2: Ecosystem Services
- SD9: Biodiversity and Geodiversity
- SD10: International Sites
- SD11: Trees, Woodland and hedgerows

1.41 The purpose of the policies is to set out a positive strategy to ensure the conservation and enhancement of biodiversity across the National Park; set specific requirements relating to particular SAC / SPA area and ensure the management of existing trees, woodland and hedgerows.

1.42 The South Downs Local Plan Habitats Regulations Assessment assesses the potential for any significant impacts resulting from policies of the Local Plan on sites of international nature conservation importance.

Baseline Information

Current evidence base

Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) 2018 Shoreham cement Works (available on request).

DEFRA 25 Year Environment Plan 2018

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf

The Environment Bill (The Environment Bill continues through Parliament and is to receive Royal Assent – the final step in the process of becoming law – in autumn 2021).

People and Nature Network Plan Evidence and Action Report 2020

https://www.southdowns.gov.uk/wp-content/uploads/2020/07/PANN-Actions-Evidence-Report_2020_FINAL.pdfNatural Capital Investment Strategy for Sussex

2019-2024

http://sussexlnp.org.uk/sussex-natural-capital-investment-strategy/Biodiversity Opportunity Areas (Adur to Newtimer including Mill Hill)

https://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1016694&SiteCode=S1000374&SiteName=&countyCode=46&responsiblePerson

National Park Summary

1.43 Key wildlife habitats within the South Downs National Park include chalk grassland (4%), lowland heath (1%), woodland (20% - approximately half of which is ancient woodland), farmland habitats (85%), floodplain grazing marsh (1.5%), rivers and streams (321km of main river), and coastal and marine habitats (including 20km of coastline).

1.44 Intensive agriculture has had a devastating impact on many farmland species. Across the National Park populations of grey partridge and tree sparrow have plummeted by 94% over the past 40 years, and 97% of the flower-rich meadows have disappeared since the 1930s. However 93,561 hectares of land, or 57%, of the National Park is managed through agri-environment schemes seeking to address these declines.

Shoreham Cement Works Information

1.45 The site is adjacent to the River Adur, Beeding Hill to Newtimber Hill SSSI, Old Erringham Farm Valley and Road Cutting SNCI (which includes a notable road verge) and Adur Meadows SNCI. It is also 130m distance from Mill Hill LNR/SNCI. The site does not fall within any SAC / SPA buffer zones.

1.46 The Shoreham Cement Works site lies to the east of the River Adur which is then bordered by areas of improved grassland. Surrounding much of the site is arable land (shown in grey/green, Figure 2); however, there are areas of chalk grassland, the quarry itself with its areas of exposed rock face, and some pockets of mixed woodland.

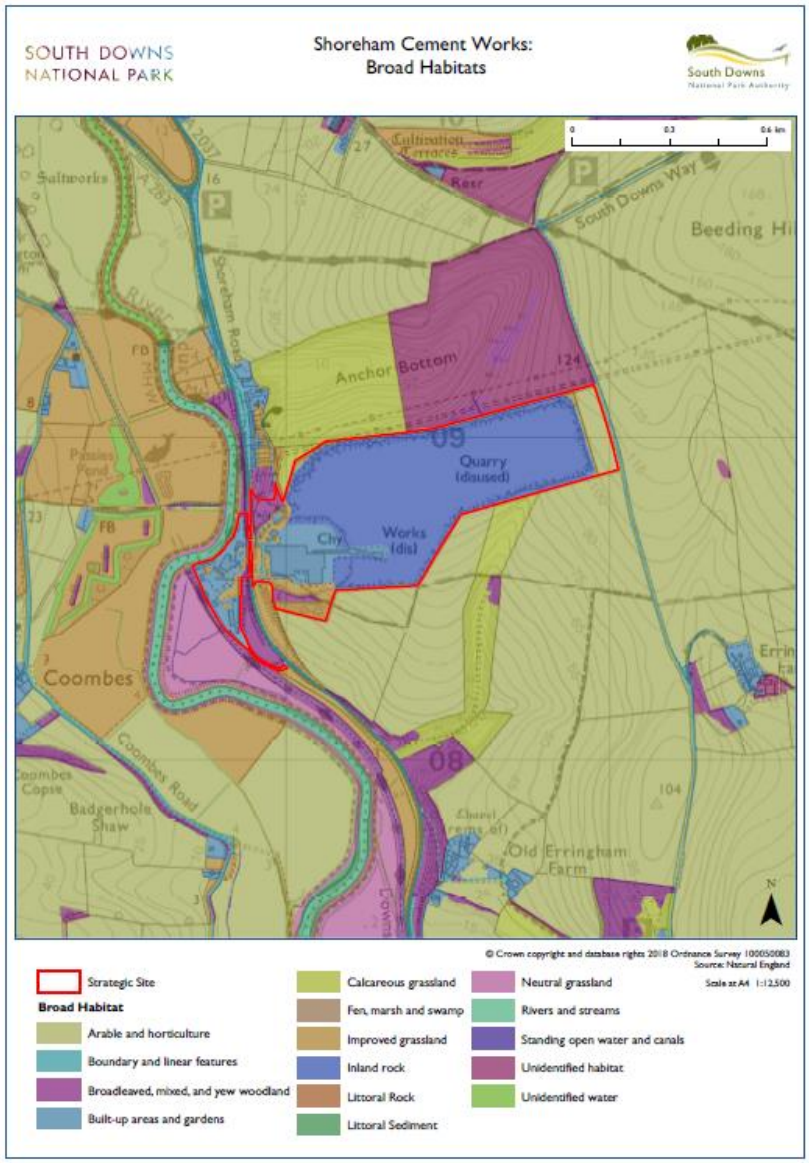


Figure 2 Broad Habitats

1.47 South Downs National Park Authority commissioned a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) in 2018 as part of the work in developing the APP. This study is available on request and a summary of the key points made within the report is set out below:

1. The site is designated as Shoreham Cement Works, Beeding Quarry Local Geological Site. A small part of the site falls within Old Erringham Farm Valley and Road Cutting Site of Nature Conservation Importance (SNCI) and Adur Meadows SNCI is adjacent to the south-west boundary. These are non-statutory designated nature conservation sites afforded protection in local planning policy.

2. The site is dominated by a mix of habitats that have established following industrial use. Approximately 55% of the site (25h) qualifies as Open Mosaic Habitat on Previously Developed Land which is a Habitat of Principal Importance (HPI) for the Conservation of Biodiversity in England under the Natural Environment and Rural Communities (NERC) Act 2006. Such a significant area of this habitat type makes the site eligible for selection as a county LWS (syn. with SNCI) under Sussex Local Wildlife Site Selection Criteria.

3. Other HPI present on-site includes Lowland Calcareous Grassland (district value), Lowland Mixed Deciduous Woodland (local value) and potentially one Pond (local value). All HPIs are by default Sussex Biodiversity Action Plan (BAP) priority habitats.

4. Other habitats consisting of buildings, hardstanding, bare ground, unvegetated substrates, ephemeral areas of standing water, poor semi-improved grassland and tall ruderal vegetation, introduced shrubs, non-native hedgerow, scrub and scattered trees. All these habitats are common and widespread in the locality and are considered to be of value within the vicinity of the site only.

5. Habitat with potential to support summer and hibernation roosts and foraging and commuting bats was present.

1.48 The site is about 1.5km upstream from the Adur Estuary SSSI, which represents a significant area of saltmarsh and intertidal mudflats. The site falls within the Impact Risk Zone for Adur Estuary SSSI. Adjoining the northern boundary of the Cement Works site is Anchor Bottom (see Figure 3), the western most edge of the Beeding Hill to Newtimber Hill SSSI, designated for its lowland chalk grassland. In 2014 Natural England assessed this part of the SSSI as being in favourable condition, consisting of well managed species rich chalk grassland which had been improved by scrub management. However, depending on the scale of the works, there is the potential for the proposals to impact the adjacent River Adur and the downstream Adur Estuary SSSI The site contains a number of butterfly species including the Adonis and Small Blue. The Cement Works site itself has attracted a number of bird species, notable of which are Peregrine Falcons.

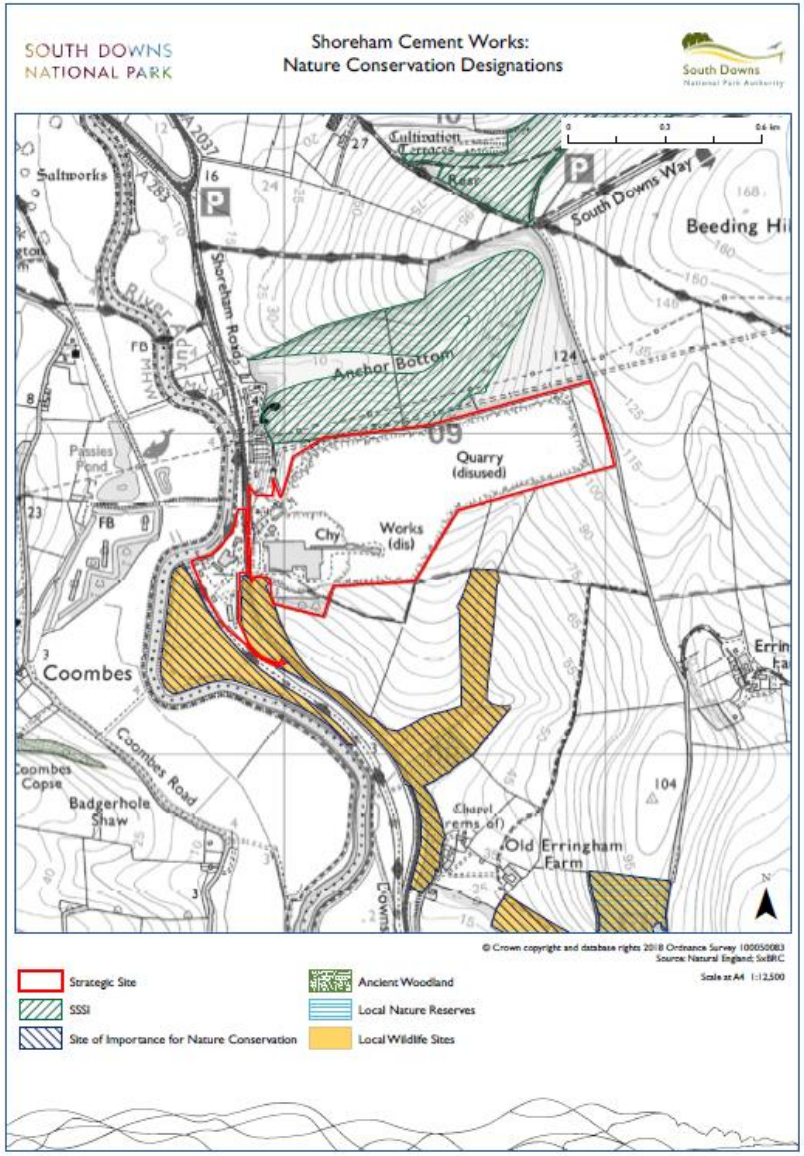


Figure 3 Nature Conservation Designations (shown in purple)

1.49 The site and adjoining land falls within the **Adur to Newtimber Biodiversity Opportunity Area (BOA)**. BOAs take a landscape-scale approach to conserving biodiversity and opportunities for improvement have been identified including chalk grassland management, restoration and creation; opportunities associated with development and farmland bird interest

Summary of key sustainability issues:	**Likely evolution of the area without the AAP**
Small fragmented wildlife habitats. Decline in species rich chalk grassland. Disturbance to habitats and species now established in the disused quarry. Uncertainty over long-term, sustainable land management.	Biodiversity in the National Park is already protected through National and Local Plan policy. This will continue and without the plan species will flourish or decline in line with local trends and in response to relevant land management. There will be no significant change in the conditions of adjoining or nearby Nature Conservation Sites but opportunities to conserve and enhance the habitats within the cement works site may not be progressed. Opportunities to understand more about the value or the site will not be undertaken or progressed. There is a large level of uncertainty about the future of agriculture due to Brexit, but indications are that funding will have a greater emphasis on environmental enhancements, without the AAP it is not known what mechanism would secure these enhancements for this site.

Summary of key sustainability issues:	**Likely evolution of the area without the AAP**
	Increased pressure from human activity within and adjacent the site may lead to disturbance and damage to flora and fauna.

1.50 **What other evidence will we be collecting** – Further work will be instructed during 2021. This will include an updated Preliminary Ecological Assessment (PEA), A Preliminary Roost Assessment (PRA) of the parts of the site not previously surveyed, a bat survey and a programme of future survey work

Archaeological and cultural heritage

1.51 The SA of the SDLP originally called this theme Cultural Heritage and separately also considered Cultural Activity. For this SA of the AAP they have been merged and renamed.

Policy Context

1.52 At a national level the NPPF:

- recognises that heritage assets are an irreplaceable resource that should be conserved in a manner appropriate to their significance, taking account of the wider social, cultural, economic and environmental benefits of conservation, whilst also recognising the positive contribution new development can make to local character and distinctiveness.
- States that a positive strategy for the conservation and enjoyment of the historic environment is required, including those heritage assets that are most at risk.

1.53 At the local level, the following policies within the South Downs Local Plan directly relate to archaeological and cultural heritage (these being relevant issues in relation to the site).

- SD12: Historic Environment
- SD16: Archaeology

1.54 The purpose of the policies is to set out a positive strategy for the conservation and enhancement of the historic environment, including the safeguarding of heritage assets.

Baseline Information

Current evidence base

Martin, R., The History of Shoreham Cement Works', Sussex Industrial History 34, 2004, 26-35.
http://sias.pastfinder.org.uk/sih_1970_2008/34-2004.pdf

Historic England's Industrial Buildings Listing Selection Guide
https://historicengland.org.uk/images-books/publications/dlsg-industrial/

1.55 The SDNP has a rich cultural heritage and historic environment. This includes 152 Grade I, 221 Grade II* and 4798 Grade II Listed Building entries, 616 Scheduled Ancient Monuments, 154 Conservation Areas, 30 Registered Parks and Gardens and 2 Registered Battlefields.

1.56 The Cement Works site area does not contain any Listed Buildings, World Heritage Sites, scheduled monuments or historic parks and gardens. However, there are a variety of historical features of interest located within or adjacent to the boundaries.

1.57 Most notably the site contains a cluster of large and small industrial buildings dating predominantly from the 1940's through to the late 1960's, most prominent of which is the tall cement building tower and drying kilns. The site has an industrial history, important in the context of the South Downs. There are also a couple of limekiln locations and some evidence of early human presence in the area with human and animal bones found on the northern edge of the site

1.58 Adjacent to the site, on the opposite of the River Adur, is the deserted early medieval settlement and saltworkings of St Botolphs. This was formerly likely to be busy river crossing point. Some parts of the Grade 1 St Botolphs Church may be over 1000 years old. There are important views to and from the listed buildings on the west side of the river, particularly as these views are composed of the river valley and the Downs as they rise either side of the Adur gap.

1.59 Finally, earthworks and cropmark remains are still visible at Anchor Bottom being a relic of traditional landuse.

Summary of key sustainability issues:	**Likely evolution of the area without the AAP**
Damage to archaeological features on and adjoining site by redevelopment / visitor damage. Loss of industrial heritage through redevelopment. Climate change affecting the built environment. Lack of opportunity to access and understand the built environment.	Some deterioration in the condition of key heritage assets on the site. The Shoreham Cement Works site will remain in its current use or be developed in a manner resulting in reduced opportunities to enhance and safeguard the heritage and cultural assets. No opportunities for understanding and enjoying the heritage of the site. No change of conditions on adjoining sites.

1.60 **What other evidence will we be collecting** – Consultants will be instructed during 2021 to carry out an Industrial Archaeology Study. The purpose of the study is to provide the National Park Authority with a robust understanding of the significance of the site in terms of its industrial archaeological interest and to inform the decision-making process, including the retain versus demolish considerations.

Climate change including flooding

1.61 The SA of the SDLP originally called this theme climatic factors and separately also considered climate change mitigation and energy. For this SA of the AAP, they have been merged and renamed.

Policy Context

1.62 At the national level, the NPPF:

- Sets out the key role for planning in securing radical reductions in greenhouse gas (GHG) emissions. Including supporting new development in locations and ways which reduce GHG emissions; supports energy efficiency improvements to existing buildings; positively promotes renewable energy technologies and encourages transport solutions that support reductions in GHG emissions and reduce congestion.
- Steer new development away from areas of flood risk now and in the future, as far as possible.
- Takes a proactive approach to adaptation and managing risks including well planned green infrastructure.

1.63 At the local level, the following policies within the South Downs Local Plan directly relate to climate change and flooding:

- SD2: Ecosystem Services
- SD48: Climate Change and the Sustainable Use of resources
- SD49: Flood Risk Management
- SD50: Sustainable Drainage Systems
- SD51: Renewable Energy

Current evidence base

Strategic Flood Risk Assessment - Level 1 and Level 2 (2015 and 2017)

https://www.southdowns.gov.uk/planning-policy/south-downs-local-plan/local-plan-evidence-base/evidence-and-supporting-documents/level-1-update-and-level-2-strategic-flood-risk-assessment/

Renewable and Low Carbon Energy Study (2013)

https://www.southdowns.gov.uk/planning-policy/south-downs-local-plan/local-plan-evidence-base/evidence-and-supporting-documents/low-carbon-and-renewable-energy-study/

https://www.southdowns.gov.uk/wp-content/uploads/2015/04/SDNP-Low-Carbon-and-Renewable-Energy-Study-Main-Report.pdf

Flood Risk and the Sequential Test for Site Allocations

Background Paper South Downs Local Plan (page 20 Shoreham cement works)

https://www.southdowns.gov.uk/wp-content/uploads/2018/02/SS_Flood-Risk-Sequential-Test-BP.pdf

The South Downs Climate Change Adaptation Plan

https://www.southdowns.gov.uk/sdnpa-climate-change-adaptation-plan/

1.64 Their purpose is to embed a holistic approach to managing natural resources into the Local Plan, encourage high standards of sustainable building design and reduce vulnerability to flood risk and the impacts of flooding.

Baseline Information

1.65 UK air temperatures continue to rise with the strongest average monthly temperature increases being in the south east along with the Midlands and East Anglia. The analysis suggests that the south east will experience hotter, drier summers and warmer wetter winters with more extreme weather events. Sea level rise is also a factor to be considered given the location of the site on a tidal part of the River Adur.

1.66 In terms of mitigation, generation of electricity from renewable sources is increasing in the South East. The Rampion Offshore Wind Farm Project visible from the Adur Valley will have an installed generating capacity of 665 MW and will make a further significant contribution towards renewable electricity generation in the south east. There are proposals to extend the Rampion wind farm.

1.67 Flood risk mapping (Figure 4) shows that the site itself might be susceptible to groundwater and surface water flooding in places. The River Adur to the west has flood defences along its length but there is also a large flood zone associated with it. It is considered that the site to be at very low risk of flooding from rivers and the sea with all but the western fringes of site A in Flood Zone 1.

1.68 South Downs National Park Authority commissioned a Drainage and Flood Risk Report in 2018. This study is available on request and a summary of the key points made within the report are:

1. There is no encroachment of Flood Zone 3b (Functional Floodplain) predicted on any of the site areas.
There is no encroachment of Flood Zone 3a predicted on any of the site areas.
There is no encroachment of Flood Zone 2 predicted on any of the site areas.
Flood Zone 3a, when climate change allowances are applied, is predicted to encroach on the southern part of Area A, at an access road into the area.
The flood defences along the River Adur reduce flood risk to the site, so the 'actual risk' is less than indicated by the Flood Zone modelling.

2. The site areas are predominantly at 'very low' risk from surface water flooding and it is considered unlikely that flooding from this source alone would preclude development of any of the sites. There is a surface water flow path in Area B at 'high' risk of flooding, located close to the road passing under the A283.

3. The South Downs National Park Updated Level 1 and Level 2 SFRA identifies Shoreham Cement Works as being located in an area susceptible to groundwater flooding due to the underlying geology(Alluvium deposits overlying Chalk) and its proximity to the River Adur which could result in tidal locking preventing the drainage of groundwater. The SFRA identifies that risk of groundwater flooding at the site is deemed to be 'low' overall.

4. A site visit was undertaken on 12th July 2018. From the site visit it was observed that the impermeable areas of the site are served by a traditional pipe and-gully drainage system.

5. It is indicated from the study work that there is a working cesspit located which receives the foul drainage from the surrounding buildings. It is not believed that there is any connection to a public foul sewer. There is no indication of any soakaways on the site.

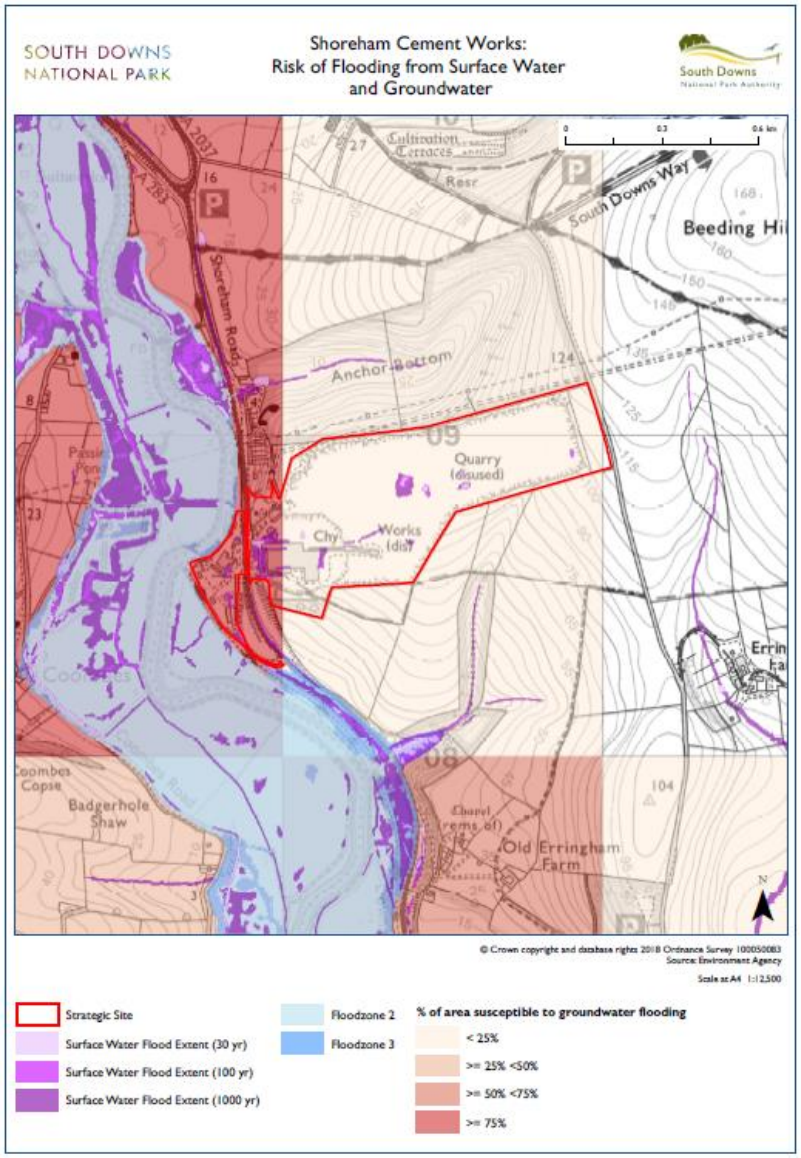


Figure 4: Flood Risk

1.69 The buildings on site, being made predominantly of concrete contain significant amounts of embodied energy and therefore their re-use could result in a lower levels of carbon release that their demolition and redevelopment.

1.70 The impacts of both solar glare and radiation experienced within the quarry site could be considerable during hot and sunny weather given the steepness of the cliff faces, the exposed chalk and limited shading.

1.71 Of relevance to this site, the **low Carbon and renewable Energy study** identified a potential for the development of biomass / woodfuel market including support for uptake of woodfuel heating with new developments.

Summary of key sustainability issues:	**Likely evolution of the area without the AAP**
Increase in extreme rainfall events and flooding. Sea level rises increasing risk of flooding on adjacent land. Increased soil erosion and loss of soil condition caused by cycles of drought and extreme rainfall. Maintenance of clean water supply in face of	The Shoreham Cement Works site will remain in its current use or be developed in a manner resulting in reduced opportunities to introduce energy generation or efficiency measures. The condition of large numbers of existing buildings on site will deteriorate and the embodied energy will be lost requiring further extraction, processing and manufacturing of new materials on site. Continuation of more extreme weather events leading to flooding, soil erosion, periods of drought, supply / demand deficit in water supply.

Summary of key sustainability issues:	**Likely evolution of the area without the AAP**
increasing demand given dryer summers. Increased opportunities to develop low carbon and renewable energy. Large amounts of existing embodied energy in the site buildings. Introduction of new species into the environment. Increasing hostility of the chalk quarry environment with hotter drier summers.	Sea level rise. Green House Gas emissions generated from the area may decrease with ongoing energy efficiency improvements.

1.72 **What other evidence will we be collecting:** It is unlikely that further studies are required for flood risk in support of the AAP although any update/change to the flood maps for the area will be monitored. However, further information on existing drainage and recommended drainage systems may be undertaken in 2021.

Health and Wellbeing

Policy Context

1.73 At the national level, the NPPF:

- States that planning policies should aim to achieve places which promote opportunities for meetings between members of the community who might not otherwise come into contact with each other and provide safe and accessible developments, containing clear and legible pedestrian routes, and high quality public space, which encourage the active and continual use of public areas.
- Paragraph 98 highlights that access to high quality open spaces and opportunities for sport and recreation can make an important contribution to the health and well-being of communities.

1.74 At the local level, there are multiple strategies and policies that can be linked to this broad theme of health and wellbeing, however, the following policies within the South Downs Local Plan most directly relate to the topic:

- SD2: Ecosystems Services
- SD20: Walking, Cycling and Equestrian Routes;
- SD21: Public Realm, Highway Design and Public Art;
- SD43: New and Existing Community Facilities;
- SD45: Green Infrastructure
- SD46: Provision and protection of open space, sport and recreational facilities and burial grounds / cemeteries
- SD47: Local Green Spaces.

1.75 The purpose of the policies is to set out how development proposals will be expected to deliver infrastructure as well as the provision or protection of community facilities.

Baseline Information

Current evidence base

Census data 2011
https://www.adur-worthing.gov.uk/about-the-councils/facts-and-figures/census/
https://www.horsham.gov.uk/council-democracy-and-elections/census
Adur Local Plan 2017
https://www.adur-worthing.gov.uk/adur-local-plan/
Horsham District Planning Framework 2015
https://www.horsham.gov.uk/planning/local-plan/read-the-current-local-plan
Upper Beeding Neighbourhood Plan
https://www.southdowns.gov.uk/wp-content/uploads/2016/05/Upper-Beeding-Referendum-Version-March-2021.pdf
Neighbourhood Plan background papers
https://www.horsham.gov.uk/__data/assets/pdf_file/0009/70398/Community-and-Infrastructure-Document.pdf
https://www.horsham.gov.uk/__data/assets/pdf_file/0013/70411/Upper-Beeding-NP-LGS-Nov-2018.pdf
https://www.horsham.gov.uk/__data/assets/pdf_file/0019/70408/Sustainability-Appriasal-incorporating-Strategic-Environmental-Assessment-Dec-2018.pdf
South Downs Accessible Natural Greenspace Study
https://www.southdowns.gov.uk/planning-policy/south-downs-local-plan/local-plan-evidence-base/evidence-and-supporting-documents/access-network-and-accessible-natural-green-space-study/
South Downs Local Plan
https://www.southdowns.gov.uk/planning-policy/south-downs-local-plan/
Public Rights of Way network maps
https://www.westsussex.gov.uk/leisure-recreation-and-community/walking-horse-riding-and-cycling/cycling-routes-and-maps/
People and Nature Network Plan Evidence and Action Report 2020
https://www.southdowns.gov.uk/wp-content/uploads/2020/07/PANN-Actions-Evidence-Report_2020_FINAL.pdf
WSCC Public Health & Sustainability Framework
https://www.westsussex.gov.uk/media/15845/creating_healthy_and_sustainable_places_ws.pdf

1.76 The population of the South Downs is predominantly rural with an average population density of 70 people per square kilometre compared to a south east average of 440 people per square kilometre.

1.77 Those aged 65 and over, account for around 21 per cent of the National Park compared to 17 per cent in the South East region. The population is also ageing further with the largest increase in population being recorded for those aged 60-64. The largest decrease was recorded in those aged 30-34 years.

1.78 The dispersed nature of settlements and facilities is highly characteristic of the area but combined with limited public transport infrastructure places a high dependence upon cars and can leave people isolated.

1.79 The Cement Works site is located almost equidistant from Upper Beeding / Steyning with a number of local services and Shoreham by Sea to the south with a much greater range of services and facilities including a large out of town retail park.

1.80 Adur is one of the most deprived local authority areas in West Sussex. GCSE attainment has improved; however, but just over a quarter of the adult population (16+) have no qualifications (the highest level for any local authority area in West Sussex). It also has the 2nd highest unemployment rate in the County and in certain areas 1 in 10 properties are in fuel poverty.

1.81 In Adur, the number of adults defining their health as 'bad or very bad' is significantly worse than the English average. Obesity, smoking, low physical activity levels, diabetes, cancer, limiting long term illness, self-harm and high number of carers are key issues.

1.82 Buckingham Ward within Adur District covers parts of the site. It has a low population density and more closely reflects the

characteristics of the Horsham wards to the north. It is the least deprived ward in Adur with high educational achievements and low levels of unemployment & benefit claimants. It has the lowest levels of crime in Adur.

1.83 The SA to the Upper Beeding Neighbourhood Plan provides a range of socio-economic characteristics of the parish of Upper Beeding which covers the Horsham District parts of the site. A Community and Infrastructure SWOT analysis set out the following issues:

Strengths

Good quality primary education facilities.
Good access to centres of major population
Good access to foot paths, cycle tracks and bridle ways for rural pursuits.
Active Church congregations.
Well mixed generational community.
Fibre Optic Broadband is available and highly beneficial for businesses.
Commitment to 'Beeding in Bloom' as a Community Venture.

Weaknesses

Outlying areas do not use many of the facilities.
No identifiable village centre in Upper Beeding
No health care facility in Small Dole
Sewage network not adequate
Narrow roads and on road parking issues: Trouble spots identified as
Newland Rd/Undermill Rd,
Hyde Lane/High Street
Primary School is near capacity
Lack of activities for Teenagers (as per questionnaire)
Lack of affordable housing stock resulting in young people moving away.
Lack of easily identifiable sites suitable for further housing.

Opportunities

Willingness to develop a stronger community ethos.
Development of the redundant cement work site
Care services for the elderly at home could be co-ordinated and run in and from the Dawn Close Clinic. This building is currently under-utilised.
To develop a network of marked and safe tracks for cycling within the community.
Potential to use Community Infrastructure Levy to fund community projects.

Threats

Inadequate road network for future development
Flood risk and sewage risk in Upper Beeding
Removal of subsidies to rural bus services
Lack of provision for increasingly elderly population
Primary School reaching capacity

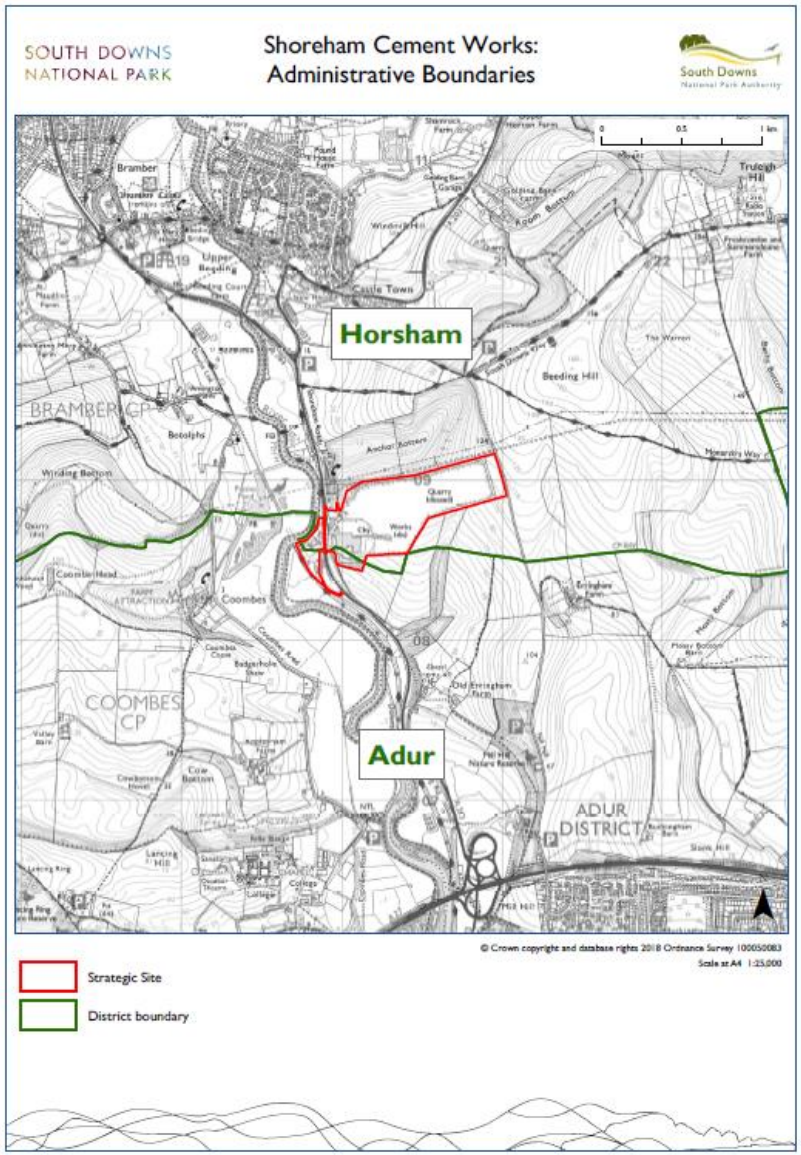


Figure 5: Administrative Boundary

1.84 Inequalities also exist in terms of physical access to the countryside. The South Downs Accessible Natural Greenspace guide identifies that there is a stark contrast between the rural, sparsely populated area of National Park and the rest of the Adur and Worthing Authority areas that are densely populated and urban. The provision of accessible natural greenspace (ANG) in the towns is negligible with only 8% having access to sites within 300m, and large areas having no access to any ANG sites. The residents of the urban areas have to rely on ANG in adjacent areas and notably in the National Park.

1.85 The parts of the site located within Horsham District fall within the Bramber, Upper Beeding & Woodmancote Ward. Some key statistics include:[42]

- There are 2,220 households.
- 25% of households with residents aged 65+.
- 23.5% households with a disabled or a long term health impaired adult.
- 28% of households with dependent children.
- 1.8 cars per household – above national average.
- 8% have no vehicle.
- 85% people with very good or good health – above national average.
- 42.5% of residents are outright homeowners, 6.5% are social renters, 12% private renters and 37% owned via mortgage or loan.

1.86 Despite the proximity of the site to the urban areas of Adur District, the immediate area of the Cement Works is reasonably affluent; experiencing limited deprivation. However, large communities living close by to the south of the site are starkly different in their profile, levels of deprivation and access to natural green space.

Summary of key sustainability issues:	**Likely evolution of the area without the AAP**
Population structure of the SDNP increasingly dominated those aged 65 and over. Limited access to public transport in places. Inequalities exist in terms of physical access to the countryside between different parts of the local population. Inequalities exist in educational attainment leading to lack of opportunity and social exclusion. Pockets of population with poor health and high care needs contrasts starkly with more affluent areas.	The influence of other plans and projects in the area will be the most influential factors e.g. community strategies and health strategies of other authorities. Opportunities to provide publically accessible greenspace and introduce project on the site to improve health may not be realised. Opportunities to provide greater and more varied employment opportunities may not be realised (see Economy and Employment topic).

1.87 **What other evidence will we be collecting** – consultation responses and input from local representatives and public consultation will form a large part of the AAP formulation process.

[42] https://www.horsham.gov.uk/__data/assets/pdf_file/0005/76631/BramberCensus.pdf

Economy and employment

Policy Context

1.88 At the national level the NPPF:

- Identifies the economy as one of the three dimensions to sustainable development .
- Requires planning authorities to plan proactively to meet the development needs of business.

1.89 Regionally the Coast to Capital Local Enterprise Partnership (LEP) is a business-led collaboration between private, public and education sectors. At a strategic level the focus is on tackling issues facing the regional economy, including transport infrastructure, the development of skills and housing and securing large amounts of public investment.

1.90 At the local level, the following policies within the South Downs Local Plan directly relate to employment and land use:

- SD34: Sustaining the Local Economy
- SD35: Employment Land
- SD39 Agriculture and Forestry
- SD40 Farm and Forestry Diversification
- SD41 Conversion of Redundant Agriculture or Forestry Buildings

1.91 The purpose of the policies is to promote and protect local businesses without compromising the purposes of the National Park.

1.92 The Adur and Worthing Economic Strategy 2018 – 2023 seeks to develop the industrial areas in Adur to take advantage of the areas manufacturing strengths, to drive growth and productivity, increase exporting and stimulate innovation through applied technologies. In addition it seeks to enable economic growth by increasing the uptake, quality and application of skills, particularly STEM skills at intermediate and higher levels. This is an ambition also reflected in the Horsham District Economic Strategy.

1.93 The Horsham District Economic Strategy 2017 – 2027 identifies five priority areas, the most relevant of which to this AAP are that the District offers a range of quality commercial floorspace to ensure that businesses have the opportunity to grow and remain here. The rural economy is growing with specialist industries such as fresh produce, food production and viticulture. It is also a priority to support the market town businesses and enhance the vitality of their high streets.

1.94 Finally the strategy highlights the importance of celebrating and promoting the distinctiveness of the area, building on current strengths and ensuring a secure and vibrant visitor economy.

Baseline Information

Current evidence base

Employment Land Review (2017) update
https://www.southdowns.gov.uk/wp-content/uploads/2017/03/ELR_report_2017.pdf
Housing and Economic Development Needs Assessment (2017)
https://www.southdowns.gov.uk/wp-content/uploads/2018/04/TSF-08-SDNP-Housing-and-Economic-Development-Needs-Assessment-HEDNA.pdf
Economic Profile of the South Downs National Park (2018)
https://www.southdowns.gov.uk/national-park-authority/our-work/key-documents/economic-profile-of-the-south-downs-national-park/
Adur and Worthing Economic Strategy
https://www.adur-worthing.gov.uk/local-economy/economic-strategy/
Horsham District Economic Strategy
https://www.horsham.gov.uk/business/economic-strategy
Horsham Visitor Economy Strategy 2018-2023
https://www.horsham.gov.uk/__data/assets/pdf_file/0010/69985/Horsham-District-Visitor-Economy-Strategy-2023.pdf
Economic Profile of Adur
https://www.adur-worthing.gov.uk/media/Media,147638,smxx.pdf
Adur and Worthing Covid-19 Economic Impact: Update December 2020
https://www.adur-worthing.gov.uk/media/Media,158291,smxx.pdf
Economic Profile Worthing
https://www.adur-worthing.gov.uk/media/Media,147639,smxx.pdf
Coast to Capital LEP Strategic Economic Plan 2018-2030
https://www.coast2capital.org.uk/strategic-economic-plan-gatwick-360
Northern West Sussex EGA Update Final Report
Crawley Borough Council, Horsham District Council, Mid Sussex District Council January 2020
https://www.horsham.gov.uk/__data/assets/pdf_file/0007/79261/Northern-West-Sussex-Economic-Growth-Assessment-24.01.20.pdf
https://www.horsham.gov.uk/__data/assets/pdf_file/0010/79354/Economic-Growth-Assessment-Appendix-5.pdf
https://www.horsham.gov.uk/__data/assets/pdf_file/0018/104247/Horsham-Focused-EGA-Update-FINAL-20.11.20.PDF

SDNPA Economic Data Update 2020

https://www.southdowns.gov.uk/wp-content/uploads/2021/02/2020-Economic-Profile-up-date.pdf

SDNPA Partnership Management Plan

https://www.southdowns.gov.uk/partnership-management-plan/

SDNPA Climate Change Adaption Plan 2020

https://www.southdowns.gov.uk/national-park-authority/our-work/climate-change-adaptation-plan-strategy/

1.95 The SDNP has seen healthy growth in its business population of over 20% in the last five years to over 8,000 businesses, outperforming the South East regional growth. The two largest sectors in the National Park are the Professional, Scientific & Technical sector which makes up nearly 21% of businesses, followed by Construction with nearly 11% of businesses. Agriculture, Forestry & Fishing is the third largest sector accounting for nearly 9% of businesses.

1.96 The National Park has a high concentration of Arts, Leisure & Entertainment businesses and the visitor economy makes up over 10% of the National Park's businesses or 835 businesses in 2017, an increase of 105 businesses or 14% since 2013.

1.97 Manufacturing is an important sector in many rural areas and the South Downs National Park is no exception; manufacturing production makes up 5% of the business base and over 8% when engineering activities are included. Together, manufacturing and engineering account for over 5,000 jobs. Only about a quarter of manufacturing could be said to be "advanced".

1.98 SDNPA have highlighted 5 priority sectors of the National Park Rural Economy. These are: Visitor Economy, Land-based, Food & Drink, Knowledge Economy and Advanced Manufacturing.

1.99 Business creation and survival rates are generally good in the National Park, although lower than in the comparator geographies. Over 98% of its businesses are in the micro and small category and there are fewer medium and large businesses than all the comparator geographies. In terms of turnover, there are more businesses in the National Park in the critical £0.5m to £1m bracket indicating that, although small, they are not necessarily unproductive.

1.100 A balance needs to be struck between not encouraging environmentally deleterious economic growth and supporting local communities that require well paid employment if they are to afford to live in the area.

1.101 The GVA per capita of the South Downs National Park is broadly similar to the South East and well above many parts of the UK. The unemployment rate is well below the national average. The average rural house price is over £400,000, whilst in the towns it is over £270,000. There are, therefore high levels of both in and out commuting for work.

1.102 The economic focus for the Adur District is changing towards a Greener Economy through a focus on Sustainable Green Technology and Advanced Manufacturing. In addition, the council is focussing on attracting high value businesses providing highly skilled jobs centred around sustainability, the green economy and

green technology. This builds on the new Creative and Digital Hub the Council has built up in Worthing in recent years. Adur is also home to several major companies including Ricardo, Dudman Aggregates, Infinity Foods and Higgidy Pies all located close to the Cement Works site. Shoreham port to the south handles over 2m tonnes of cargo per year as well as providing a range of services to commercial and leisure marine industries. Shoreham Port is also contributing to the green economy vision with a new green technology plant established at the Port. Shoreham Airport, also known as Brighton City Airport, is a popular business location providing easy access to the A27 and a range of aviation and non-aviation businesses are located there. (Economic Profile of Adur: July 2017). New development is being brought forward as set out in the Adur Local Plan 2017 (Policy 7).

1.103 The Adur manufacturing sector is larger than average but is not highly productive and many small and medium enterprises (SMEs) operate in low tech markets. Advanced, high value manufacturing and engineering is underdeveloped although there are some leading edge and global companies.

1.104 There are a number of business parks that require upgrading and reconfiguration to make best use of space.

1.105 The workforce skills levels in Adur District are low, particularly at degree level and above and also at intermediate and technical level. There are signs of a low wage low skills economy in some areas and sectors in the District. Adur is one of the most deprived local authority areas in West Sussex and has the 2nd highest unemployment rate in the County.

1.106 There is a good Further Education provision in the area and access to universities nearby, but both Districts experience higher value businesses skills shortages, particularly in science, technology, engineering and maths subjects (STEM subjects).

1.107 The most common employment sector in the Horsham district is business and professional services, but the rural economy, including agriculture and tourism are also important outside the main towns and villages. Many of the businesses in Horsham district are small in size, employing between 1 and 4 employees. There are a number of high-tech firms operating in the district as well as a number of industrial estates located within settlements across the district and in the rural area. Unemployment levels are lower than for the South East or nationally. The workforce is generally highly skilled, (with 47.7% of residents educated to degree level or higher).

1.108 Current evidence shows that there are a number of issues affecting economic growth in the District:

- A limited supply of office, industrial and warehouse facilities (B1 and B8 uses).This has arisen due to a modest increase in demand, loss of existing stock to alternative uses and a limited level of new development coming forward.
- Two thirds of the district's commercial office space lies within Horsham town with most of the rest in Southwater and North of the A264. Industrial space is more evenly distributed across the District.
- There is a continuing increase in out-commuting from the district. A large proportion of residents seek well-paid jobs in London, Gatwick and Croydon.
- Many jobs within the Horsham district area are not well paid.

1.109 The Horsham Visitor Economy Strategy identifies that the varied landscape, from the wooded north to thehistoric houses nestling at the foot of the Downs in the south; the central pasture and farmland crossed by the Adur and Arun rivers and an extensive public rights of way network, including a section of the South

Downs Way Chanctonbury Ring, make the countryside attractive and accessible to walkers, cyclists and horse riders.

1.110 Together the market towns of Horsham, Billingshurst, Henfield, Pulborough, Steyning and Storrington, with their diverse architecture and surrounding villages and hidden hamlets, offer a rich local history, attractive and convenient facilities, independent shops, lively festivals and interesting gastronomy.

1.111 It is a good place to live, traditional and safe, surrounded by protected landscapes, interesting places to visit and large urban populations.

1.112 The district is well located between London and the coast, close to Gatwick Airport with a good road and rail network. For both leisure and business visitors Horsham town is easily accessible, attractive and provides a wide range of convenient services.

Summary of key sustainability issues:	**Likely evolution of the area without the AAP**
Economy disconnected from the local area, significant levels of out-commuting. Uncertainty around future of agriculture. Disparity in income levels and employment opportunities. Skills shortage in STEM subjects.	There are a range of projects in the Adur area, these will continue without the progression of the plan. The site is home to a range of businesses which can continue on site. Opportunities to support the local economy, qualification and skill levels of local residents may not be maximised. Promoting the South Downs National Park on the regional / national stage will continue.
Need to support the growth of small / medium enterprises which form the basis of the local economy. Limited availability of employment land especially of 7hectares and over. This results in limited options for move on space for businesses. Limited number of higher value business offering a range of high value employment options for local people. Lack of employment space supported by suitable infrastructure to attract a range of sectors including the advanced manufacturing sector businesses.	Local authorities and business agencies will continue to support businesses within available time and resources The lack of employment space will remain although land allocations within existing Local Plans and draft Local Plans will be brought forward through the planning process. Economic Strategies will continue to support a range of employment sectors and encourage higher value added businesses to locate/expand within the local area. Regeneration policies within the Adur Local Plan seek to provide new employment floor space and infrastructure. These will be brought forward and implemented during the Plan period.

1.113 **What other evidence will we be collecting** – consultation responses and input from local, District & County and sub-regional representatives will form a large part of the AAP formulation process.

Communities and Housing

1.114 The SA of the South Downs Local Plan originally called this topic 'Housing'. For this SA of the AAP it has been broadened out to include a range of matters relating to the community as a whole.

Policy Context

1.115 At the national level the NPPF:

- Sets a strategy to significantly boost housing supply. For the most part, this is focused on meeting the objectively assessed housing needs for the area. However it also makes very clear that where specific policies indicate development should be restricted, then this requirement to meet the full need does not apply (footnote 7 to paragraph 11, which specifies that National Parks are one such area).
- Expects local authorities to deliver a wide choice of high quality homes. They should also plan for a mix of housing based on current and future demographic trends, market trends, and the needs of different groups in the community, and set policies for meeting affordable housing needs which should generally be on-site.
- States that planning policies should guard against the unnecessary loss of valued facilities and services, particularly where this would reduce the community's ability to meet its day-to-day needs and ensure an integrated approach to considering the location of housing, economic uses and community facilities and services.

1.116 The Government recognises that National Parks are not suitable locations for unrestricted housing and does not therefore provide general housing targets for them. Consistent with government policy, the expectation is that new housing in the SDNP will be focused on meeting affordable housing requirements, supporting local employment opportunities and key services.

1.117 At the local level, the following policies within the South Downs Local Plan directly relate to communities and housing:

- SD25: Development Strategy
- SD26: Supply of homes
- SD27: Mix of homes
- SD28: Affordable homes
- SD38: Shops outside centres
- SD42: Infrastructure
- SD43: New and Existing Community Facilities

1.118 The purpose of the policies is to identify towns and villages that are able to accommodate growth, establish the levels of housing expected to be delivered in each one, delivery of affordable housing and the provision of smaller homes. In addition, they ensure that development takes place alongside the protection and provision of infrastructure.

Baseline Information

Current evidence base

Authority Monitoring Report
https://www.southdowns.gov.uk/wp-content/uploads/2020/12/Authority-Monitoring-Report-2019-2020.pdf
South Downs Strategic Housing Market Assessment (SHMA) – 2015
https://www.southdowns.gov.uk/wp-content/uploads/2015/09/SDNP-SHMA-2015.pdf
Housing and Economic Development Needs Assessment (HEDNA) – 2017
https://www.southdowns.gov.uk/wp-content/uploads/2018/04/TSF-08-SDNP-Housing-and-Economic-Development-Needs-Assessment-HEDNA.pdf
Whole Plan and Affordable Housing Viability Report, 2017
https://www.southdowns.gov.uk/wp-content/uploads/2018/04/Core-13-Whole-Plan-and-Affordable-Housing-Viability-Report.pdf
Upper Beeding Neighbourhood Plan
https://www.southdowns.gov.uk/wp-content/uploads/2016/05/Upper-Beeding-Referendum-Version-March-2021.pdf
https://www.horsham.gov.uk/__data/assets/pdf_file/0019/70408/Sustainability-Appriasal-incorporating-Strategic-Environmental-Assessment-Dec-2018.pdf
South Downs Local Plan
https://www.southdowns.gov.uk/wp-content/uploads/2019/07/SD_LocalPlan_2019_17Wb.pdf
Adur & Worthing Housing Needs studies
https://www.adur-worthing.gov.uk/planning-policy/adur/adur-background-studies-and-info/housing-need/
Northern West Sussex Strategic Housing Market Assessment 2019
https://www.horsham.gov.uk/__data/assets/pdf_file/0020/79130/Northern-West-Sussex-Strategic-Housing-Market-Asessment.pdf
Horsham Local Plan evidence base
https://www.horsham.gov.uk/planning/planning-policy/evidence-base
Coastal West Sussex SHMA
https://www.midsussex.gov.uk/media/3194/rd-_19-coastal-west-sussex-shma-update-2012.pdf

1.119 In 2014 there were estimated to be approximately 48,530 households in the National Park. The National Park has a high proportion of detached homes (40 per cent of all homes) with semi-detached homes accounting for a further 27 per cent of homes.

1.120 Through the Local Plan the SDNPA is making provision for approximately 4,750 additional homes in the period to 2033. The HEDNA and SHMA identify a need for a mix of dwelling sizes with a much greater level of need for small and medium-sized homes and limited need for larger houses of 4 or more bedrooms.

1.121 The affordability of housing is a major barrier to sustainable communities in the National Park. In 2019, the average house prices was 15 times average earnings and house prices increased by 68% from 2009 to 2019. 294 affordable homes are needed a year in the National Park to meet the full objectively assessed need for affordable housing.

1.122 The Cement Works site is located almost equidistant between Upper Beeding and Shoreham. To the west of Upper Beeding is the historic town of Steyning. Steyning is identified as a small town in the Horsham District Planning Framework and can support some development. Horsham is ranked as the second least deprived Authority in West Sussex. The areas in and around the site are some of the least deprived in the District.

1.123 The Horsham District Council Settlement Sustainability Review 2014 states that Upper Beeding has limited employment opportunities within the village although there are some nearby industrial estates. There are strong employment links with the south coast towns of Brighton and Worthing which are the main employment destinations for residents in the village. Upper Beeding has a good range of community facilities including a

primary school, village hall (shared with Bramber), recreation ground, sports hall and church halls, allotments and a branch surgery of Steyning Health Centre. There is also a range of local shops including a convenience store, hairdressers as well as some more specialist outlets. In Steyning, services and facilities include a wider range of retail outlets, a leisure centre with swimming pool and a secondary school. There is a ½ hourly to hourly bus service to Steyning from Upper Beeding. Upper Beeding is located within a high quality environment adjoining the South Downs National Park.

1.124 The SA to the Upper Beeding Neighbourhood Plan provides a range of housing community characteristics of the parish of Upper Beeding which covers the Horsham District parts of the site. A Housing and Development SWOT analysis set out the following issues:

Strengths

- Recent flooding has highlighted the benefit of our flood plains
- The parish has its own unique character and needs to be retained
- Our 15th century properties compliment the architecture of the village
- The parish boundary is on an area of outstanding natural beauty
- Rural setting near to Brighton / London
- Property prices competitive compared to Hove/ Brighton
- Only 90 mins. from centre of London
- Good schools / catchment area
- Safe community to live in

Weaknesses

- Parishioners apathy to want to get involved / engage
- Roads are very narrow to support large vehicles
- Railway does not exist
- High Streets used as 'rat runs'
- Not enough business units for businesses to set up or expand
- Infrastructure nearing capacity.
- High Speed Broadband not available to all.
- Lack of Parking to support development
- Not enough Care Homes
- Limited Medical Care and access to Hospitals / Medical
- Limited retail outlets in the parish42
- Insufficient data to support housing and development needs
- Lack of futuristic mind set to develop for the next 20 years

Opportunities

- Farmers/land owners who want to release land for new builds
- Check if there are any brownfield sites for development.
- Ask parishioners if there aware of opportunities for development.
- What planning applications are there to increase accommodation?
- Old Cement Works has real development opportunities
- Develop existing buildings to house more people with local incentives
- Industrial estates; are they being used to their maximum
- Produce housing needs survey to identify villager's demands
- Possible development opportunity on mobile home sites
- Change the use of mobile home sites for permanent use
- We have good data to estimate the housing needs for the future.

- Recommend the design & materials to protect the uniqueness of builds
- To develop the villages in the parish so that they keep village status.
- To retain open spaces to ensure that any dwelling has adequate space
- To allow children to play in an open environment
- To use and develop allotments.
- Develop an initiative to ensure empty properties become occupied
- Establish housing requirements with the local housing associations: Moat, Raglan, Saxon Weald,
- Southern Housing, English Rural Housing Association, Greenoak Housing Association, Southdown
- Housing Association, Lewes Land Trust and Grosvenor Estate

Threats

- Southdown Downs National Parks Plans may conflict with NP
- Horsham District Council Plans may impact our NP.
- Large Developers may only provide bland out of character housing
- Current open spaces could be under threat of being built on
- Extra development could impact our infrastructure if not reviewed also.
- The design and buildings not in keeping with the village
- No additional housing is forcing families born & bred in village to leave
- Lack of single housing to meet ageing population needs
- Lack of local employment options means people have to move
- Large housing estates could increase crime and disorder.
- Could be forced to build on the flood plain
- Adjoining parishes development plans not complimentary to ours

1.125 Nearby Shoreham has a population of over 20,000 people and is possibly best known for its Airport which lies to the west of the main town. The town is served by Shoreham-by-Sea railway station, located on the West Coastway Line and a range of local bus services principally running along the coastal routes. The town itself contains a moderately sized High Street containing a mix of multi-nationals as well as independent stores. It is also the location of the Ropetackle Arts Centre. The out of town Retail Park at Holmbush is home to a large Tesco, Marks & Spencer as well as a Next. There are significant areas of employment, in particular centred on the Harbour area, which provides in the region of 1,400 jobs.

Summary of key sustainability issues:	**Likely evolution of the area without the AAP**
Need for more affordable housing. Low capacity for settlements to accommodate new housing. Need to ensure locations for new housing are not unsustainable, providing the opportunity to use local services.	Continuing need for housing at affordable prices main remain. Significant shortfall in housing supply may remain an issue. Opportunities to provide community facilities which would enhance those in the local area, particularly to the south may not be realised.

High value area causes houses to be enlarged, improved, replaced, reducing proportion of smaller, cheaper houses. Need to sustain services and facilities in rural areas.	

1.126 **What other evidence will we be collecting** – The identification of land for housing as part of the AAP will be very closely linked to viability. Assessments of the viability of various options will be undertaken as the AAP progresses and the input from the community on their current and likely future needs and aspirations will form a large part of the work.

Transport and Sustainable travel

Policy Context

1.127 At the national level, the NPPF:

- States that local plans should support a pattern of development which, when reasonable to do so, facilitates the use of sustainable modes of transport and a balance of land uses which encourages people to minimise journey lengths (paragraphs 104, 105 and 106). It requires local planning authorities to work with neighbouring authorities and transport providers to develop strategies for infrastructure provision.
- Contains guidance on the design of developments and on local parking standards. Paragraph 110 sets out transport issues to be addressed in the selection and design of new development sites. Paragraph 100 states that planning authorities should seek to protect and enhance public rights of way and access.

1.128 At the local level, the following policies within the South Downs Local Plan directly relate to transport and travel:

- Policy SD19: Transport and Accessibility
- Policy SD20: Walking, Cycling and Equestrian Routes
- Policy SD21: Public Realm, Highway Design and Public Art
- Policy SD22: Parking Provision

1.129 Alongside Policy SD25: Development Strategy, the purpose of the policies is to direct development towards the most sustainable locations in transport terms, safeguard and enhance non-motorised routes and provide guidance on design and parking.

1.130 Shoreham cement works is located within West Sussex County Council (Highway Authority). The current West Sussex Transport Plan 2011-26[43] sets the strategy for guiding future investment in highways and transport infrastructure. It also sets a framework for considering transport infrastructure requirements associated with future development across the county.

1.131 The Transport Plan is under review and the draft West Sussex Transport Plan (WSTP) 2022-2036 was published for consultation from 16 July to 8 October 2021[44].

1.132 West Sussex also produce a Rights of Way Management Plan (RoWMP) 2018-2028 which sets out the County Council's approach to managing the Public Rights of Way (PRoW) network over the next ten years[45].

1.133 The South Downs Cycling and Walking Strategy 2017-2024 sets out our aim and direction for the future of cycling and walking activities

1.134 and supports infrastructure coming forward in the National Park

1.135 Buses travel along the A283 and destinations include Steyning, Shoreham and Brighton. In addition there are significant numbers of footpaths and high quality cycle ways including the Downs Link and Monarchs Way Long Distance Footpath adjoining or in close proximity to the site (Figure 6).

[43] https://www.westsussex.gov.uk/about-the-council/policies-and-reports/roads-and-travel-policy-and-reports/west-sussex-transport-plan/

[44] https://www.westsussex.gov.uk/about-the-council/policies-and-reports/roads-and-travel-policy-and-reports/west-sussex-transport-plan-review/

[45] https://www.westsussex.gov.uk/land-waste-and-housing/public-paths-and-the-countryside/public-rights-of-way/rights-of-way-management-plan-2018-2028/

1.136 The Downs Link is a long distance route for walkers, horse riders and cyclists. The route is mostly off-road following Public Rights of Way along two disused railway lines and crosses the Surrey Hills, the Low Weald, the South Downs and the Coastal Plain. Since the trains departed in the 1960s the embankments and cuttings have become a green corridor for wildlife and people. The Downs Link connects with other long-distance routes, such as the South Downs Way, Wey South Path, Greensand Way, Sussex Border Path and National Cycle Network routes 2 (along the south coast) and 22.

Baseline Information

1.137 The Downs Link is in close proximity to the Shoreham Cement Works site circuiting the corner of the site to the east of the River Adur. From the site, the link takes you to Shoreham by Sea to the south and Steyning/Upper Beeding/Bramber to the north.

1.138 The document 'Roads in the South Downs' (2015) was commissioned by the SDNPA in close collaboration with the local highway authorities. It contains guidance on locally appropriate highway design for the area. It combines an approach based on careful analysis of appropriate design speeds for traffic with an emphasis on distinctive place-making, village entrances and an integration of roads and streetscapes with their surrounding buildings, features and landscape elements.

1.139 Residents, business and visitors to the National Park have a high dependence on cars. This increasing dependence is a reflection of poor public transport infrastructure and the dispersed, rural nature of the communities.

1.140 Approximately 22,500 residents living in the SDNP commute out to other destinations in the south east, including London. Peak capacity on rail commuter routes between London and south coast termini such as Brighton, Portsmouth and Southampton is an acknowledged problem. Similar capacity issues are affecting coastway services primarily driven by housing development and associated population increases.

Current evidence base

South Downs Transport Study Phase 1 (2013)
https://www.southdowns.gov.uk/wp-content/uploads/2015/02/Transport-Study-Phase-1-March-2013.pdf
South Downs Local Plan Transport Paper 2017
https://www.southdowns.gov.uk/wp-content/uploads/2018/04/PCP01-Transport-Background-Paper.pdf
Local Plan Transport Assessment (2016)
https://www.southdowns.gov.uk/wp-content/uploads/2017/01/Local-Plan-Transport-Assessment.pdf
WSCC, 2016. West Sussex Walking and Cycling Strategy 2016 – 2026
https://www.westsussex.gov.uk/about-the-council/policies-and-reports/roads-and-travel-policy-and-reports/west-sussex-walking-and-cycling-strategy-2016-2026/
WSCC, Breathing Better: A Partnership Approach to Improving Air Quality in West Sussex (2018)
http://www2.westsussex.gov.uk/ds/mis/110718env4a.pdf
West Sussex Rights of Way Improvement Plan
https://www.westsussex.gov.uk/media/11362/row_management_plan.pdf
Roads in the South Downs (2015)
https://www.southdowns.gov.uk/wp-content/uploads/2015/09/Roads-in-the-South-Downs.pdf
West Sussex Transport Plan 2011-2026
https://www.westsussex.gov.uk/about-the-council/policies-and-reports/roads-and-travel-policy-and-reports/west-sussex-transport-plan/
Adur & Worthing Local Cycling Walking Infrastructure Plan
https://www.adur-worthing.gov.uk/media/Media,158651,smxx.pdf

1.141 The site is well connected to the strategic road network with links to Gatwick and London as well as the business areas in Shoreham Harbour and Shoreham Airport. A significant proportion of residents commute out of the Adur District to

work and the District contains 4 railway stations, the closest to the site being in Shoreham.

1.142 The SDNP is transacted by a number of strategic highway routes. The Shoreham Cement works site sits just to the north of the A27 (east –west route) on the A283. Pressures for road improvements exist throughout and adjoining the South Downs.

1.143 Key strategic development sites to the south of the Cement Works around Shoreham and Lancing will require works on the A27 to mitigate the impact.

1.144 To the north some key local routes transect the National Park. An increase in their usage damages tranquillity.

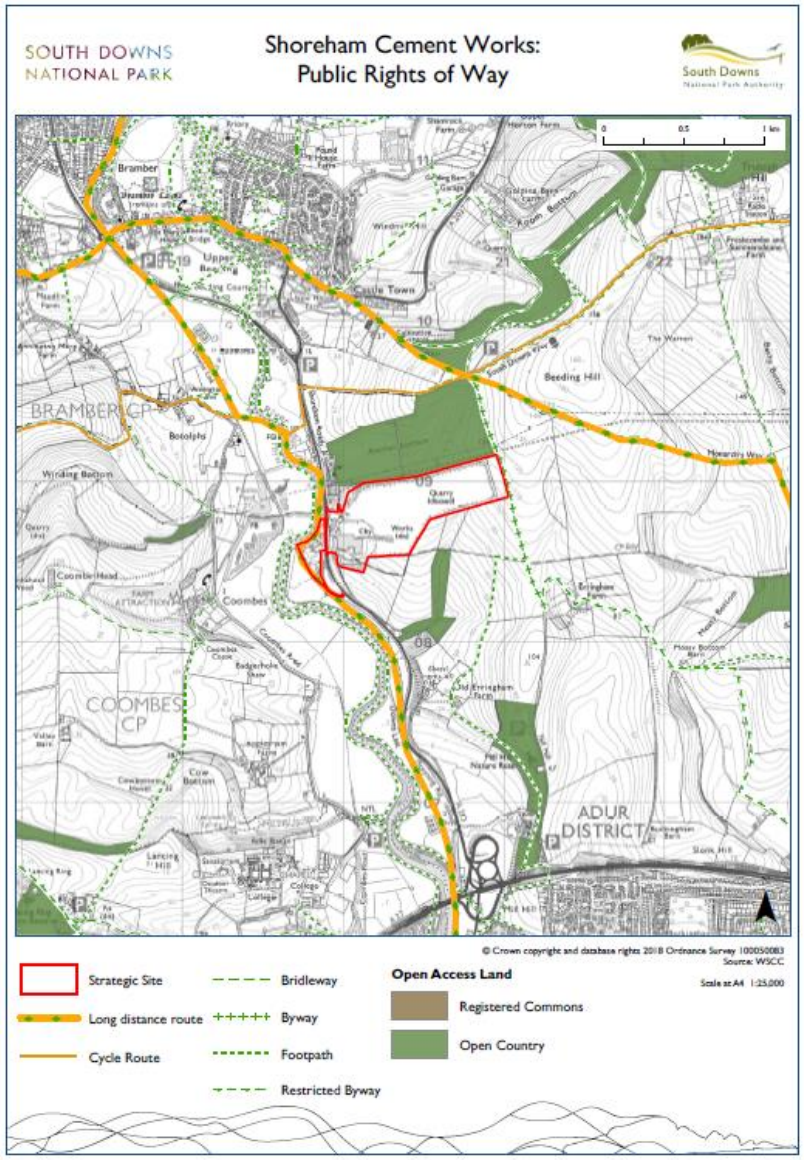


Figure 6: Footpaths and cycle routes

Summary of key sustainability issues:	**Likely evolution of the area without the AAP**
Peak time road congestion leading to delay, poor traveller experience and reduction in air quality. Key transport routes transect the SDNP. High visitor dependence upon cars. Some rail commuter routes will be at peak capacity by 2020. Large scale development outside the SDNP leading to increasing levels of traffic through the National Park. Opportunities to connect to excellent network of public footpaths and cycle routes. Opportunities to maximise bus use by connecting through to existing networks.	Congestion leads to poor air quality, travel delays – effects economy and visitor experience as well as residents. Significant development proposals in the local area outside of the National Park may lead to large increases in traffic whether or not development takes place on this site. Significant mitigation will be needed. Public transport and resolving congestion hot spots would remain a key objective. Opportunities to encourage walking and cycling (also good for health and wellbeing) may not be optimised. Improvements may not be made to the non-motorised transport infrastructure. Opportunities to utilise existing public transport may not be optimised.

1.145 **What other evidence will we be collecting** – Transport modelling of various development options will be undertaken by consultants during 2021.

1.146 Site specific highways and access assessments will also be required.

Water, air, soil & geology

Policy Context

1.147 At the national level the NPPF:

- States that planning policies should comply with and contribute towards EU limit values or national objectives for pollutants, taking into account the presence of Air Quality Management.
- Paragraph 174 states that the planning system should contribute to and enhance the natural and local environment by protecting geological conservation interests and soil.

1.148 At the local level, the following policies within the South Downs Local Plan directly relate to this water, air, soil and geology:

- SD2: Ecosystem services
- SD9: Biodiversity and Geodiversity
- SD17: Protection of the Water Environment
- SD54: Pollution and Air Quality
- SD55: Contaminated Land

1.149 The purpose of the policies is to protect groundwater and surface water assets, set out a positive strategy for the conservation and enhancement of geodiversity and manage the impact of pollutants.

1.150 Horsham and Adur District Councils are required to monitor air quality across the authority areas and take action where nationally set levels are likely to be exceeded. The EU Water Framework Directive requires action to be taken to prevent deterioration of aquatic ecosystems and protect, enhance and restore water bodies to 'good' status.

Baseline Information

Current evidence base

Water Cycle Study and SFRA Level 1 (2015)

https://www.southdowns.gov.uk/wp-content/uploads/2018/05/TSF-44-Water-Cycle-Study-2015-Scoping-and-Outline-Report.pdf

Soils Data Cranfield University

http://www.landis.org.uk/soilscapes/

Sussex Geodiversity Partnership – Regionally Important Geological and Geomorphological sites entry

https://www.geodiversitysussex.org.uk/riggs.php

WSCC, Breathing Better: A Partnership Approach to Improving Air Quality in West Sussex (2018)

http://www2.westsussex.gov.uk/ds/mis/110718env4a.pdf

Adur Air Quality Action Plan (2007)

https://www.adur-worthing.gov.uk/media/Media,104971,smxx.pdf

Horsham Air Quality

https://www.horsham.gov.uk/environmental-health/air-quality/what-is-an-air-quality-management-area

Shoreham Cement works - Preliminary Geotechnical and Geo-Environmental Assessment 2018. Report available on request.

1.151 The chalk of the South Downs, being very porous, acts as a huge sponge (or aquifer) and stores water. It is this groundwater that supplies the large majority of the people living within and around the South Downs with their drinking water, constituting ~75% supply. The site is not located within a designated Groundwater Source Protection Zone but there are a number of strategic boreholes in adjoining areas and a principal aquifer lies below the site. In addition the groundwater body itself is classified under the Water Framework Directive as failing.

1.152 Pressure from new development and rising household demand is increasing the need for water across the southeast. This is having an impact on the water resources from the South Downs National Park. The level of abstraction, from both the Chalk and Lower Greensand aquifers across the National Park, already exceed the available natural resource (Environment Agency, 2012). This also has an effect on river flows and the need to maintain their ecological condition. Adur District is classified by the EA as an area of serious water stress. Equally there are similar pressures on waste water disposal so there are multiple reasons to ensure high standards of water efficiency and grey water re-use.

1.153 Water companies produce water resources management plans every 5 years which set out how they will manage such increasing demands and maintain supplies over a 25 year horizon.

1.154 The River Adur is classified as a 'transitional water body' of moderate quality. The aim as a minimum is for no deterioration in that quality. There is the potential for hydraulic connectivity between the site and nearby river. The River Adur is adjacent to the western boundary of the site and it is likely shallow groundwater is present beneath the site, particularly in the western area. Mitigation measures will be required to protect controlled waters and need to be incorporated in any surface water drainage strategy.

1.155 There are no air quality management zones in or in close proximity to the site.

1.156 The mapped geology is Lewes Nodular Chalk in the west and Seaford Chalk in the east. However, as it is an inactive chalk quarry, it is likely to differ from the mapped geology. The soil (where it exists) over and adjoining the site is described as shallow lime-rich over chalk or limestone with a loamy texture. Much of the site is identified as a Local Geological site, identified for its lower / middle and upper chalk geology. The full entry is in Appendix 3. The river to the west is underlay by clay, silt and sand.

1.157 South Downs National Park Authority commissioned a Preliminary Geo-technical and geo-environmental Assessment in 2018. This study is available on request and a summary of the key points made within the report are:

1. Much of the potential contamination hazard across the site arises from the presence of historic landfill material and made ground.

2. It is possible that underground process pipework and storage tanks could be present across much of the site, especially in Areas A & B, where cement manufacturing was focussed.

3. It is unknown whether any of the historical infrastructure across the site was formally decommissioned and reused or removed from site, or whether much of these remain buried on site.

4. There is potential for historical waste liquids to be contained within any buried pipework or storage tanks remaining on site.

5. The risk to workers and site users from both current and historic land use on and around the site is assessed as being low to moderate.

6. The risk to groundwater from both current and historic land use on and around the site is assessed as being low to moderate. As a Principal Aquifer the risk of contamination to the Chalk is most significant.

7. The risk to surface water (River Adur) from both current and historic land use on and around the site is assessed as being low to moderate risk. Any leachable near surface contaminants are likely to be mobilised either to the site drainage system or groundwater.

8. The risk to the Adur Estuary SSSI from both current and historic land use on and around the site is assessed as being low risk.

Water quality of River Adur to be maintained or improved. Lack of opportunity to access and appreciate the chalk geology of the South Downs. Degradation of soil quality through trampling, erosion and climate change.	Damage to thin and fragile soil on the site may occur.

Summary of key sustainability issues:	**Likely evolution of the area without the AAP**
Water demand exceeds supply with resulting over abstraction from aquifers / rivers affecting quality of water sources. Groundwater supplies large majority of people living in and around the South Downs. Air quality to be maintained or improved.	No deterioration in quality of water in River Adur. All opportunities to appreciate / explore / understand chalk geology may not be realised. Reduction in air quality in areas of high congestion. Improvement in air quality at a more regional level due to policy at National Government levels. Continued pressure to extract groundwater.

What other evidence will we be collecting

1.158 A programme and costings schedule on the extent and requirement of land and ground investigations will be provide during 2021. Further consideration of the updates to the Climate Change Allowances and flood modelling on the Adur with expected Flood Zones updates to reflect the new modelling early 2022.

5. Stage A4 – The Sustainability Appraisal Framework

1.159 The SA for the South Downs Local Plan lists 12 sustainability objectives. Since the Local Plan fully encompasses the extent of the AAP it provides a starting point in identifying sustainability objectives that are relevant to the development of this plan. These objectives have then been reviewed in light of the key sustainability issues emerging from the preceding collection of baseline data (Stages A2 and A3) and their relevance to the AAP. A number have consequently been excluded or adapted.

1.160 Furthermore it is considered to be consistent with the guidance on evidence provided by the NPPF, namely that:

1.161 Assessments should be proportionate and should not repeat policy assessment that has already been undertaken.

1.162 The following table links thematic topics of the SEA Directive with the SA objectives of the South Downs Local Plan and the proposed objectives for the AAP. Some objectives could easily sit under multiple issues so a best fit has been used.

Table A4.1 Proposed Area Action Plan Sustainability Objectives

No.	*Topic*	*South Downs Local Plan SA objective(s)*	*<u>PROPOSED</u> Shoreham Cement Works Area Action Plan SA objective(s)*	*Decision aiding questions*
1	Landscape SEA/SA topic: Landscape	To conserve and enhance landscape character.	1.1 To conserve, enhance and restore the landscape of the site.	*These will be included once the Shoreham Cement Works Landscape Assessment work is completed.*
2	Biodiversity SEA/SA topic: Biodiversity / Flora and Fauna	To conserve and enhance the region's biodiversity.	2.1 Conserve and enhance priority species and habitats that occur on the site as identified in the Preliminary PEA and PRA 2018 and any subsequent survey recommendations set out in further work during 2021/2022. 2.2 The development should contribute to nature recovery through biodiversity net gain and other delivery mechanisms as informed by the site's ecological context.	Will the option contribute to the enhancement of the biodiversity opportunity area including conserving, restoring and creating chalk grassland and farmland bird species? Will the option adequately conserve and enhance protected species and habitats identified in the Extended Phase 1 Habitat Survey and Protected Species Assessment? Will the option result in at least 10% net biodiversity gain?
3	Archaeological and cultural heritage SEA/SA topic: Cultural heritage	Conserve and enhance the historic environment, heritage assets and their settings. To encourage increased engagement in cultural activity across all sections of the community in the SDNP and promote sustainable tourism	3.1 To conserve key features of the industrial heritage of the site, (this may include the cement tower and others as identified in studies and assessments undertaken in 2021 on cultural heritage and existing buildings). 3.2 To ensure the development delivers sustainable tourism (see Economy and Employment theme).	Will the option promote sensitive re-use of important buildings? Will current and future generations be able to understand the history of the site in relation to chalk extraction, cement production and regeneration?

No.	*Topic*	*South Downs Local Plan SA objective(s)*	*<u>PROPOSED</u> Shoreham Cement Works Area Action Plan SA objective(s)*	*Decision aiding questions*
4	Climate change including flooding SEA/SA topic: Climatic factors / Material Assets	To address the causes of climate change through reducing emissions of greenhouse gases and the consequences through adaptation measures. To ensure the SDNP communities are prepared for the impacts of climate change.	4.1 Minimise the risk of flooding to new and existing development. 4.2 Maximise the use of low carbon and renewable energy within the site. 4.3 Minimise the impacts on health of both solar glare and radiation experienced within the quarry site. 4.4 Minimise water consumption and maximise grey water recycling to reduce pressure on local water supplies. 4.5 Makes best possible use of existing materials and resources already on the site.	Will the option reduce the risk of flooding from all sources to future development? Will the option help to reduce the rate of run-off? Will the option encourage Sustainable Urban Drainage Schemes? Will the option ensure that increased flooding extremes can be withstood? Will the option reduce the need for energy use? Will the option facilitate the generation / use of renewable energy?
5	Health and Wellbeing SEA/SA topic: Heath / Population	To improve the health and well-being of the population and reduce inequalities in health and well-being.	5.1 To improve the health and well-being of the population and reduce inequalities in health and well-being. 5.2 To promote the 15 minute neighbourhood concept that will enable people to meet most of their daily needs within a 15 minute walk, cycle or public transport links from their home.	Will the option help to improve the health of the community? Will the option encourage healthy lifestyles? Will the option improve access to accessible natural green space? Will the option help overcome social exclusion? Will the option help address the issues of deprivation and poverty? Will the option promote social and health cohesiveness.

No.	*Topic*	*South Downs Local Plan SA objective(s)*	*<u>PROPOSED</u> Shoreham Cement Works Area Action Plan SA objective(s)*	*Decision aiding questions*
6	Economy and Employment SEA/SA topic: Economy & Employment	To encourage development of the rural economy in a manner that balances agricultural and other business interests to maintain a living, valued landscape. To deliver sustainable tourism.	6.1 Development that provides for small / medium business enterprises particularly in the core sectors of Visitor Economy, Land-based, Food & Drink, Knowledge Economy and Advanced Manufacturing. 6.2 To deliver sustainable tourism which promotes a modal shift from private to public transport, diversifies and improves the tourism offer and improves the knowledge and custodianship of visitors.	Will the option encourage a range of jobs that are accessible to local people Will the option support the clusters or network of knowledge driven, creative or high technology industries? Will the option increase the likelihood of local jobs being filled by local people? Will the option ensure that the viability, vitality and competitiveness of nearby town and village centres are not harmed? Will the option encourage diversity and quality of employment? Will the option provide employment floor space and attract a range of employment options including green technologies and higher value added businesses.

No.	*Topic*	*South Downs Local Plan SA objective(s)*	*<u>PROPOSED</u> Shoreham Cement Works Area Action Plan SA objective(s)*	*Decision aiding questions*
7	Community and Housing SEA topic: Population	To ensure that everyone has the opportunity to live in a good quality, affordable home, suitable to their need and which optimises the scope for environmental sustainability. To improve accessibility to all services and facilities. To create and sustain vibrant communities which recognise the needs and contributions of all individuals.	7.1 Contribute towards affordable housing. 7.2 Ensure any housing is of a suitable size and type to meet identified local needs. 7.3 Ensure residents have convenient and sustainable access to day-to-day local services. 7.4 A mixed community where children can play freely and social isolation is the exception. 7.5 Development that does not harm the viability of services and facilities in surrounding communities in particular Upper Beeding, Steyning and Shoreham.	Will the option boost the supply of affordable housing? Will the option promote improvements in the availability and quality of the housing stock? Will the option negatively impact on existing local facilities?

No.	*Topic*	*South Downs Local Plan SA objective(s)*	*<u>PROPOSED</u> Shoreham Cement Works Area Action Plan SA objective(s)*	*Decision aiding questions*
8	Transport and travel SEA/SA topic: Transport	To improve the efficiency of transport networks by enhancing the proportion of travel by sustainable modes and by promoting policies which reduce the need to travel.	8.1 Provide convenient access to a range of sustainable modes of transport to and from the site. 8.2 Minimise the impact of required highways schemes on the landscape, biodiversity, heritage and riverine environment. 8.2 Seek to improve the current non-motorised transport infrastructure in the vicinity of the site and the links to neighbouring settlements.	Will the option reduce the need to travel, especially by private motorised vehicles? Will the option help provide/improve/link up walking / cycling / public transport infrastructure? Will the option be accommodated within the existing public transport constraints? Will the option improve access to the countryside and historic environments? Will the option improve access to key services (education, employment, recreation, health, community services, cultural assets)?

No.	*Topic*	*South Downs Local Plan SA objective(s)*	*<u>PROPOSED</u> Shoreham Cement Works Area Action Plan SA objective(s)*	*Decision aiding questions*
9	Water, air, soil and geology SEA topic: Soil / Water / Air	-	9.1 No reduction in water quality of rivers and aquifers. 9.2 Reduce congestion or minimise unavoidable increases in congestion. 9.3 Prevent soil erosion and compaction. 9.4 Protect and provide access to key parts of site to enable people to appreciate the chalk geology. 9.5 To adequately clean up/remediate the site once the extent of land contamination is known and to ensure buildings are demolished and cleared in accordance with relevant guidance. To re-use materials where possible	Will the option improve water quality and maintain an adequate supply of water? Will the option reduce pollution of groundwater, watercourses and rivers from run-off / point-sources? Will the option provide adequate utilities infrastructure to service development to avoid unacceptable impacts on the environment? Will the option safeguard water resources to maintain an adequate level of river and ground water? Will current and future generations understand the history of the site in relation to chalk extraction, cement production and regeneration?

Stage A5 – Consulting on the scope

1.163 It is a statutory requirement that the Scoping Report be sent to the three Environmental Consultation Bodies[46]. In addition, relevant local stakeholders [47] will be invited to make representations. Consultation at this stage is fundamental to ensure that the Scope of the SA is fully identified and the subsequent report comprehensive enough.

Compliance with the SEA Directive
"The bodies identified by the UK Government as being likely to be concerned by the environmental effects of implementing the plan have been consulted in deciding" (Annex 1 (d)) – Article 5 (4)

Next Steps

1.164 Following the consultation, the baseline and objectives will be updated as appropriate. The objectives will then be used to test a range of reasonable alternatives. This testing will identify the sustainability merits or otherwise of a scheme now and in the future. It will also help to identify potential mitigation. The results of the testing will feed back into the AAP.

1.165 The final component of the Framework is a series of indicators that will be used to provide a basis for future monitoring. These will allow an assessment of whether or not polices are effective in addressing the sustainability objectives and will be developed later.

[46] Environment Agency, Natural England and Historic England
[47] Horsham District Council, Adur & Worthing Councils, West Sussex County Council, Upper Beeding Parish Council.

Appendix 1: Full text of South Downs Local Plan policy SD56

Strategic Site Policy SD56: Shoreham Cement Works

1. Shoreham Cement Works, as identified on the Policies Map, is an area of significant opportunity for an exemplar sustainable mixed use development, which delivers a substantially enhanced landscape and uses that are compatible with the purposes of the National Park. To help achieve this the National Park Authority will prepare an AAP with the overall aims of:
a) Enhancing the visual impact of the site from both the nearby and distant public viewpoints;
b) Conserving, enhancing and providing opportunities for understanding the biodiversity, geodiversity, historic significance and cultural heritage of the site;
c) Ensuring the delivery of ecosystems services; and
d) Ensuring that the design of any development is of the highest quality and appropriate to its setting within a national park.

2. The National Park Authority would support development proposals for the following land uses where it is demonstrated they deliver the environmentally led restoration of the site:
a) Sustainable tourism/visitor based recreation activities and leisure development directly related to the understanding and enjoyment of the National Park;
b) B2 and B8 business uses to support the local economy, with a focus on environmentally sustainable activities, supporting local communities and providing opportunities for entrepreneurship; and
c) Further types of development, including new homes, including affordable homes and/or Class B1 office development, where necessary to enable redevelopment of the allocation site as whole. Such types of development should be subordinate to the overall mix of uses proposed. provided that the proposals can clearly demonstrate how they would deliver the key considerations set out in Part 1 of this policy; and
d) Improve accessibility and help to create sustainable patterns of travel;
e) Provide renewable energy generation to serve any development on the site;
f) Provide realistic proposals for the relocation of existing employment and storage uses that are not appropriate to a National Park setting; and
g) Ensure that any adverse impacts (either alone or in combination) are avoided, or, if unavoidable, minimised through mitigation with any residual impacts being compensated for.

3. The National Park Authority will resist more development than is necessary to secure and deliver the environmentally-led restoration of the site.

4. The National Park Authority wants to see a comprehensive redevelopment of the whole site consistent with the AAP. However, if any planning applications come forward separately and prior to the adoption of the AAP, then they would have to clearly demonstrate how the proposals would accord with the key considerations set out above.

Appendix 2: Landscape Character areas.

G3: Adur Valley Sides (brown wash) Characterised by: • Valley sides carved from chalk, relatively steep along their length. • Pasture, chalk grassland and woodland occupy steeper slopes, for example at Mill Hill and Anchor Bottom. • Contains an extensive road network, including the A283 and Coombes Road. • Minor lanes and unsurfaced tracks descend the valley sides – many of these are public rights of way. • A string of shrunken medieval villages lie along the lower slopes of the western valley side e.g. Botolphs, Coombes, Applesham Farm. These are surrounded by early enclosures. • Woodlands along the lower slopes are particularly distinctive and form a strong wooded edge to the floodplain. • Away, from the roads, the valley sides form a tranquil, rural setting to the floodplain. •. The chimney of the Shoreham Cement Works is a key landmark feature.	**F3: Adur Floodplain** (light blue wash) Characterised by: Flat valley floor of the deep U-shaped Adur Valley between Bramber and Old Shoreham. • A landscape of apparent large and expansive scale as a result of the flat landform, consistent pasture land cover, lack of trees and other vertical elements and far-reaching views across the open floodplain. Views are contained by the valley sides. • Contains the meandering course of the tidal River Adur which flows between artificial flood banks. Public rights of way provide access along the tops of the floodbanks. • Saltern mounds provide evidence of the medieval salt-extraction industry. • Periodically waterlogged silty soils support permanent pasture, within fields reclaimed from the floodplain, giving the floodplain a lush, pastoral character and supporting an important ecological flora. • Groups of willows and alders occur sporadically alongside the river and drainage channels providing important visual and ecological features. • A small area of the Adur Estuary (designated as a SSSI) extends into the character area, supporting ecologically important saltmarsh and intertidal mudflats, of high value to wading birds. • Typically absent of settlement, with the exception of the ancient settlement edge of Beeding (a medieval port) on the northern character area boundary. • Tranquillity affected by proximity of built development on the valley sides, the A283 and A27. • Views to the landmarks of Bramber Castle and Lancing College on the adjacent valley side.
A2: Adur to Ouse Open Downs - where relevant to the site and immediate environs (purple wash) Characterised by: Vast open rolling upland chalk landscape of blunt, whale-backed Downs. • Furrowed by extensive branching dry valley systems which produce deep, narrow, rounded coombs. • Large scale irregular fields (of 20th century date) of arable and pasture bounded by visually permeable post and wire fencing or sparse thorn hedgerows creating a very open landscape supporting a range of farmland birds. Hedgerows and tracks survive from the earlier manorial downland landscape. • Significant areas of unimproved chalk grassland, which supports nationally scarce plant species. • Occasional scrub and woodland on steeper slopes adds to the overall diversity of chalk grassland habitats, contributes to biodiversity and provides visual texture in the landscape.	

• Large open skies ensure that weather conditions are a dominant influence creating a dynamic landscape, with considerable seasonal variation. • A strong sense of remoteness and tranquillity in close proximity to the south coast urban area. A large number of prehistoric and later earthworks providing a strong sense of historical continuity. • Good public access with a network of public rights of way and open access land. Proximity to urban areas means there are a large number of potential users. • The communication masts at Truleigh Hill are prominent features of the skyline.	

Appendix 3: Shoreham Cement Works – Sussex Geodiversity Records entry

Sussex RIGS number: TQ20/101

Grid Reference: TQ202088

Summary Description:

22/09/2010
(from West Sussex RIGS Survey 2010)

Interest Feature(s)

Bedrock:
Large disused chalk quarry exposing sequence from lower Lewes Nodular Chalk to upper Seaford Chalk formations. The exposed sections of Lewes Chalk and Seaford Chalk formations are both about 50 m thick. The quarry is 1 km long and varies in width from 250-450m.

Stratigraphy:
Lower Lewes Nodular Chalk Formation (Ringmer Beds) to upper Seaford Chalk Formation (basal Haven Brow Beds), White Chalk Subgroup, late Cretaceous in age (including the Turonian-Coniacian and Coniacian-Santonian boundaries. Key marker beds exposed are the Navigation Hardgrounds and Marls, Lewes Marl and Flint Bands, Cuckmere and Seven Sisters Flint Bands, Belle Tout and Shoreham Marls.

Sedimentology:
Lewes Chalk - rhythmic sequence of soft chalks, nodular chalks and hardground chalks with thin marls and regular seams of flints; Seaford Chalk - homogeneous white chalk with regularly spaced seams of large flints. The quarry shows an excellent range of the possible sedimentological variations in the Chalk. Deposited in relatively deep marine environments.

Sedimentary structures:
Lewes Chalk - 'Augen' (eye-shaped structures) seen at base of Bridgewick Marls. Extensive burrows and trace fossils are present. Interlaced (griotte) marl seams are visible in the lowest sections. Tubular flints extend down to about 3 m below the Lewes Marl and dumbbell-shaped flints occur above it. Nodular horizons in the upper Lewes Chalk are often stained red with iron.

Palaeontology:
A wide variety of fossils have been found including zone fossils and unusual forms of some species which are important for correlation with other sites. This site has huge geodiversity of echinoids, bivalves, aragonitic fossils, brachiopods and many others.

Structural geology:
Rock fracture patterns are similar to Seaford Head. A conspicuous fault is visible on the eastern face, and inclined faults or shear planes are visible on the north and south faces. Downslope movement has developed overfold structures and gulls towards the Adur valley.

Geomorphology:
Faults and shear planes have been exploited by solution processes resulting in cavities and infilling by younger sediments.

APPENDIX D

THEMES, ISSUES AND OPTIONS

Themes Issues and Options

Themes	Issues	Options	How it affects the 5 areas
Viability	The primary issue is the challenge of making a proposal viable given the extraordinary costs in preparing the site for development. The evidence study initial testing found all development scenarios, with a policy compliant 50% affordable housing provision, to be in substantial deficit (making a loss). The scenarios[48] were still in deficit with 100% private market housing with no affordable housing provision. Sensitivity analysis undertaken by BPS, shows a 'best case' scenario where Development Scenario 2 makes a surplus (is viable) and Development Scenario 1 is close to breaking even. The viability evidence illustrates that delivering affordable housing as part of redevelopment proposals for Shoreham Cement Works will be challenging, and will likely require Government subsidy. The density of housing development is an issue for viability. Development Scenarios 1 and 2 include high density residential development at levels normally	There are a number of options arising from the viability evidence: • A 100% private market scheme to maximise viability • A mixed tenure development with a small proportion of onsite affordable homes • Development required to provide a financial contribution in-lieu of providing onsite affordable housing • Employment uses promoted to maximise viability (B2 general industrial and/or B8 storage and distribution)	The Riverside is the most profitable area to build homes, with a premium for the riverside location and views to the surrounding countryside. The Riverside and Cement Works immediately adjacent to the A283 road, are somewhat impacted by noise and air pollution from passing traffic. This is exacerbated at in parts of the Riverside, as the road is elevated in relation to this part of the site. Residential sales value in the Cement Works will be affected by surrounding commercial uses and the quarry location. Low daylight levels in the southern part of the Cement Works will also impact sales values.

[48] See **Appendix B** for scenario

Themes	Issues	Options	How it affects the 5 areas
	found in areas of excellent public transport provision. There are also viability considerations for the potential employment uses. The only employment uses which lead to viability surpluses are B2 General Industrial and B8 Storage and Distribution, due to their relatively low construction costs. All other employment uses (offices, research & development, light industry) reduce the viability of the scenarios.		
Contaminated Land and Demolition	The cost of remediation, the demolition of existing buildings and the protection of the Clifflands will impact on viability, the extent of developable land and the type of development appropriate. The full extent of made ground, contamination hotspots and ground gases generation is unknown. The Moonscape and presents low risk of contamination. The full extent of remediation and clean-up requirements will differ depending on sensitivity of the end user and site layout. A large risk for the demolition is the extent/thickness of slabs and	There are a number of options arising from the contamination and demolition evidence: • It is likely that the Riverside area is most suitable for housing development, with or without gardens, or commercial development. • The Cement Works area is most likely suitable for a mix of housing, with or without gardens, and commercial development. • Light industrial uses are recommended towards the Bowl end of the Cement Works area as rock fall issues may impact on where commercial development with higher footfall/traffic movements is located.	The Riverside contains 3.5m of made ground and has the potential for combination hotpots. There are limited demolition requirements in this area. The Cement Works contains the former cement works buildings and demolition costs are important to the viability of the overall development. There is limited made ground in this location. There is potential for some hotspots of contamination and asbestos containing materials. Further investigation into the potential to re-use slab foundations is required. The slope stability levels will need to be considered. The Bowl contains inert landfill areas with a substantial amount of made ground comprising CKD and other by products of manufacturing process. It also contains the site of the former lagoon. New structures may require foundation solutions such as piled foundations and any route infrastructure may need to avoid areas of contaminated infill. Excavation/sorting and screening

Themes	Issues	Options	How it affects the 5 areas
	foundations. These are usually very thick in cement works, but breaking-out these foundations can be a large commercial risk.	• The Bowl area is most likely to be suitable for commercial development. • The Moonscape is most likely to be suitable for public open space. • The Clifflands may not be suitable for some development due to cliff stability	plus off-site disposal of all material in the top 300mm (commercial/residential without gardens) and 600mm for residential with gardens is a likely requirement for this area. The Moonscape is vacant and unused. There are no sources of contamination. Slope stability and rock fall are important issues. The potential levels of mitigation and engineering required for highly sensitive land uses (residential) in the Clifflands are likely to be greater than those required for less sensitive land uses such as commercial or open space. The Clifflands are considered unsuitable for residential uses.
Water, Drainage and Flooding	The provision of a WTW or pumping station will impact on viability and the extent of developable land and the type of development appropriate in close proximity to these facilities. When future Flood Zone 3a is considered, a small extent of Riverside is predicted to be within the zone, but this is confined to the southern area of the site.	There are a number of options arising from the water, drainage and flooding evidence: • It is likely that the Riverside is suitable for housing or commercial/retail development. It may be the preferred location for the WTW or pumping station. • Dwellings would be appropriate in all parts of the site with regard to drainage. • Non-residential institutions such as educational buildings/visitor centres would be appropriate for use in all areas with respect to drainage.	Highly vulnerable development, with basements or temporary dwellings, is considered appropriate within all parts of the site including the Riverside with regards to flooding. Shops, retail and business would be appropriate in the Riverside with regards to drainage. Space is likely to be required in order to locate attenuation, soakaways and other sustainable drainage system (SuDS) elements as the Riverside is at the lowest part of the site, therefore this should be allowed for from the earliest stages of concept design. Dwellings would be appropriate in all parts of the site with regard to drainage. Non-residential institutions such as educational buildings/visitor centres would be appropriate for use in all areas with respect to drainage. The Bowl is an area of landfill with made ground, therefore it is the least likely area to be able to utilise infiltration drainage. For

Themes	Issues	Options	How it affects the 5 areas
			the Bowl and the Moonscape areas, the proximity of SuDS features to the existing quarry sides and terraces will also need to be considered.
Cultural Heritage	It needs to be considered if any of the existing buildings should be retained as part of the redevelopment. The retention of all of the historic buildings, much of which are in an extreme state of dilapidation, would increase the development costs and thus impact on viability. However, should some of the buildings most notably the chimney be retained? It is a locally iconic landmark that can be viewed from a considerable distance of the site. It is the machinery and the structures such as the kilns rather than the buildings that house them that are historically significant. The buildings can only be restored and reused by clearing them of their contents. It could be argued that it is more important to salvage some of the machinery and structures and put them on public view within the site than to restore the buildings that house them. It needs to be considered to what extent the design should reflect and	There are a number of options arising from the cultural heritage evidence: • The demolition of all the buildings would maximise the amount of land available for redevelopment whilst the retention of some of the buildings and/or artefacts they hold would help to conserve and enhance the site's cultural heritage. • The design of the redevelopment should reflect and commemorate its cultural heritage. The question arises to what extent the design should do this.	The Riverside was the site of the original cement works, but very little remains of historic interest. It is the utilitarian Cement Works themselves where the most of the historic interest lies and it is here where the new four arm roundabout is proposed. This would obviously require the demolition of most of the buildings. The Chimney, which forms a locally iconic landmark is located here just outside the footprint of the proposed roundabout. The rest of the site forms a dramatic backdrop to the site, but is of no particular historic interest.

Themes	Issues	Options	How it affects the 5 areas
	commemorate the site's cultural heritage. .		
Nature Recovery	Nature recovery is a priority for the SDNPA. Conserving and enhancing wildlife is enshrined in the first purpose of the National Park. The evidence has identified high value habitats and important species are present in many locations across the site. It is likely to be challenging to make provision for development to support a viable scheme whilst seeking to avoid and mitigate any harm, and enhancing biodiversity contributing to nature recovery. A related challenge is achieving BNG on a site with highly distinctiveness habitat. The majority of this is the cliff faces and scrub atop the cliffs. Utilising development structures to support nature via green roofs and green walls may make a useful contribution to BNG for the site, but there is potential tension with provision of solar panels for green energy generation. The unique OMH present, and opportunities for enhancement, have been facilitated by the particular use	There are a number of options arising from the nature recovery evidence: • It needs to be considered how much of a priority nature recovery should be as part of the redevelopment of the site. The extent and intensity of development could have an adverse impact on sensitive habitats and protected species. • The five areas of the site offer different opportunities for nature recovery, for example, the Riverside could be conserved and enhanced as a riparian corridor linking with other habitats down and up stream.	The evidence shows that the Riverside is the area with the least high value habitat and therefore has most potential for accommodating development. It is noted that the Riverside may offer opportunities to enhance the riparian corridor of the Adur. Some habitat of value is noted along the road corridor, which is a consideration for access of the site. In the Cement Works area, there are mix of habitats including areas of chalk grassland and woodland. The Clifflands to the south of this area has moderate value for bat roosting and could be affected by change in conditions and use of land next to the cliff. The Cement Works buildings have value for bats and birds. The Bowl contains a significant area of OMH in the north/north west of this area. Important opportunities for enhancement and habitat creation have been identified in the north/east of this area. The Clifflands on the north / northeast inner section of the Bowl has been identified as particularly significant for bat roost suitability habitat. The Moonscape area has high potential for habitat enhancement and creation. The Clifflands at the eastern side of this area are noted for peregrines. There is an area of grassland habitat, currently grazed, adjacent to Mill Hill shown to be of limited value for biodiversity at present.

Themes	Issues	Options	How it affects the 5 areas
	of the site. The activity has, in a cyclical manner, exposed the chalk and allowed the early succession species to establish when the disturbance has ceased. This cyclical or periodic disturbance creates the unique habitat structure and value for nature. Retaining, enhancing and/or creating more of this type of habitat would support celebration of the scar, the history of the site. However, the appropriate use of the site and management would be an important consideration in how such a celebration could be achieved. Such consideration include implications of access, recreational disturbance and lighting.		All of the Clifflands have cliff faces with some suitability for bats.
Climate Change	Cement is the key ingredient in concrete and has shaped much of our modern built environment. However, it has a massive carbon footprint. Cement production has ceased at Shoreham Cement Works The buildings on site, being made predominantly of concrete contain significant amounts of embodied energy and should ideally be re-used. This is unlikely to be practical in its entirety for a number of reasons, but as a minimum, the concrete structures and foundations should be	There are two main options arising from the climate change evidence: • Existing Local Plan policy requires major development to be zero carbon and zero waste. • This could be extended to require a zero whole life assessment covering construction, operational and ongoing extensions/repairs. Some offsetting will likely to be needed and any energy demands not met by onsite renewables generation	The impacts of both solar glare and radiation experienced within the Cement Works and the Bowl could be considerable during hot and sunny weather given the steepness of the cliff faces, the exposed chalk and limited shading. The site is largely protected by the flood defences on the River Adur, although Flood Zone 3a ('High Probability' of fluvial or tidal flooding), is predicted to encroach on the southern part of the Riverside, at the existing access road into the area. Overall the site is at low risk from surface water flooding. However, there is a surface water flow path

Themes	Issues	Options	How it affects the 5 areas
	recycled for other uses, preferably on site. Any redevelopment will need to be matched by substantial investment in sustainable transport, for example, increasing the frequency and accessibility of the existing bus service. The site could offer the potential for a range of onsite renewable energy generation from solar energy in the unshaded areas of the site to potential use of the River Adur for hydro- power or water source heat pumps. There may also be scope to benefit from emerging technology and innovations such as the green hydrogen hub being developed at Shoreham Port Buildings will need to be designed to avoid overheating and public open space will need shade to be useable in the summer. However, tree planting is likely to only be suitable in the Riverside area. Sustainable Urban Drainage will need to be carefully designed to ensure contaminants do not enter groundwater and pollution pathways are not created.	could be required to be met by investment in new renewable energy off-site.	in the Cement Works at high risk of flooding, located close to the tunnel passing under the A283.
Getting Around	There are a number of transport issues relating to Shoreham Cement Works relating to traffic generation,	There are a number of options arising from the transport evidence:	The issues for the Riverside are primarily access related. A roundabout would involve major infrastructure changes and regrading of terrain. The

Themes	Issues	Options	How it affects the 5 areas
	different access solutions and sustainable means of travel. In terms of motorised transport the redevelopment would cause a general increase in traffic on the surrounding network. Due to its relatively remote location, the site is predisposed towards motor vehicles. Scenario 1 would generate the most traffic (1102 peak time two-way movements p/day) whereas Scenario 4 generates the least (735 peak time two-way movements p/day). The leisure based Scenario 3 changes the composition of traffic, drawing more coaches and tourist traffic to the site (3 coach and 190 car based peak time two-way movements p/day). In terms of the access solutions there are landscape effects generated by the different options. The dual use of a new roundabout and the underpass could facilitate segregating motorised and non-motorised traffic. There may also be the possibility of shared surfaces rather than segregated traffic. Some scenarios and access options could result in mixed heavy traffic in residential areas.	• A four arm roundabout located near the existing access to the Cement Works area is suggested as the best option by the transport consultants. The existing underpasses would be retained for walking/cycling and emergency vehicle access. • There is potential for a left-in-left-out access using existing access points instead of a roundabout. This would require replacing the existing underpass with a larger one that could accommodate two way traffic and walking/cycling access. Full investigation of this option was beyond the scope of the Transport Study. Two further options were considered but dismissed by the consultants due to unacceptable impacts on traffic flows. These were the retention of the two all movements junctions on both sides of the road plus the existing underpass. The other option was the provision of two three-armed roundabouts plus the existing underpass.	provision of a new and improved underpass would create higher traffic flows through residential areas. There are few transport effects on the Bowl and the Moonscape outside of internal routing. In regards to the Clifflands, roads and access need to be located away from cliffs due to safety concerns. In all areas walking/cycling access routes would need to be connected up to and through the site, primarily accessing the residential areas and any tourist focused attractions.

Themes	Issues	Options	How it affects the 5 areas
	The site is close to both the South Downs Way and the Downs Link, which offers great opportunities to access the site by foot or cycle.		
A place to visit	Tourism in this part of the National Park relates closely to nature and the Local Nature Reserves nearby to the site. As there is a substantial evidence base on tourism in the National Park, it was not considered necessary to commission a separate study to support the AAP. To the south, this part of the National Park is connected to Shoreham by Sea by a number of paths and right of way. The People and Nature Network (PANN) includes Shoreham Cement Works in the opportunity area of the Adur Blue-Green corridor where there are opportunities for cultural heritage and green infrastructure enhancements. To the north looking towards Upper Beeding and Bramber there are the South Downs Way and Downs Link. There is also the Beeding Hill Car Park to the northeast of the site. During and since the pandemic more people than ever have been exploring the National Park. Locally, there are problems with car parking at Beeding Hill Car Park. Visitors	Firstly, a sensitive, naturalistic approach to attract visitors would conserve and enhance what is already on site in terms of fauna and flora, natural habitats and wildlife. This option would promote education and the special qualities of the National Park with a big push for biodiversity net gain and ecosystem services. This may include walking and rambling, bird watching, nature trails and star gazing in the dark night sky reserve. A café or small restaurant that would not be intrusive to the landscape mosaic could be suitable. This would be situated in the bowl, moonscape and incorporates elements of the cliffs. • A second option is to celebrate the chalk. Similar to the first option, but with a focus on geology and particularly the chalk. There could be art and sculpture trails, a museum, art gallery. This would be situated in the Bowl and Moonscape, with minimal	The Riverside is very accessible from the roadside and has close connections with the Downs Link, public transport (Number 2 bus) and the Adur River. Water sports and links to blue infrastructure could be possible here. With café or restaurants for those who are using the Downs Link and South Downs Way for recreation. The Cement Works is a local landmark in the landscape of the South Downs with its distinctive chimney, which can be seen from afar. Here the industrial heritage of this part of the site could form part of a visitor attraction. A visitor centre, café or restaurant could also work well here. The Bowl and the Moonscape are very sensitive both in terms of landscape and biodiversity. They are currently relatively tranquil as they are located some distance from the main road. They could be the best opportunity for recreation and tourism, and still be fairly hidden inside the landscape. There are opportunities in the Bowl, Moonscape and Cliffs for the quiet enjoyment of the geodiversity and biodiversity of the site. The Clifflands form a stunning backdrop to Shoreham Cement Works. There are questions around implementing any kind of tourism or change to this part of the site, due to the instability of the chalk cliffs. They provide sensitive habitats for bats and peregrine falcons.

Themes	Issues	Options	How it affects the 5 areas
	regularly park along the South Downs Way and can block entrances to farmers' fields. The site itself is also not well served by public transport, except for a bus service. We already are aware that 70-80% of all of those who visit the National Park do so via private transportation. The PANN notes that the A27 to the south creates a barrier for communities to access the National Park and that there is a deficit in existing accessible natural greenspace in the coastal towns. It is important that development of the site avoids creating a 'honey pot' site, which would bring too many visitors to the site and degrade visitors overall enjoyment and possibility of returning to the site.	physical interaction with the Clifflands. Rock climbing may be possible as part of this option providing there was robust evidence on the stability of the chalk cliffs. There are several indoor rock climbing facilities in the sub-region but none that offer the outdoor experience. • The third option is larger scale tourism, focused on recreation that fits within the landscape. Possible attractions are zip wires, toboggan runs and mountain biking. • Finally, the natural amphitheatre of the Bowl could be used for live music and festivals. The whole site could be a suitable location for filming.	
A place to live	There is significant housing pressure in the National Park, where the supply of new homes is constrained by the need to protect the nationally important landscape. There is also unmet housing need arising from the nearby urban areas along the south coast and to a lesser extent from nearby villages in the south of Horsham district.	There are a number of options arising from the housing evidence: • As a place to live, the redevelopment could include more or less of a range of different housing types, for example, family-sized homes with gardens or apartments with communal gardens / rooftop gardens. The choice of housing types will be constrained by a	As noted in the viability section, the Riverside will attract a premium making this the most attractive area for housing. However, land contamination needs to be factored in when planning for a place to live. There is the expectation that there will be employment development in the Cement Works area. The inter-relationship with any new homes also located in this area will need to be carefully considered, taking into account for example traffic and noise impacts.

Themes	Issues	Options	How it affects the 5 areas
	There is an underlying tension in creating a sustainable place to live at Shoreham Cement Works, given it is 2km from the nearest shop, school or health care facility. On the other hand, the site is not completely remote, as it is just 20 minutes by car from Shoreham-by-Sea railway station and less than an hour to Brighton. At the same time there will be a limit on the number of homes that can be built here, given the landscape and environmental constraints as well as the employment / visitor aspirations for the site. These factors limit the scale of residential development that can take place, which in turn influence the level of community facilities that development could support. Different quantums of housing were tested as part of the development scenarios. These ranged from just 84 in the dismissed appeal scheme forming scenario 4 to 400 and 240 new homes in the mixed employment and housing schemes in scenarios 2 and 3 respectively. The leisure led scheme forming scenario3 included 200 new homes.	number of issues particularly contamination. • Focus housing development in the Riverside only or also include housing in the redevelopment of the Cement Works as well. • There are emerging types of housing development which may grow in predominance and could be relevant to redevelopment at SCW. For example the growth in Build-to-Rent, may see more people looking for longer term tenancies in preference to buying a home.	The Bowl is the area of most significant contamination, with high levels of toxic cement kiln dust, making this the least suitable area for new homes. Whilst the Moonscape has low levels of contamination, it has the highest landscape sensitivity and is remote from transport / utilities infrastructure making residential development here unlikely. The Clifflands would be unsuitable for housing because of the risk rock falls; this could be mitigate by substantial netting but this would most likely be unacceptable in landscape terms.

Themes	Issues	Options	How it affects the 5 areas
A place to work	The analysis of the evidence, having regard to the above suggests a shift away from traditional storage or distribution in favour of land use that compliments and attracts green jobs and a preference for sectors that contribute to this agenda. High value jobs are important for the National Park's communities and will reduce the very high levels of out-commuting and travel to work movements in the National Park. Knowledge intensive businesses are re-locating along the coast from Brighton through 'longshore drift'. With a suitable provision of employment space and infrastructure support, crucially, ultrafast broadband, it is expected that these businesses are attracted to key locations in the National Park. Manufacturing is a significant sector in the SDNP economy; however, not enough of this sector is technologically sensitive i.e. advanced. Supporting the development of more advanced manufacturing in the region will have an economic and environmental benefit.	There are a number of options arising from the employment evidence: • Prioritise employment space that is linked to the National Park's priority sectors of farming, forestry and tourism • Prioritise employment space that is linked to local/ sub regional climate change and nature recovery plans and contributes positively to a greener economy. • Create high value, high skilled jobs. • Provide employment floorspace in response to the wider economic need for B8 storage and distribution	Consideration should be afforded to the suitable and comparable re-location of existing businesses currently utilising the Riverside. It is generally accepted that this area is suitable for housing and therefore, is unlikely to be identified for substantial employment development. The Cement Works and the Bowl are the most suitable locations for substantial commercial development. Ideally, these areas would be identified solely for this use although there is potential for housing to be located in these areas as part of mixed use scheme. If this is the case, careful consideration should be provided to avoid bad neighbour disputes on matters such as traffic and noise. It was noted in the contaminated land section that the Bowl is heavily constrained by the substantial deposits of concrete kiln dust and is the site of a former lagoon. Developing the Bowl would require foundation solutions such as piled foundations and any route infrastructure may need to avoid areas of contaminated infill. This makes the Bowl more suitable for lightweight commercial buildings that could be accommodated on the contaminated made ground and would generate value for the site. It is generally accepted that the Moonscape and Clifflands are unsuitable for employment development due to landscape, biodiversity and safety constraints.

Themes	Issues	Options	How it affects the 5 areas
	The evidence shows a need for employment space and a reasoned argument for a focus on Advanced Manufacturing, Innovation and Green Technology, wherever possible.		
Landscape	Shoreham Cement Works is a highly sensitive site in both landscape and visual terms; these are mostly physical and natural, visual, perceptual and cultural sensitivities. The site itself is highly visible from the west and together its chimney and cliffs form a well-known local landmark. The site's relative isolation is a significant issue we cannot directly affect. Any new development is likely to generate fairly widespread direct and indirect effect on the landscape including views, ecology, perceptual qualities for, for example increased traffic. The issues and tensions are greatest in the central areas of the site where there is the most over-lap between constraints and opportunities. Much of these tensions affect viability to one degree or another. In the central areas heritage, land contamination, ecology and perhaps	All the options set out in this document have different impacts on the landscape. The first purpose of the Authority is to conserve and enhance its scenic beauty, wildlife and cultural heritage.	. Much of the Riverside's industrial heritage value has been lost including the original cement works and more recently the over-road conveyor belt system. The Riverside is the most visually exposed part of the site. This area is considered most suitable for a residential use and this is the most viable land use. The Cement Works is influenced by its surrounding cliffs to the north, south and wrapping around the site's eastern edge, which reduce the area available for development. The Cement Works area will also be affected by the potential need for significant infrastructure to provide vehicular access to both sides of the site. The Moonscape is highly sensitive visually and ecologically. It has strong perceptual qualities, affording long and impressive views across the valley; it feels deeply secluded and with high levels of tranquillity. Whilst the Moonscape supports significant ecological value, it is also the least contaminated part of the site, making it from this point of view the cheapest to develop. However, this cost saving is likely to come with hidden costs to landscape and views, and in particular ecology.

Themes	Issues	Options	How it affects the 5 areas
	less obvious constraints such as micro-climate all combine to reduce opportunities to deliver development. Further east the site is characterised more strongly by its perceptual qualities and ecological significance suggestive of little or no development. Further west the areas offer more opportunity to receive development, as in these areas negative effects can largely be avoided and mitigated for and then enhanced through design. The lack of topsoil across much of the site and the potentially harsh climate expected within it, particularly during prolonged hot and dry spells, will significantly constrain any opportunities for 'designed' soft landscaping and certainly the ability to support a verdant landscape sustainably is unlikely.		The Clifflands play an important huge part in characterising the site. It is impossible to under estimate the site's history of extraction when stood within it or nearby. Netting the cliffs will negatively affect the views and the unique wildlife that they support. The rear cliff face is the most visible, particularly in the longest distance views from the west. Not only do they support significant wildlife, the cliffs also hold regional/national geological value.

APPENDIX E
APPRAISAL OF ISSUES

Should any of the buildings, such as the chimney, be retained on site?

Options
1a All of the existing buildings should be retained on site.
1b The existing buildings, including the chimney should be removed.
1c The chimney should be retained on site.

Summary
Options 1b and 1c are equal in their preference rating. When assessed against two of the sustainability topics (travel & transport and water, air, soil & geology) option 1b is the most sustainable – that is to remove all of the buildings including the chimney. When assessed against topics landscape and archaeological & cultural heritage – option 1c (to retain the chimney) is supported. On balance, the option to retain the chimney could be the most sustainable option. It retains a structure that recognises the history of the site and at the same time is acknowledged within the landscape study as being of local importance and highly visible. It therefore, carries a cultural significance for the local area. However, retaining the chimney may have an impact on access and development space, creating a blockage within the site that has to be worked around. It is considered that layout, design, creating access points can be undertaken carefully whilst retaining the chimney. Option 1a is the most supported option for nature recovery and biodiversity.

Sustainability Topic	Discussion	Rank of preference		
		1a	1b	1c
Landscape	The existing chimney is identified as a key landmark in the landscape background evidence study. This states that its retention provides the opportunity to maintain the site's local prominence in views and maintain a key link to its industrial heritage. The site including the chimney is highly sensitive and visible. There are several other prominent buildings on the site but their impact on the overall landscape and views of the site is considered negatively significant. The SA objective is to conserve, enhance and restore the landscape of the site. At this stage in the AAP process, all options may be suitable depending on the design and layout of the buildings and whether the visibility of the existing buildings, including the chimney remain an important part of this complex landscape and the desire to retain some or all of the buildings even with modifications. To this end, all options could be considered preferable but at this stage it is concluded that retaining the chimney forms part of	3	2	1

	the conservation and enhancement of the landscape of the site. Retention of the rest of the buildings is likely to require a large amount of modification and it is questionable if these make a positive impact on the landscape.			
Biodiversity	Retaining all of the buildings including the chimney may be preferable as several provide habitats for a wide variety of species including those protected. However a full survey of the structures has not taken place. At this stage, there is no clear information that confirms removing the buildings will conserve or enhance priority species or contribute to nature recovery.	1	3	2
Archaeological and cultural heritage	Objective 4 is to conserve key features of the industrial heritage of the site and this includes the chimney. Whilst the chimney as a stand-alone structure may not represent the most important part of the industrial heritage of the site, it is a locally iconic landmark of great cultural important to the local area. The rest of the buildings, whilst relevant in terms of understanding the industrial heritage of the site are in an extreme state of dilapidation and would require modification. In that sense they will change from being in the exact form as they were built. In addition, it is the machinery and internal structures within the buildings that are historically significant. It is considered that option 1c is the preferred approach.	2	3	1
Climate Change including flooding	Objective 10 states that development should make the best possible use of existing materials and resources already on the site. Whether there is a possibility of re-using the materials from the demolished buildings is unknown at this stage. It is also unknown if the buildings can be re-used due to their dilapidated state. Therefore it is considered that these options have minimal impact on the sustainability objectives	-	-	-
Health & Wellbeing	There is no link to the objectives set out under this topic and the retention or not of the buildings/chimney.	-	-	-
Economy & Employment	There is no direct link between the buildings/chimney and the objectives relating to the economy and employment but there is a connection between retaining the buildings on site and creating space for new commercial development. However the details of layout and designs are unknown.	-	-	-
Community & Housing	There is no direct link between the retention/removal of the buildings and the objectives relating to housing development and community support. There is a connection between retaining the buildings on site and creating space for new residential development However the details of layout and designs are unknown.	-	-	-
Travel & Transport	It is considered that retaining the buildings may restrict access and the provision of transport links into the site including safety for pedestrians and cyclists. Whilst the	3	1	2

	exact layout has not been detailed at this stage, retention of existing structures will impact on how the site can be accessed.			
Water, air, soil and geology	Objective 27 states - to adequately clean up/remediate the site once the extent of land contamination is known and to ensure buildings are demolished and cleared in accordance with relevant guidance. To re-use materials where possible. The retention of the buildings would have an impact on achieving this objective.	3	1	2

To what extent should the design of the redevelopment reflect the site's industrial past?

Options
1a. The designs of the development should reflect the site's industrial history – to what extent?
1b. Some of the existing industrial buildings should be retained to conserve the cultural and historical heritage.

Summary
The two options are not mutually exclusive It is possible to retain some buildings on site and to design new ones to reflect the industrial past and cultural heritage of the site. However in all cases and at this stage in the process, option 1a was seen as the preferred option as retaining some or many of the existing buildings on site will restrict many elements of the redevelopment and serve no real purpose in conserving the historical heritage of the site.

Sustainability Topic	Discussion	Rank of preference	
		1a	1b
Landscape	In terms of design of the development, reflecting the industrial past of the site could have a positive impact on the landscape but the detail of this will determine how much of an impact there will be. In the simplest of terms, it is considered that option 1a is acceptable. Retaining the industrial buildings (apart from the chimney) may be acceptable in landscape terms but generally it is assessed that many of these will have a negative impact on the landscape and will require substantial modification and rebuilding.	1	2
Biodiversity	A number of existing buildings provide habitat opportunities for a range of species including protected species. Retaining some of the buildings will be of benefit to biodiversity but in order for them to be re-used, substantial amount of work will be needed to modernise them. In addition, retaining them will mean less land available for opportunities for nature recovery and biodiversity net gain. The two options are not mutually exclusive. Buildings can be retained and new ones can be designed to reflect the industrial heritage. However the evidence states that existing buildings are important for biodiversity and overall should be retained.	1	2
Archaeological and cultural heritage	Both options relate to the industrial heritage of the site. Objective 4 is to conserve key features of the industrial heritage of the site, (this may include the chimney and others as	2	1

	identified in studies and assessments). It is not suggested that all buildings are to be retained. New buildings can also be designed to reflect the site's history. However, the background evidence states that the buildings on site are not of great historical value and will require substantial modification. In addition, the contents within the buildings have the greatest value.		
Climate Change including flooding	Retaining the buildings on site will require a significant amount of retrofitting to ensure they maximise the use of low carbon and renewable energy within the site (objective 7) and minimise water consumption (objective 9). These could be achieved with new buildings. Objective 10 seeks to make best possible use of existing materials and resources already on the site. This could involve reusing the buildings or it could mean re-using demolition material. It is considered that designing new buildings (with the possibility of re-using materials) is the preferred option.	1	2
Health & Wellbeing	Retaining buildings on site could reduce the amount of available space for new development thus creating a local community and neighbourhood where residents and visitors as well as employees are within a local distance to essential needs. Therefore option 1c is preferable in that it relates to designing new buildings that reflect the site's history and not retaining buildings with large floorplates.	1	2
Economy & Employment	It is unlikely that retaining the existing buildings will allow business to occupy the space as they are not fit for purpose. However the objectives within this topic also refer to tourism and retaining some of the original buildings may offer a tourism and educational experience. Overall however, it is not considered retaining the buildings to be practical for attracting businesses who may wish to occupy new and modern premises.	1	2
Community & Housing	Retaining a number of buildings on site will limit space available for residential development and the creation of community and neighbourhood.	1	2
Travel & Transport	Retaining a number of buildings on site will reduce the space available for access into and around the site.	1	2
Water, air, soil and geology	Objective 27 is to adequately clean up/remediate the site once the extent of land contamination is known and to ensure buildings are demolished and cleared in accordance with relevant guidance and to re-use materials where possible. This objective can be achieved but only through removing the existing buildings on site.	1	2

In which area(s) of the site should the focus be for biodiversity protection, enhancement and creation?

Options
1a. Biodiversity should be focussed in The Riverside
1b. Biodiversity should be focused in the Cement Works
1c. Biodiversity should be focussed in The Bowl
1d. Biodiversity should be focussed in the Moonscape
1e. Biodiversity should be focussed in the Clifflands
1f. Biodiversity should be focussed across the site/a number of areas.

Summary
Overall, the appraisal shows that biodiversity protection, enhancement and creation is best focussed in The Bowl, The Moonscape and Clifflands. These areas are shown to contain areas of habitat that can be protected/enhanced as a priority/ where possible and opportunities for habitat creation. Whilst the Riverside and Cement Works contain buildings that are recommended for retention, they tend to be surrounded by areas of low quality habitat of limited value.

Sustainability Topic	Discussion	Rank of Preference					
		1a	1b	1c	1d	1e	1f
Landscape	Biodiversity protection, enhancement and creation would have a positive impact on landscape across all parts and areas of the site – particularly in the visible sections from public access points i.e. the Riverside where development may be focussed. Overall, it is considered a positive issue. Landscaping proposals could also benefit habitat recovery and creation for example shrub planting, and open grassy areas. The Moonscape is a sensitive part of the site for landscape and biodiversity enhancements could make a positive contribution.	2	3	3	1	3	1
Biodiversity	The background evidence document states that the Riverside area contains low quality habitat of limited value although the buildings on this area and the Cement works are highlighted for retention/enhancement where possible. The Moonscape, the Bowl	3	2	1	1	1	4

	and Clifflands are recommended for habitat retention/enhancement and creation. The chalk quarry cliffs of the site were all found to have positive suitability for roosting bats, some of which were particularly high or moderate in their suitability.						
Archaeological and cultural heritage	The background evidence suggest that industrial buildings within The Riverside and the Cement works should be retained /enhanced where possible due to presence of a number of species and habitats.	1	1	2	2	2	3
Climate Change including flooding	Proposals for nature recovery across the site will benefit the objectives seeking to manage and adapt for climate change.	-	-	-	-	-	1
Health & Wellbeing	Proposals for nature recovery across the site will benefit the objectives seeking to improve the health and wellbeing of the local population. This includes providing access to open space. To this end, protecting parts of the site for enhancement and protection will be important for general wellbeing so it does not become over developed.	2	2	1	1	1	-
Economy & Employment	Development of parts of the site for commercial development is likely to result in the loss of existing buildings. This will have a negative impact on biodiversity protection. For other parts of the site where employment is unlikely to be situated, nature recovery will be focused. Tourism offers that focus on the Clifflands and geology may impact on these areas. However, it is unlikely that the entire extent of the Clifflands will be used for tourism opportunities.	2	2	1	1	1	-
Community & Housing	Development of parts of the site for residential development is likely to result in the loss of existing buildings. This will have a negative impact on biodiversity protection. For other parts of the site where residential unlikely to be situated, nature recovery will be focused. Residential development may be suitable on the Riverside as this location contains low quality habitat of limited value albeit there are existing buildings. However, it is less of a priority compared with The Bowl, Moonscape and Clifflands. Whilst the Cement Works is suitable for residential development, it will result in the loss of existing buildings. However around the buildings, there are areas of low quality habitat of limited value.	2	2	1	1	1	-

Travel & Transport	A number of the schemes to access the site will have an impact on biodiversity. The access points directly from the main road will affect The Riverside and the Cement Works and whilst some of these areas have locations of low quality habitat – it is likely that to be some negative impact. Roads within the site in order to access other inner parts may have an impact but should be designed so these remain minimal.	3	2	1	1	1	-
Water, air, soil and geology	Nature recovery and biodiversity enhancement and creation should have a positive impact on these objectives across the site. It does include an objective to clean up the site which will result in the loss of buildings and structures. This is relevant to the Riverside and Cement Works.	3	3	2	2	2	1

Should buildings contribute to nature via green roofs and walls, or should these surfaces support solar energy or a mixture

Options 1a Buildings should contribute to nature 1b Buildings should support solar energy 1c A mixture of both
Summary Overall, a mixture of both solar energy and green roofs/walls is the supported and most sustainable option. This includes archaeology and cultural heritage, health & wellbeing, employment, housing and travel and transport. For landscape and biodiversity objectives – option 1a is supported as it will have a direct and positive impact.

Sustainability Topic	**Discussion**	**Rank of Preference**		
		1a	**1b**	**1c**
Landscape	In landscape terms, the contribution to nature (via green roofs etc) may have a positive impact although much of this will depend on location and design/height and massing of the building. Solar energy is not necessarily detrimental in landscape terms although orientation will be important and some may be visible from vantage points and within the site.	1	3	2
Biodiversity	Option 1a is supported for these objectives as it will contribute towards nature recovery actions.	1	3	2
Archaeological and cultural heritage	These objectives seek to retain some of the buildings/key features on site. As part of this – green roofs/solar energy may be acceptable on some of the structures but further work will be required. This will result in a change to the buildings so they will not exist as they originally did.	2	2	1
Climate Change including flooding	Providing solar energy on the buildings will contribute toward adapting to climate change and is the most supported option.	3	1	2
Health & Wellbeing	Both solar energy facilities and green roofs/walls will have a positive impact on health and wellbeing	2	2	1

Economy & Employment	It is considered that both options will be suitable for employment floor space – depending on location, design and type of building but there is no reason to consider that one is more acceptable than the other at this stage.	2	2	1
Community & Housing	It is considered that both options will be suitable for residential floor space – depending on location, design and type of building, although solar energy may more acceptable for houses rather than green roofs/walls but there is no reason to consider that one is more acceptable than the other at this stage.	2	2	1
Travel & Transport	Solar energy and green roofs/walls can be used as part of new transport facilities such on bus stops/for signage/lighting.	2	2	1
Water, air, soil and geology	Both options could have a positive impact on these objectives	2	2	1

What is your view on a new roundabout or any other solutions to access the site?

Set out below is an appraisal of alternative approaches to accessing the site via a roundabout or other access arrangements.

Options
1a A new roundabout should be considered for the development
1b A new left in-left out access should be considered for the development
1c Retain the existing access junctions on both sides of the road

Summary
In terms of objectives relating to economy and employment, community and housing, option 1a is supported at this stage. None of the options, have a positive impact on biodiversity although it is likely that new access arrangements will be located away from areas of high biodiversity value. In terms of landscape impact, options 1a and 1b are least supported although this is not an absolute final conclusion as details of design, layout and siting of the new access/roundabout are unknown at this stage. Access arrangements that will result in the removal of existing buildings score less favourably when assessed against the cultural heritage objectives.

Sustainability Topic	Discussion	Rank of preference		
		1a	1b	1c
Landscape	All of the proposed options for accessing the site may have an impact on the landscape and may not meet the objective of conserving, enhancing and restoring the landscape of the site. Retaining the existing junctions will likely result in the least impact on the landscape but the results will depend on the design and location of any new transport options. At this stage, option 1c will have the least impact as it represents the existing situation.	2	2	1
Biodiversity	Whilst the exact location and details of the access options are unknown at this stage, it is likely that areas of biodiversity will be impacted by each scheme. The existing access points would avoid/minimise harm/loss of habitat and offer limited options for nature recovery. The development of the roundabout is likely to be located where the existing cement works buildings currently are and these buildings do offer habitats for protected species. It is also likely to result in areas of habitat being removed. However, proposed roundabout/new access will be some distance from the Clifflands, Moonspace and the Bowl which contain areas of habitat to be retained and enhanced. It is concluded that	3	3	3

	none of the options will have a positive impact on biodiversity but retaining the existing access would have the least worst impact.			
Archaeological and cultural heritage	It is likely that options 1a and 1b will require the removal of most of the buildings – with the roundabout option being located within the Cement Works area. This would not be in accordance with objective 4 which seeks to conserve key features of the industrial heritage of the site. Option 1b would also require removal of some of the buildings but it is assumed this will not be to the same extent. Retaining the existing access points would have minimal impact on existing buildings.	3	2	1
Climate Change including flooding	Taking the content of the various sustainability objectives into account, there are none that have a direct link to assessing the impact of new access arrangements for the site on climate change. Nevertheless, creating conditions that allow greater use of motorised vehicles will have a negative impact on climate change and the various options for reducing emissions. There is no option that is preferred over another.	-	-	-
Health & Wellbeing	As above - taking the content of the various sustainability objectives into account, there are none that have a direct link to assessing the impact of new access arrangements for the site on health and wellbeing. Nevertheless, creating conditions that allow greater use of motorised vehicles will have a negative impact on health due to pollution and the 15minute neighbourhood concept. There is no option that is preferred over another.	-	-	-
Economy & Employment	The roundabout option is likely to take up land space that could be allocated for employment development but on balance, it is considered that this option will enable a range of development options to access the site including commercial vehicles. It will also allow visitors to access the site even when encouraged to use public transport. The option of a new left-on, left-out may also enable better access into the site for employment uses.	1	2	3
Community & Housing	As above - a roundabout option will enable a range of development types to be built on site, including housing. Although this option will take up land space which could be allocated for residential development. In addition, a new access into the site will assist with allowing the free flow of traffic along the A283 which will maintain the viability of services in neighbouring towns. Sever traffic delay along the road will possibly have a negative impact on these surrounding communities.	1	2	3
Travel & Transport	Objective 21 considers that highways schemes should minimise the impact on landscape, biodiversity, heritage and riverine environment. This is a competing list of issues that need to be addressed through the design, layout and site position of each of the three options. The roundabout may impact on landscape and heritage due to the removal of buildings. The new left-in and left-out is likely to have the same impacts. Using the	-	-	-

	existing access points into the site may impact on the riverine environment and biodiversity as well as causing the removal of buildings. As this assessment will require information and detail of each of the schemes, it has not been possible to link them to the objectives.			
Water, air, soil and geology	Objective 24 seeks to reduce congestion or minimise unavoidable increases in congestion. It is considered that the roundabout is the preferred option to achieve this. Whilst it may encourage the continued use of motorised vehicles, it will also allow for less congestion along an already busy road. This option will also require the remediation of the site.	1	2	3

Do you support shared surfaces or segregated routes for vehicular traffic and pedestrians/cyclists for parts of the redeveloped site?

Options
1a. Provide shared surfaces for traffic and pedestrians/cyclists
1b. provide segregated routes for traffic and pedestrians/cyclists

Summary
The supported option is option 1b – segregated routes for traffic and pedestrians/cyclists. This is due to the use of the existing underpass which will be retained with the roundabout option and also provide a direct access point into the site from the Downs Link. It also ensures that there is a separation with heavy commercial traffic. However, the two options are not mutually exclusive and there may be some sections of the internal road network that is shared. The key issue is to ensure that any segregated routes are safe after dark/any time so they can be used freely by residents, visitors and other users.

Sustainability Topic	Discussion	Rank of preference	
		1a	1b
Landscape	The nuances of segregating routes for traffic/pedestrians versus providing shared surfaces may have minimal impact on the landscape and assessing these options will be based on design, layout, materials and location and the use of lighting. A firm link between the options and the landscape objectives is not established at this stage.	-	-
Biodiversity	Depending on the location of access routes around and across the site, the link between the options and the biodiversity objectives are not known at this stage in the process.	-	-
Archaeological and cultural heritage	It is likely that new access routes into and throughout the site will impact on existing buildings and will result in their removal. The option of providing segregated routes for pedestrians and cyclists may encourage visitors to the site. A roundabout option would mean that the existing underpass would be used for walking/cycling and is the preferred option for tourism.	2	1
Climate Change including flooding	Options that encourage people to walk/cycle into and around the site will have a positive impact on climate change although there is no formal link between the options and the	2	1

	various objectives within this topic. Objective 10 – making the best possible use of existing materials and resources already on the site could relate to using the existing underpass.		
Health & Wellbeing	Promoting the 15minute neighbourhood concept may be possible through the use of both shared and segregated access routes. Safety of pedestrian and cycle routes, especially in the dark hours of the day need to be considered. For this issue, both options are equally preferable.	1	1
Economy & Employment	Objective 14 seeks to deliver sustainable tourism which promotes a modal shift from private to public transport. For this objectives, both options are considered preferable as it is highly likely that some routes will be segregated and some will be shared. In terms of employment and commercial uses, segregated routes will be preferable so that any heavy vehicles are not sharing the same route as pedestrians and cyclists.	2	1
Community & Housing	Objective 18 proposes a mixed community where children can play freely and social isolation is the exception. Segregated routes for pedestrians and cyclists will enable this freedom from traffic noise and pollution, however safety will be critical. It is considered option 1b is preferable.	2	1
Travel & Transport	Objective 20 seeks to provide convenient access to a range of sustainable modes of transport to and from the site. The roundabout option will allow for the underpass to be retained for pedestrians and cyclists and it is considered this combination of options is preferable	2	1
Water, air, soil and geology	Both options will have a positive impact as they seek to ensure there are routes for pedestrians and cyclists. There is no firm link between the options and the objectives.	-	-

What visitor attractions would you like or not like to see on the site?

Options
1a. A sensitive, naturalistic approach to visitor attractions – i.e. education/biodiversity/bird watching etc
1b. Celebrate the chalk with an emphasis on geology
1c. Large scale tourism – eg zip wire/mountain biking
1d. Use of the Bowl as an amphitheatre/concerts

Summary
Options 1a and 1b are considered to represent the type of tourism that the National Park supports – tourism that focusses on the natural environment and provides an educational resource. Tourism that attracts people who are interested in geology or wildlife fits well with the ethos of the National Park. However all types of tourism will need to be carefully managed in terms of disturbance, access and transport and numbers. Large scale tourism options such as zip wire and concerts/theatre area are likely to encourage visitors from a wider catchment area that may cause traffic congestion and noise/air/light pollution. These may also have a negative impact on residential development.

Sustainability Topic	Discussion	Rank of preference			
		1a	1b	1c	1d
Landscape	Options 1a and 1b are likely to allow some protection and conservation of the landscape due to limited development pressure required to enable the tourism offer to be provided. The focus and nature of both of these options is low key and focussed on nature. However numbers of visitors would need to be managed in order not to create pressure within sensitive areas. Options 1c and 1d may result in a greater number of visitors, traffic generation, activities in the evening and this my impact on the landscape but the design, layout and location of these proposal may respect the existing landscape features.	1	1	2	3
Biodiversity	As above – option 1a and 1b will possibly provide the opportunities for conserving and enhancing biodiversity provided pressure from visitor numbers and/or places where tourists visit is managed. Large-scale tourism and events/concerts are likely to have greater impact but generally all forms of tourism may impact on biodiversity and nature recovery. The location of the various tourism offers within the site may also have implications for how biodiversity is affected.	1	1	2	2

Archaeological and cultural heritage	Objective 5 seeks to ensure the development delivers sustainable tourism. Option 1b in particular considers the educational and geological interest of the chalk and seeks to celebrate the features and fascination of the site. Whilst the other options will allow visitors to learn more about and experience the site – option 1b is the preferred approach.	2	1	3	3
Climate Change including flooding	There is not a direct and clear link between the options are the objectives listed under the climate Change and flooding topic. It is assumed that any tourism offer will need to take renewable energy and water consumption into account. However, large-scale tourism schemes will have a greater energy drain but the design and technical layouts of any development will be required to be low carbon.	-	-	-	-
Health & Wellbeing	It is possible that tourism will improve the health and wellbeing of the local community – perhaps through shared opportunities and services or through employment opportunities but there isn't a firm link between this and the options	-	-	-	-
Economy & Employment	This topic seeks to deliver sustainable tourism. Options 1a and 1b are likely to support green tourism facilities due to their more sensitive nature and focus on biodiversity and geology. Options 1c and 1d may result in large-scale tourism with visitors traveling from a larger catchment area. However, this may result in greater employment opportunities. If the central theme is sustainable tourism then options 1a and 1b are the preferred ones.	1	1	2	3
Community & Housing	Large-scale tourism offers may result in negative impacts on local community within the site and residential enjoyment – due to the impact of visitor numbers, traffic, noise etc. Large-scale tourism may also take up development space where housing could be developed. However, at this stage, there is no direct links between the options and the objectives.	-	-	-	-
Travel & Transport	Options 1a and 1b are likely to create less impact from visitors arriving by car due to sustainable nature of their tourism offer. However it is likely that they may still attract visitors using private cars and from a wide catchment area especially if improvements to bus/cycle/pedestrian links are not realised. However, it is assumed that options 1c and 1b may cause greater traffic impacts of detriment to the site community and local area.	1	1	2	3
Water, air, soil and geology	Objective 26 seeks to protect and provide access to key parts of site to enable people to appreciate the chalk geology. Option 1b will enable this to be achieved. This topic also seeks to reduce congestion and it is considered the low scale tourism offers will minimise the impact of congestion on air quality and noise pollution and light pollution.	2	1	3	4

Do you think houses with gardens or flats or a mixture should be built?

Options
1a. Provide a range of housing types including family housing with gardens
1b. Provide apartments with communal gardens
1c. Provide different types of housing such as self-build or build to rent.

Summary
Overall, the three options are considered to be of equal value when assessed against most of the sustainability objectives. In particular, they offer the chance to develop a range of different residential types that would help create a balanced community. The options are less preferable when considered against the objective to retain industrial buildings. Further details of the design, layout and scale of development is required before the options can be accurately appraised against the objectives.

Sustainability Topic	Discussion	Rank of preference		
		1a	1b	1c
Landscape	The impact of the three options on the landscape and views into/out of the site will depend on design, layout, scale and location within the site. Residential development on the Riverside may be of significant visually from vantage points but this will depend on the design and layout – details that are unknown at this stage. The scale of apartment residential blocks will need to be detailed in order to assess the impact on landscape. These may not be known until the planning application stage. The Moonscape is considered sensitive in landscape terms and possibly unsuitable for residential development. The detail of the development is required before a firm link can be made between the options and the objective.	-	-	-
Biodiversity	As above, the impact on biodiversity will depend on the location of residential development within the site and the scale/detail of this. However,	-	-	-
Archaeological and cultural heritage	It is unlikely that any of the existing buildings will be retained to be re-used as residential development due to the extent of remodelling and redevelopment that will be required to ensure they are of an acceptable standard for occupation. In addition, the quantum of residential development that may be required could possibly impact on the number of	3	3	3

	industrial buildings that are cleared for development. Therefore all of the options for residential development will impact on the objective under this topic (objective 3).			
Climate Change including flooding	New residential development may present opportunities to ensure low carbon, reduced water consumption and renewable energy are integral to the scheme from the start. There may also be an opportunity to re-use materials on site. These positive impacts are always coupled with the fact that new development will increase the energy use overall. Each of the options will provide the same benefits with the detail of design, orientation and layout being key.	I	I	I
Health & Wellbeing	Objective 11 seeks to improve the health and well-being of the population and reduce inequalities in health and well-being. It is likely that all three options will create a balanced community and help reduce inequalities by offering housing options for all. Both options support the 15 minute neighbourhood.	I	I	I
Economy & Employment	There is no direct link between the housing options and the employment/economy topic. Land allocation for houses with gardens may take up greater parts of the site and thus not be available for employment development but there is no information at this stage.	-	-	-
Community & Housing	All three options will have a positive impact on this topic. The options present a range of different housing types that will benefit families needing gardens and those that wish to purchase a flat as well as self-build.	I	I	I
Travel & Transport	The impact on this topic will depend on the design and layout of the residential development, where car parking will go, how sustainable modes of transport will be integrated in to the development. At this stage, there is no firm link between the topic and the options	-	-	-
Water, air, soil and geology	There is no firm link between the options and this topic. Overall, residential development will impact on congestion and will require the land to be remediated in order for development to take place. The contaminated land studies do not preclude residential development with gardens (i.e. the contamination present does not preclude having gardens within the site). However, any need to import soils for gardens on areas where there is limited soil is not ideal in sustainability terms. There is also concern that glare and shading issues may impact on whether gardens can be provided.	-	-	-

What sort of businesses would you like or not like to see and why?

Options
1a. Prioritise business space that is linked to the National Park's priority sectors.
1b. Prioritise business space that contributes positively to a greener economy
1c Create high value/high skilled jobs
1d Provide employment floorspace for B8 uses.

Summary
For many of the objectives there is not a clear link between the options as the details of any commercial development is unknown at this stage (in terms of layout, location and access arrangements). However, for several of the objectives – option 1d is considered to the least preferable due to possible congestion (existence of large, heavy goods vehicles) and limited support for the National Park's core sectors.

Sustainability Topic	Discussion	Rank of preference			
		1a	1b	1c	1d
Landscape	The location, scale, design and detail of any proposed employment floorspace will need to be considered in terms of the landscape and impact on views. These details are unknown at this stage but it is likely that large warehouse and distribution centres may not be acceptable. In addition, certain parts of the site are more sensitive than others. At this stage there is no form link between the options and the objectives	-	-	-	-
Biodiversity	As above, the development of employment floorspace and the impact on the biodiversity characteristics of the site is linked to the scale, design and layout of the buildings. However, in terms of particular sectors – an emphasis on a greener economy and the NP sectors may be of benefit to the wider region and economy. However, there is no firm link between the options and the objectives at this stage	-	-	-	-
Archaeological and cultural heritage	Objective 5 is to ensure the development delivers sustainable tourism. One of the NP's priority sector is tourism and option 1a seeks to achieve this. The other options do not have a direct link to the objectives.	1	2	2	2
Climate Change including flooding	Objectives relating to climate change relate to the details of the development rather than the types of businesses located within the employment floorspace. In all options,	-	-	-	-

	the design, orientation and layout of the development should have a positive impact on these objectives. There is no direct link between the options and objectives at this stage.				
Health & Wellbeing	All of the options provide a positive impact on the topic and objectives as they seek to ensure there is a wide range of employment options as well as supporting the 15minutute neighbourhood concept.	1	1	1	1
Economy & Employment	Objective 13 supports development that provides for small / medium business enterprises particularly in the core sectors of Visitor Economy, Land-based, Food & Drink, Knowledge Economy and Advanced Manufacturing. Options 1a,1b and1c all contribute positively to this objective and should be supported within the redevelopment of the site.	1	1	1	2
Community & Housing	Objective 19 states that development that does not harm the viability of services and facilities in surrounding communities in particular Upper Beeding, Steyning and Shoreham. Whilst this may not specifically relate to employment and businesses locating at the site, it should be considered that new development does not directly affect the services in local settlements. It is likely and normal for businesses to relocate from within the sub-region. However there is no firm link between the options and objectives.	-	-	-	-
Travel & Transport	New employment development is likely to attract traffic and may result in congestion (depending on how access is provided as part of the overall scheme). However, it is possible that B8 warehouse type development will generate the need to use heavy vehicles/lorries, although the number of employees could be low. The other options may have a higher number of employees that access the site from the wider region but sustainable transport links embedded within the scheme will assist in reducing the numbers of private cars.	1	1	1	2
Water, air, soil and geology	Objective 24 seeks to reduce congestion or minimise unavoidable increases in congestion. As above, congestion may take many forms with larger vehicles required to access the site if there are B8 storage and warehouse units. The use of private vehicles may be significant if employment is based on higher value added sectors and higher skilled jobs. This is not an exact science and one sector isn't preferable over the other at this stage until the details of access arrangements, layouts and sustainable transport links are established.	-	-	-	-

Do you think green tech companies should be encouraged to locate here

Options 1a. Yes, they should be located here as this is supporting green industry. 1b No, they should not be encouraged here as likely to generate employee numbers and reliance on the car.
Summary The options are balanced between supporting and encouraging green tech companies and not. However, where it is appraised that green tech companies should not be encouraged – this is based around the generation of traffic (which would be the same for any type of business sector). Supporting green tech companies will have a positive impact on climate change, health & wellbeing and the economy.

Sustainability Topic	**Discussion**	**Rank of Preference**	
		1a	**1b**
Landscape	As the design, layout and location of the green tech businesses are unknown at this stage, the impacts on the landscape cannot be adequately appraised. It is not clear which of the options will have a positive impact on the landscape.	-	-
Biodiversity	As the design, layout and location of the green tech businesses are unknown at this stage, the impacts on biodiversity cannot be adequately appraised. It is not clear which of the options will have a positive impact.	-	-
Archaeological and cultural heritage	Retaining the industrial buildings on site may reduce space available for new businesses and it is likely that green tech companies will wish to occupy modern and energy efficient premises. Option 1a – encouraging green tech businesses will have a negative impact on this theme.	2	1
Climate Change including flooding	Encouraging green tech businesses to locate on the site will have a positive impact on these themes provided the employment space maximises the use of low carbon and renewable energy. However it may generate traffic with employees accessing the site from a wide area thus creating pollution and impacting air quality. .	1	2

Health & Wellbeing	Locating green tech businesses on site will have a positive impact on this theme as it offers a range of employment opportunities for the local community. However it may generate traffic with employees accessing the site from a wide area.	1	2
Economy & Employment	Green tech companies are encouraged as part of the employment offer within the site and fall into one of the core sectors for the National Park (knowledge economy)	1	2
Community & Housing	There is not a strong link between these objectives and the options	-	-
Travel & Transport	Whilst the encouragement of green tech industries here will create extra traffic – the objectives within this theme seek to improve sustainable forms of transport. Nevertheless, new companies will inevitably mean more traffic generation.	2	1
Water, air, soil and geology	New companies will inevitably mean more traffic generation and this will have a detrimental impact on air and noise quality. .	2	1

Should development be restricted to previously developed areas?

Options 1a The development should maximise the use of the existing developed areas only (The Riverside/The Cement Works) 1b. The development should maximise the use of the whole site (all areas including The Bowl/The Moonscape/Clifflands).
Summary On balance, option 1b is most supported. This is because for a number of the objectives, the whole of the site offers the best opportunity to deliver a number of the SA objectives. For landscape – option 1a is the best option as other parts of the site are to be protected and enhanced. The same goes for biodiversity and nature recovery. However in order to achieve the tourism offer presented by the site and for access and other facilities such as open space and recreation to be realised, the whole site should be identified.

Sustainability Topic	**Discussion**	**Rank of preference**	
		1a	**1b**
Landscape	Development of all areas of the site is sensitive in landscape terms and the scale/type and design of the individual parts of the development is key to assessing the impact on the landscape. The Moonscape and The Bowl are fairly hidden inside the landscape. However, the Riverside is visually prominent at the front of the site nearest the River Adur. In landscape terms and from the background evidence, 1a is the preferred option. However the Bowl may offer opportunities for development without impacting in landscape terms.	1	2
Biodiversity	Development of all areas is sensitive to biodiversity. However, evidence shows that the Riverside is the area with the least high value habitat. The Cement works buildings have value for bats and birds. The Bowl, Clifflands and Moonscape all have high potential for biodiversity value and habitat enhancement. For this assessment both options have an impact on biodiversity. For the Cement Works this relates to the existing buildings. On balance, option 1a is supported.	1	2
Archaeological and cultural heritage	As this topic relates to conserving key features of the industrial heritage, option 1a is the least preferred option - this seeks to redevelop the brownfield parts of the site which possibly will involve removing the buildings.	2	1

Climate Change including flooding	Objective 10 seeks to make the best possible use of existing materials and resources already on the site. To achieve this objective, option 1a is preferable as the materials from the existing buildings can be re-used. However, are no firm links between the options and the objectives. Much of this will depend on location and orientation within the site and the designs of the new development buildings. Development on the Riverside will need to ensure there is no flood risk.	-	-
Health & Wellbeing	Objective 12 seeks to promote the 15 minute neighbourhood concept. Option 1a is preferable as this refers to parts of the site closest to transport links and sustainable transport options. It means that should there be residential or commercial development towards the rear of the site (the Moonscape) then travelling distances may be greater in order to access key facilities. However, the detail of the scheme is unknown at this stage, therefore confirming which option is preferable is difficult. Parts of the wider site may be appropriate from leisure and open space and this will have a positive impact on wellbeing. It is concluded that the whole site is needed in order to achieve these objectives.	2	1
Economy & Employment	In order to deliver a range of employment types, including tourism, it is preferable that the whole site is developed (albeit that some parts will have low key development linked to tourism/education, open space).	2	1
Community & Housing	It is considered that the majority of housing will focus on the central areas either side of the main road (Riverside and the Cement Works). Therefore option 1a is preferable. The wider site contains a number of biodiversity habitats and landscape impacts that may not be suitable for housing development. However, it could be that The Bowl is suitable for some open space and recreation. In conclusion, option 1a is preferable.	1	2
Travel & Transport	Access, transport and travel will be required in all parts of the site as part of the overall scheme although the design, layout and location of any routes will need to be carefully considered especially in the far reaching parts of the site. For this issue, option 1b is preferable.	2	1
Water, air, soil and geology	Objectives within this topic refer to accessing key parts of the site to appreciate the geology as well as remediating the site in order to allow a wide variety of development forms to be built. For this topic – 1b is preferable.	2	1

How far do you think the new buildings should reflect the height and massing of the existing buildings?

Options 1a. The scale of new structures should be restricted by the scale of the existing buildings in each area 1b. New structures do not need to be restricted by the scale of the existing buildings and can be higher/large in places.
Summary In many cases, there is no firm link between the options and objectives. However for the topics of Landscape, Climate Change and Community/Housing – option 1a is the preferred. In terms of living space and impact on the landscape from within the site and from outside – development should be restricted by the scale of the existing buildings within each area.

Sustainability Topic	Discussion	Rank of preference	
		1a	1b
Landscape	The site and the existing buildings are highly visible within the landscape. Some of the existing buildings are imposing when viewed from several vantage points and dominate the landscape. Through design, layout and scale it should be that new buildings will enhance the landscape and to this end, it is preferred that the development respects the scale of existing buildings and be no greater or higher. It will be important that structures don't dominate the site and allow for the chalk cliffs to the rear of the site to be appreciated. Option 1a is preferable.	1	2
Biodiversity	It is assumed that the scale of any new structures will not have an impact either way on biodiversity apart from overshadowing that may occur if the buildings are higher or greater than the existing. There is no firm link between the options and the objectives.	-	-
Archaeological and cultural heritage	Retaining any of the buildings will likely result in the scale remaining similar to that existing. The removal of all buildings will have a negative impact on these objectives. However through removing all of them, this may provide the template for building new structures of greater scale. There are no details of the scale of buildings and therefore no firm link is found between the options and the objectives.	-	-
Climate Change including flooding	Option 1a is the preferred option as this will maintain the scale and bulk of the existing buildings through the development of new structures. Objective 8 seeks to minimise the	1	2

	impacts on health of both solar glare and radiation experienced within the quarry site. It is assumed that these issues will not worsen through detailed consideration of the impact of new structures on glare, over shadowing, light pollution.		
Health & Wellbeing	There are no firm links between the options and these objectives. However, well-constructed and designed buildings of a manageable scale and bulk could create interesting places to live, work and relax thus supporting healthy communities.	--	
Economy & Employment	It is likely that some of the employment development will be higher than ground floor level – particular office buildings. Tourism development may be of a lower scale. There isn't a firm link between the options and the objectives.	-	-
Community & Housing	Residential development can take the form of flats but it is unlikely that this location is suitable for high rise development. Whilst there is no firm link between the options and the objectives, it is preferable that residential structures respect and are restricted by the scale of the existing buildings within each area.	I	2
Travel & Transport	There are no firm links between the options and the objectives.	-	-
Water, air, soil and geology	There are no firm links between the options and the objectives.	-	-

Would you prefer a contemporary or traditional approach to architectural design or a mixture of both?

Options
1a. Contemporary approach to design
1b Traditional approach to design
1c. A mixture of both

Summary
This appraisal supported the option of encouraging a contemporary approach to architectural design. Essentially, this style will offer modern and innovative ways of ensuring nature recovery, landscape enhancement, future proofing against climate change and supporting modern living and business. It will also encourage tourism and visitors who appreciate contemporary development.

Sustainability Topic	Discussion	Rank of Preference		
		1a	1b	1c
Landscape	A contemporary design to the architecture may offer scope to reflect on the landscape of the site and surrounding area. Whilst, this is something that a traditional approach could also achieve – contemporary could achieve a much different scheme.	1	3	2
Biodiversity	As above – a contemporary approach may enable different ways of achieving and embedding nature recovery across the site.	1	3	2
Archaeological and cultural heritage	It is possible that both a contemporary and a traditional approach to design will allow for the industrial past of the site to be recognised. It is likely that contemporary will achieve the same result but within a modern framework but for this theme, it is a considered a mix of both is the preference.	2	3	1
Climate Change including flooding	A contemporary design to the architecture may offer scope to ensure the buildings are future proofed against climate change impacts – this incorporating the latest technical solutions reflective of the challenges faced by the site and location.	1	3	2
Health & Wellbeing	Good quality, clean, modern, light and spacious developments will have a positive impact on health and wellbeing. Both contemporary and traditional designed buildings will achieve this.	2	2	1
Economy & Employment	New business premises should be modern and seek to ensure energy use is at a minimum whist saving water and utilising renewable energy. It will also ensure all form communications is up-to-date. A contemporary style design for new businesses is supported.	1	3	2

Community & Housing	New residential units should be modern and seek to ensure energy use is at a minimum whist saving water and utilising renewable energy. A contemporary style design for new housing is supported.	1	3	2
Travel & Transport	It is not always clear how design affects transport and travel but any facilities linked to these objectives should incorporate renewable energy and be efficient. It is not necessarily confirmed that only contemporary style buildings can achieve this.	2	3	1
Water, air, soil and geology	Energy efficient buildings should incorporate designs that ensure there is no external impact on air, water and noise quality. It is not necessarily confirmed that only contemporary style buildings can achieve this.	2	3	1

Should the redevelopment hide, frame or reveal new views moving eastwards away from the main road or a combination of all three?

Options
1a. The redevelopment should hide new views 1b. the redevelopment should frame new views 1c. The redevelopment should reveal new views 1d. There should be a combination of all three.
Summary As the technical details of the design and layout of the developments and the location of uses across the site is unknown, it is hard to establish whether redevelopment should hide, frame or reveal new views and therefore option 1a has greatest support. In terms of landscape, revealing new views may provide an opportunity to create a new and positive impact on the local area.

Sustainability Topic	Discussion	Rank of Preference			
		1a	1b	1c	1d
Landscape	Generally, the site becomes more sensitive towards the east. Close to the A283 and the river Adur the previously developed character of these areas remains. Further east, experiences of these areas are characterised more strongly by a sense of nature 'taking back' and strong perceptual qualities such as tranquillity. As the technical details of the design and layout of the developments and the location of uses across the site is unknown, it is hard to establish whether redevelopment should hide, frame or reveal new views and therefore option 1d is supported. In terms of landscape, revealing new views may provide an opportunity to create a new and positive impact on the local area.	2	3	1	1
Biodiversity	Further east within the site, it is characterised by ecological significance suggestive of little or no development. It is suggested that hiding new views moving eastwards is the supported option.	1	-	-	-
Archaeological and cultural heritage	Retaining the existing industrial buildings will result in views being hidden as one moves eastwards from the main road. Removing the buildings will result in views being revealed or framed.	1	-	-	-
Climate Change including flooding	There is not a direct link to these options.	-	-	-	-

Health & Wellbeing	There is not a direct link to these options.	-	-	-	-
Economy & Employment	The development of the core areas for commercial and employment floorspace (the Riverside and The Cement Works) is likely to result in views being hidden as one moves eastwards from the road. Whether the design and layout of development will enable views to be revealed is unclear at this stage. This would be the preferred option but this cannot be assessed at this stage.	-	-	-	-
Community & Housing	The development of the core areas for residential floorspace (the Riverside and The Cement Works) is likely to result in views being hidden as one moves eastwards from the road. Whether the design and layout of development will enable views to be revealed is unclear at this stage. This would be the preferred option but this cannot be assessed at this stage.	-	-	-	-
Travel & Transport	There is not a direct link to these options.	-	-	-	-
Water, air, soil and geology	There is not a direct link to these options.	-	-	-	-

DEVELOPMENT SCENARIOS[1]

Scenario 1 **Mixed use scheme with employment and 400 new homes**

Scenario 2 **Mixed use scheme with employment and 240 new homes**

Scenario 3 **Mixed use leisure led scheme with and 200 new homes**

Scenario 4 **Mixed use scheme with employment and 84 new homes (dismissed appeal scheme)**

Scenario 5 **Do Nothing option**

APPENDIX F
APPRAISAL OF DEVELOPMENT SCENARIOS

DEVELOPMENT SCENARIOS[1]

Scenario 1 **Mixed use scheme with employment and 400 new homes**

Scenario 2 **Mixed use scheme with employment and 240 new homes**

Scenario 3 **Mixed use leisure led scheme with and 200 new homes**

Scenario 4 **Mixed use scheme with employment and 84 new homes (dismissed appeal scheme)**

Scenario 5 **Do Nothing option**

Discussion of preference options and relative merits of scenarios on Sustainability Topic[49]	Rank of Preference Options				
	1	2	3	4	5
Landscape					
The site, which is an inactive chalk quarry and former cement works, currently has a significant effect on landscape quality in the area. It has a visual impact on both the local and wider landscape character of the area, which is further accentuated by its prominent location at the narrowest part of the National Park. In this case scenario 5 is the least preferable. Of the housing options, scenario 4 could be considered the most favourable as it provides for a lower land take for housing development. For scenario 3, the details of any leisure scheme will need to be known before it is clear what the impact on the landscape will be. Whilst high quality design can lessen any impact, any housing proposed would still have an impact on tranquillity and the dark skies reserve. Scenario 3 may lead to less employment/heavy vehicle movement than scenarios 1, 2 and 4 which include employment uses. However, depending on the type of leisure facility – this could increase the use of the site by private vehicles. Impacts under any of the options are possible however, and depend on the design and layout of new development, the remodelling and removal of unsightly buildings, the location of development in relation to key viewpoints in the area, and the integration of high quality green infrastructure provision.	4	3	1	2	5

[49] Please note that much of the commentary is extracted from the SA to the South Downs Local Plan

DEVELOPMENT SCENARIOS[1]

Scenario 1 **Mixed use scheme with employment and 400 new homes**

Scenario 2 **Mixed use scheme with employment and 240 new homes**

Scenario 3 **Mixed use leisure led scheme with and 200 new homes**

Scenario 4 **Mixed use scheme with employment and 84 new homes (dismissed appeal scheme)**

Scenario 5 **Do Nothing option**

Discussion of preference options and relative merits of scenarios on Sustainability Topic[50]	Rank of Preference Options				
	1	2	3	4	5
Biodiversity					
A range of biodiversity constraints are present on and in the vicinity of the site. The site itself is a Regionally Important Geological Site, comprises a range of BAP Priority Habitats (including good quality semi-improved grassland, deciduous woodland and lowland calcareous grassland) and is home to protected bird species. The Beeding Hill to Newtimber Hill SSSI, is immediately adjacent to the site on its northern boundary. The site is also located within the SSSI's 'Impact Risk Zone' for 'all planning applications- except householder applications'. As such, strategic scale development of all types (i.e. under each of the options) raises the possibility of adverse effects on the SSSI without avoidance and mitigation measures. In this context scenarios 1-4 have the potential to lead to significant impacts on habitats and species without appropriate design and layout and the integration of infrastructure which supports ecological networks in the area. In terms of differentiating between the options, scenario 1 contains the greatest number of homes. Recently the issue of water neutrality has emerged in the Sussex North Water Resource (Supply) Zone (WRZ). 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. Scenario 4 potentially proposes a smaller scale of development in land take terms than the other options however, all scenarios with housing have a greater impact from recreational disturbance (caused by people and pets). It is recognised that a smaller scale of development may limit the scope for larger scale green infrastructure enhancements on site which support habitats, species and ecological networks. As such, whilst scenarios 1-4 have the potential to lead to effects on biodiversity, the significance of effects depends on the integration of measures to protection and enhance biodiversity on the site.	1	1	1	1	2

[50] Please note that much of the commentary is extracted from the SA to the South Downs Local Plan

DEVELOPMENT SCENARIOS[1]

Scenario 1 **Mixed use scheme with employment and 400 new homes**

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Scenario 4 **Mixed use scheme with employment and 84 new homes (dismissed appeal scheme)**

Scenario 5 **Do Nothing option**

Option 5 is do nothing. This option would support natural regen / rewilding. What is special about the biodiversity of the site is the open mosaic habitat supporting early successional plant communities. These would be lost without appropriate levels of disturbance management. The opportunity for investment via biodiversity net gain would be lost as well. On balance, this is the least preferred option.					

DEVELOPMENT SCENARIOS[1]

Scenario 1 **Mixed use scheme with employment and 400 new homes**

Scenario 2 **Mixed use scheme with employment and 240 new homes**

Scenario 3 **Mixed use leisure led scheme with and 200 new homes**

Scenario 4 **Mixed use scheme with employment and 84 new homes (dismissed appeal scheme)**

Scenario 5 **Do Nothing option**

Discussion of preference options and relative merits of scenarios on Sustainability Topic[51]	Rank of Preference Options				
	1	2	3	4	5
Archaeological and cultural heritage					
The former uses at the site currently have a significant effect on landscape quality in the area, with associated effects on the setting of the historic environment. In this context there is considerable opportunity for development to lead to significant improvements in the character of the area. Development also offers opportunities for recognising and conserving the intrinsic cultural heritage value of some of the buildings and structures of the disused cement works. Whilst the Do Nothing scenario would appear to be the preferred option (i.e. to retain the buildings on site as they are), due to the severe state of dilapidation, it is unlikely many of the buildings can be retained or re-used. In addition, the internal contents of the buildings are of greater heritage value than the buildings themselves. Scenarios 1-4 have the potential to retain some/small parts of the cement works buildings and offer a cultural heritage educational resources for the local community. On balance, the leisure focussed option is the preferred scenario.	2	3	1	4	5

[51] Please note that much of the commentary is extracted from the SA to the South Downs Local Plan

DEVELOPMENT SCENARIOS[1]

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Scenario 2 **Mixed use scheme with employment and 240 new homes**

Scenario 3 **Mixed use leisure led scheme with and 200 new homes**

Scenario 4 **Mixed use scheme with employment and 84 new homes (dismissed appeal scheme)**

Scenario 5 **Do Nothing option**

Discussion of preference options and relative merits of scenarios on Sustainability Topic[52]	Rank of Preference Options				
	1	2	3	4	5
Climate change including flooding					
Whilst the site is not located within a Flood Zone 2 or 3, the susceptibility of surrounding areas to flooding (including related to the River Adur) leads to potential effects from new development at this location on fluvial and surface water flooding. In relation to the scenarios considered, it is difficult to differentiate between these without an understanding of the necessary development-specific elements associated with the options albeit employment uses are deemed to be 'less vulnerable' than housing when assessing flood risk. Therefore this consideration may be based on where on the site the various land uses will be developed. The effect of each scenario on flood risk from surface water runoff is difficult to establish given uncertainties regarding the nature of development and the incorporation of mitigation measures such as sustainable urban drainage systems (SuDS). Road transport is an increasingly significant contributor to emissions. The extent to which new development through each scenario has the potential to support climate change mitigation through facilitating a reduced level of car dependency is dependent on the provision of new sustainable transport links and infrastructure. The resilience of the site to the likely effects of climate change also depends on the provision of on-site green infrastructure networks which will support climate change adaptation through helping to limit the effects of extreme weather events and to maximise the use of low carbon and renewable energy. Scenario 5 will not enable climate change provision to be incorporated within the site neither will it allow for the re-use of materials. It is unlikely this will be a preferred option. For scenarios 1-4 –these all have the potential to lead to positive impacts on climate change through design and layout details and depending on the location of development, proposed residential should not be susceptible to flooding.	1	1	1	1	2

[52] Please note that much of the commentary is extracted from the SA to the South Downs Local Plan

DEVELOPMENT SCENARIOS[1]

Scenario 1 **Mixed use scheme with employment and 400 new homes**

Scenario 2 **Mixed use scheme with employment and 240 new homes**

Scenario 3 **Mixed use leisure led scheme with and 200 new homes**

Scenario 4 **Mixed use scheme with employment and 84 new homes (dismissed appeal scheme)**

Scenario 5 **Do Nothing option**

Discussion of preference options and relative merits of scenarios on Sustainability Topic[53]	Rank of Preference Options				
	1	2	3	4	5
Health and Wellbeing					
Scenarios 1-4 all offer the option of providing mixed use communities that will benefit the health and wellbeing of residents and employees. Depending on site layout and design, the location of different uses and the allocation of space for local services/open space and recreation facilities – all scenarios should incorporate positive wellbeing experiences. Option 3 has most potential to enhance uses of existing attractions (including the South Downs Way) which will support leisure and recreational activities with benefits for health and wellbeing. The site currently has poor access to services and facilities, as well as public transport networks. Due to the location of the site, the options proposed are unlikely to lead to significant effects on the vitality of existing settlements, with the possible exception of localised benefits to Upper Beeding. However scenario 3 does include food/retail uses and this may have an impact on local towns/settlements. The mix of employment uses and housing may have a negative impact on wellbeing due to noise/anti-social hours of operation etc from some businesses but details of layout and types of employment options will address these concerns. The Do Nothing scenario is unlikely to promote health and wellbeing due to the nature of the site the state of the existing structures. The greater number of new homes will enable a mixed type of development with unit sizes and types.	1	2	3	4	5

[53] Please note that much of the commentary is extracted from the SA to the South Downs Local Plan

DEVELOPMENT SCENARIOS[1]

Scenario 1 **Mixed use scheme with employment and 400 new homes**

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Scenario 3 **Mixed use leisure led scheme with and 200 new homes**

Scenario 4 **Mixed use scheme with employment and 84 new homes (dismissed appeal scheme)**

Scenario 5 **Do Nothing option**

Discussion of preference options and relative merits of scenarios on Sustainability Topic[54]	**Rank of Preference Options**				
	1	2	3	4	5
Economy and Employment					
Scenarios 1,2 and 4 include employment uses within an overall mixed development. Scenario 3 also provides for tourism/leisure based and this will have a positive impact on the sustainability options. All of the scenarios (not 5) include hotel development. Scenario 3 includes retail/food establishments. Scenarios 1-4 have the potential to support small / medium business enterprises particularly in the core sectors of Visitor Economy, Land-based, Food & Drink, Knowledge Economy and Advanced Manufacturing. Scenario 4 offers lower employment floorspace and could potentially exclude some of the key sectors of important to the National park. Scenario 3 has increased potential to support a range of activities relating to the visitor and tourism economy. This includes visitor accommodation uses, and opportunities to make use of the key attractions, such as the South Downs Way, and the wider offer of the National Park. Scenario 5 also provides for employment use and this will be as the existing operations currently on site. However, this would not be a positive impact on the sustainability appraisal due to the limited types of businesses operating and no opportunities for leisure/tourism.	1	1	1	2	3

[54] Please note that much of the commentary is extracted from the SA to the South Downs Local Plan

DEVELOPMENT SCENARIOS[1]

Scenario 1 **Mixed use scheme with employment and 400 new homes**

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Scenario 5 **Do Nothing option**

Discussion of preference options and relative merits of scenarios on Sustainability Topic[55]	Rank of Preference Options				
	1	2	3	4	5
Community and Housing					
Scenarios 1-4 offer a mixed development option will all including housing. Scenario 1 with a higher number of new homes may be able to provide for a rang e housing types and sizes which will benefit all sections of the community. Due to the location of the site, the options proposed are unlikely to lead to significant effects on the vitality of existing settlements, with the possible exception of localised benefits to Upper Beeding. However scenario 3 does include food/retail uses and this may have an impact on local towns/settlements. Scenario 5 includes no housing and is the least preferred scenario. Scenario 4 only provides 84 new homes and this unlikely to be a wide range of housing mix and therefore limited options for the community.	1	2	2	3	4
Transport and travel					
The site currently has poor access to services and facilities, as well as public transport networks. In this context the site is located at distance from local services, facilities and amenities, with the nearest located at Upper Beeding and Steyning. Small numbers of new houses being provided may not support or enable the delivery of significant on-site community facilities, therefore resulting in local vehicles trips. However, scenarios 1-3 do provide for a small retail unit and scenario 3 includes food and drink facilities. Mixed use options that include	2	3	1	4	5

[55] Please note that much of the commentary is extracted from the SA to the South Downs Local Plan

DEVELOPMENT SCENARIOS[1]

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Scenario 5 **Do Nothing option**

employment (especially B8) may require access arrangements that can accommodate heavy vehicles (scenarios 1,2). The leisure and recreational use option (3) may increase the volume of traffic as those travelling to the site may do so in a private vehicle. All options (apart from 5) have the chance to improve accessibility of the site and establish new sustainability transport facilities.					
Discussion of preference options and relative merits of scenarios on Sustainability Topic[56]	**Rank of Preference Options**				
	1	2	3	4	5
Water, air, soil and geology					
All development options will lead to a high degree of car use and dependency given the site's lack of proximity to existing services, facilities and amenities. This will increase greenhouse gas emissions from transport. Scenarios 1 and 2 also include an element of B8 and this may lead to increased access from heavy vehicles. The result may have a negative impact on local air quality. Scenario 3 with an element of leisure use will have a positive impact on encouraging tourism and educational visits to appreciate the chalk geology. A lower number of new homes will enable most of the site to remain untouched and this may also have an impact on water, air and soil. Scenario 5 which retains the site as it is unlikely to have a positive impact on the sustainability objectives as it will not result in a site clean-up and remediation.	3	3	1	2	4

[56] Please note that much of the commentary is extracted from the SA to the South Downs Local Plan

DEVELOPMENT SCENARIOS[1]

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Scenario 5	**Do Nothing option**

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.

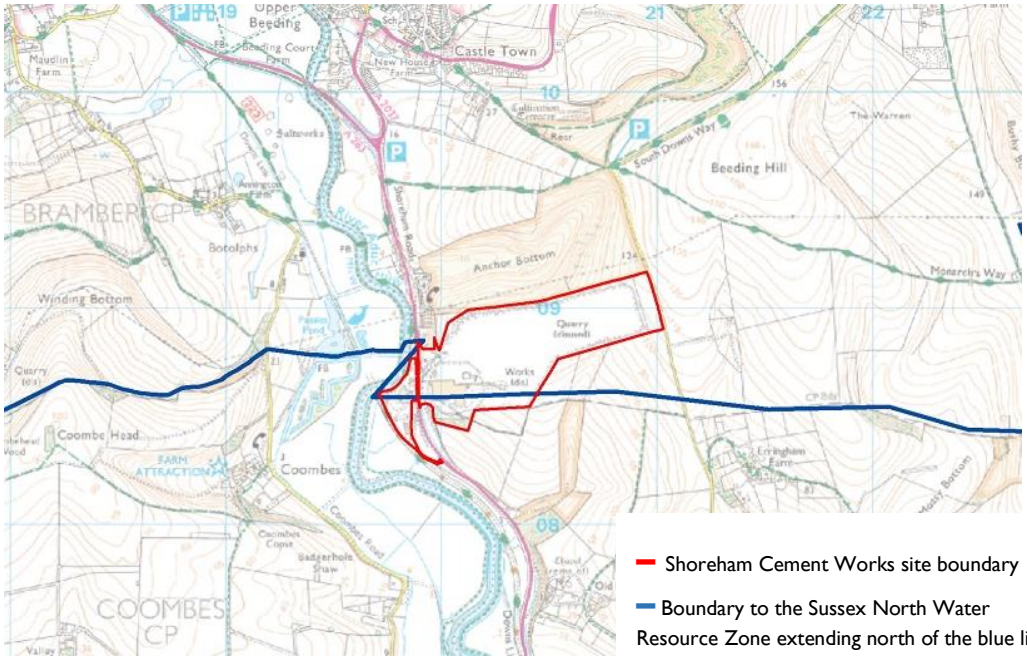

Figure 1 - Shoreham Cement Works and the Sussex North Water Resource Zone

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 dependant 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