

Shoreham Cement Works Area Action Plan Issues & Options Consultation

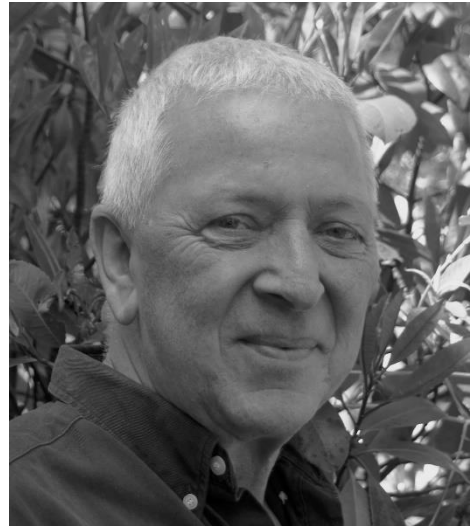


May 2022

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

HAVE YOUR SAY

The consultation on the Issues & Options version of the Shoreham Cement Works Area Action Plan will run from Tuesday 07 June to Tuesday 02 August 2022.

The best way to input into the consultation is to visit our website on <https://www.southdowns.gov.uk/area-action-plan-shoreham-cement-works/> to view specially filmed drone footage and add your comments on the development of the site. You can scan this QR code to directly go to the webpage.

Alternatively, you can email us at planningpolicy@southdowns.gov.uk or write to us at:

Planning Policy
South Downs National Park Authority
South Downs Centre, North Street
Midhurst
West Sussex GU29 9DH



You can read the AAP and all the evidence that supports it on the website. You can also read paper copies of the document at the South Downs Centre and a number of deposit points including Shoreham and Steyning Libraries. There is a full list of deposit points on the website.

All representations will be published on the SDNPA website and anonymous comments cannot be accepted.

Please do not hesitate to contact the Planning Policy team by email at planningpolicy@southdowns.gov.uk or telephone on 01730 814810 if you have any queries about this consultation.

It should be noted that this Area Action Plan is based on existing legislation, policy and guidance as of May 2022, but may be subject to change as a result of forthcoming legislation, policy or guidance. The South Downs National Park Authority will monitor any changes and will follow legislation, policy and guidance as required.

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 of 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?

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I Introduction

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

- I.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.
- I.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.
- I.3 The final adopted version of the AAP will be the statutory development plan for Shoreham Cement Works along with the South Downs Local Plan¹ covering the whole National Park, the Upper Beeding Neighbourhood Plan² covering the parish of Upper Beeding and the West Sussex Joint Minerals Local Plan³ and Waste Local Plan⁴. 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. The plan period for the AAP is 2014-2033, which is the same as the Local Plan.
- I.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

- I.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:

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 conserve and enhance the natural beauty, wildlife and cultural heritage of the area
- 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 NPPF⁵. 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

⁵ National Planning Policy Framework, DLUHC, 2021

- I.12 The planning timeline for Shoreham Cement Works is set out in Appendix I. It starts with the permission granted to extract chalk just after the end of the Second 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

- I.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.
- I.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.
- I.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.
- I.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

- I.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

I.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 quantum. 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 and 200 new homes
4. Mixed use scheme with employment and 84 new homes (dismissed appeal scheme)

I.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

I.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.

I.21 An SA for the South Downs Local Plan was undertaken by AECOM⁶ 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.

I.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

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

compatible with the purposes of the National Park, namely tourism / visitor based recreational activities and employment uses.

- I.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 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.
- I.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 Report⁷ was subsequently updated following comments from the consultees and feedback from these groups has informed the SA of this Issues & Options document.
- I.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.
- I.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

- I.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.
- I.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

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

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 screening⁸ and this concluded that 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.

- I.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

- I.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.
- I.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.
- I.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?

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

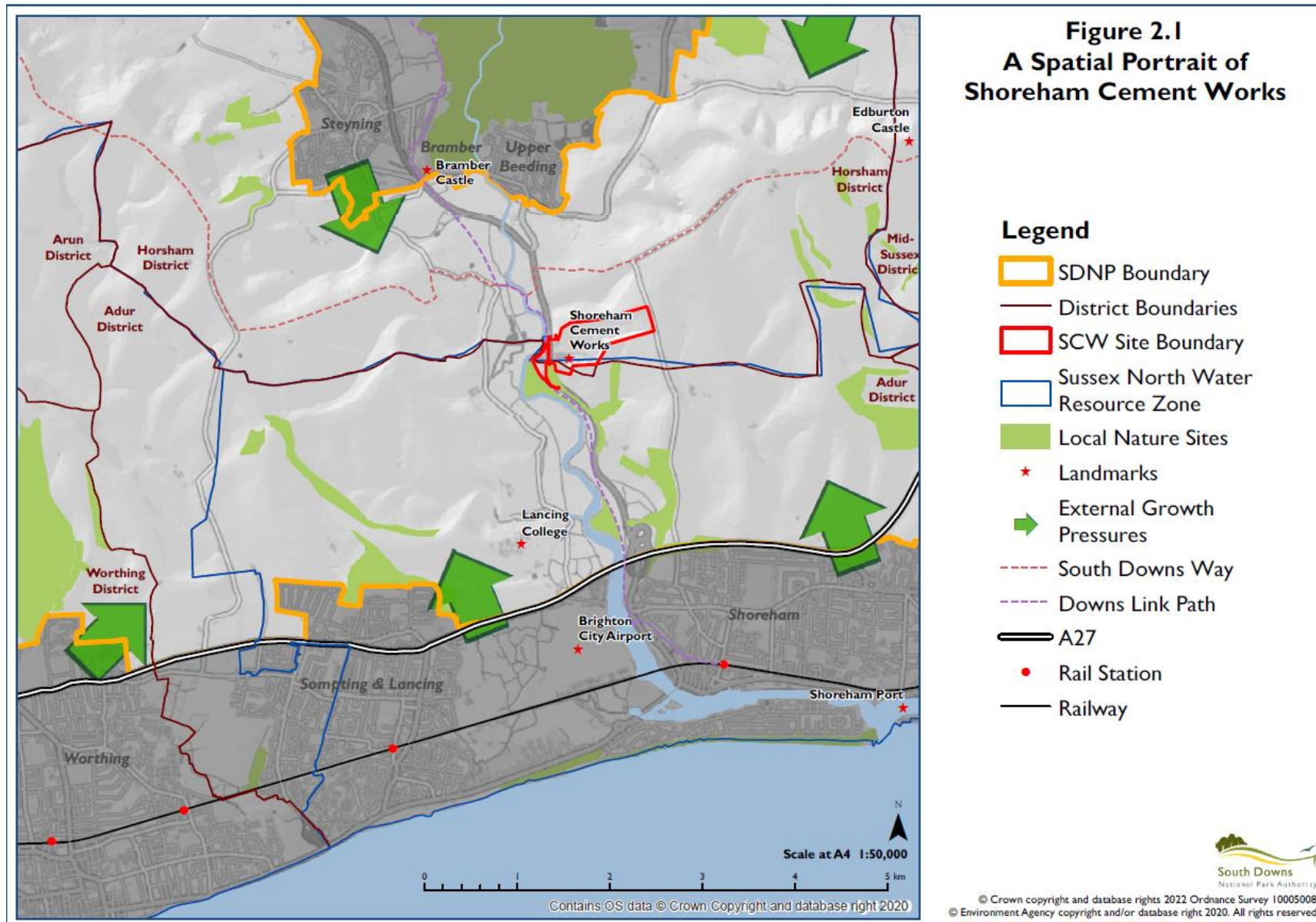
2 Shoreham Cement Works Now: a Spatial Portrait

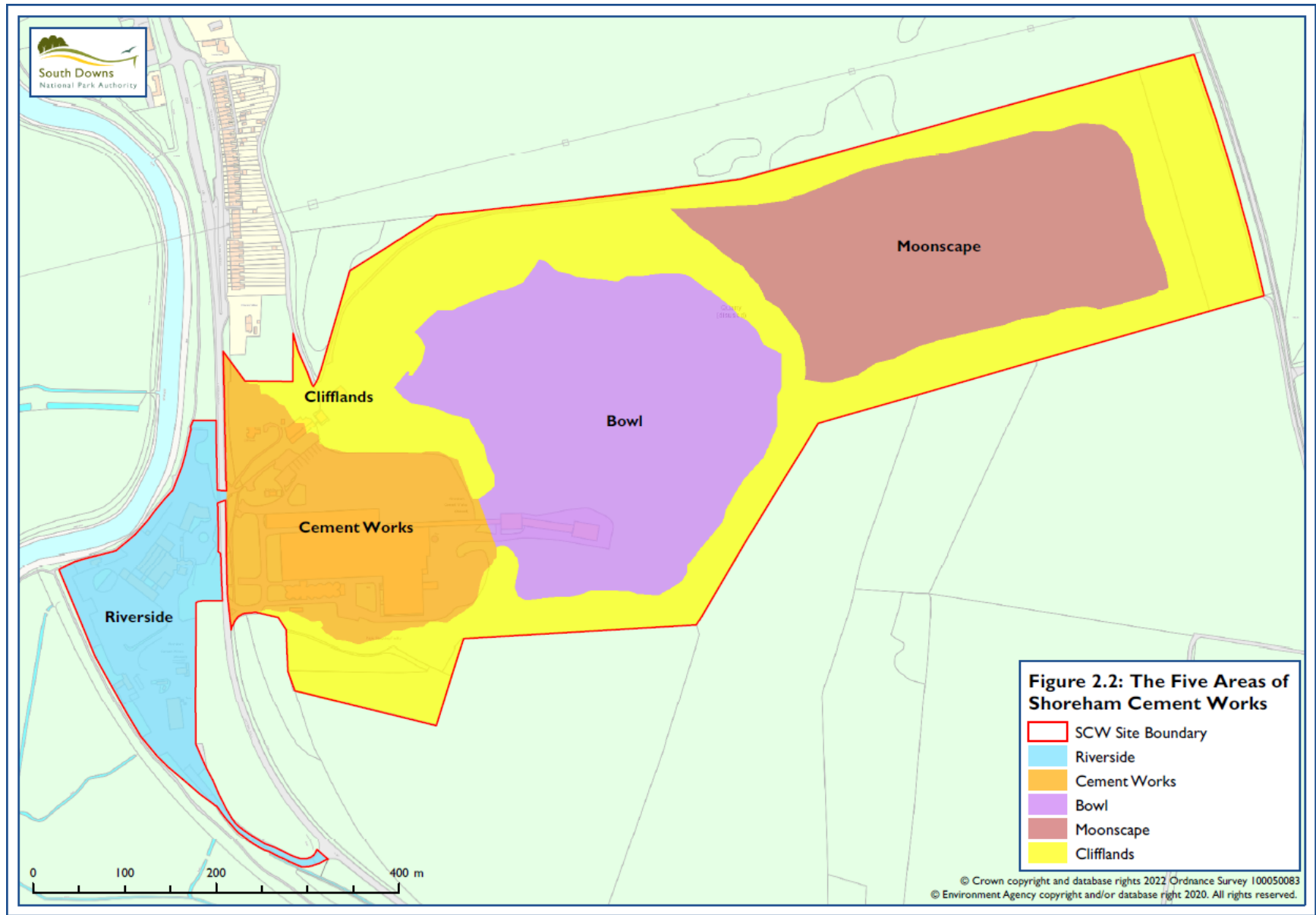
- 2.1 The spatial portrait of Shoreham Cement Works paints a geographical picture of the site and its surroundings. It highlights key features that are important both in the landscape and the local economy such as Brighton Airport and Lancing College. The spatial portrait forms figure 2.1.
- 2.2 Whilst 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. His more notable works include the Menin Gate in Ypres and he 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

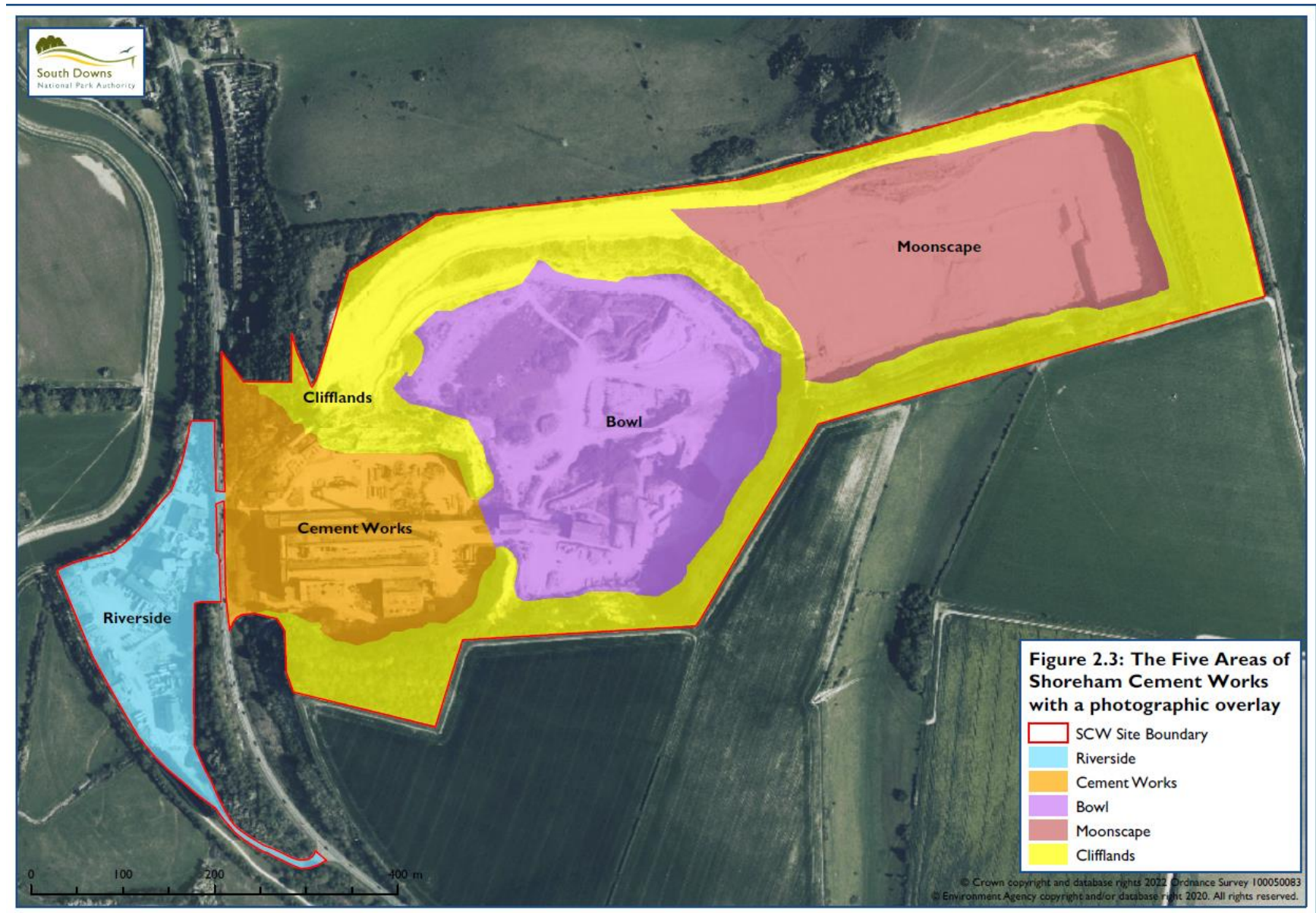
the Clifflands surround most of the site to the east of the main road. Each area has different opportunities and constraints and chapter 4 sets out bespoke design principles and potential uses for each area. The five areas are shown in figure 2.2 and in figure 2.3 they are shown with a photographic overlay.

- 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 of 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?







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 from 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 from 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 opportunities to 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 from 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 from 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 Study⁹ 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; this 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 appeal¹⁰, 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 Parks¹¹. 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

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

and 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 Report¹² and a Preliminary Building Condition, Safety and Demolition Assessment Report¹³. In 2021, the SDNPA commissioned CGL to undertake a Programme of Works Report for Land Contamination¹⁴. CGL also managed a separate consultant report - Hazardous Materials (Chemical) and Demolition Costings survey¹⁵ 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 Report¹⁶ and a Preliminary Building Condition, Safety and Demolition Assessment Report¹⁷ in 2018. In 2021, the SDNPA commissioned CGL to undertake a Programme of Works Report for Land Contamination¹⁸ and Motion to prepare a Foul Water Drainage Strategy¹⁹.
- 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 Study²⁰ 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 heritage of the site. The **Cement Works** was designed by cement industry leader



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

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.

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

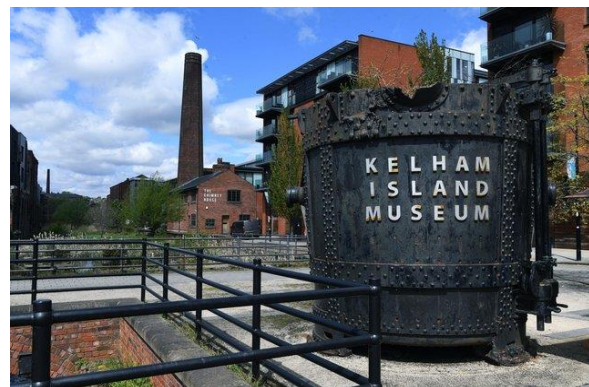
schools across Sussex and Surrey. Coaches used to bring pupils to the plant where they would be welcomed at the visitor centre. An engineer would then chaperone them around the plant to illustrate cement production processes, the large pieces of equipment and machinery. Special attention would be paid 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 Appraisal²¹ (PEA) and Preliminary Roost Assessment²² (PRA) (for bats) were undertaken. In 2021, the SDNPA commissioned WSP to provide an update²³ 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 PRA²⁴ 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



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)

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 I of the Wildlife and Countryside Act.

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 2019²⁵ and the Government's 25 Year Environment Plan²⁶, 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 Note²⁷ 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



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

²⁵ [State of Nature Report, 2019](#)

²⁶ [A Green Future: Our 25 Year Plan to Improve the Environment](#)

²⁷ [Biodiversity Net Gain Technical Advice Note, SDNPA, 2022](#)

contribution to BNG for the site, but there is potential tension with provision of solar panels for green energy generation.

- 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.

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 projections²⁸ 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 assessment²⁹ 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 Assessment³⁰ 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



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

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.

- 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 purposes 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.

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.



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

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 dual 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.



*Four-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 year³¹. The most popular activities by visitors are walking and rambling, and visiting tea and public houses, followed with increasing popularity by shopping³². 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 way³³. 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 Review³⁵ 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 PANN³⁶ 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



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

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.

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 of the redevelopment?

51 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 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 supply³⁷. 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 coast³⁸ 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



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

starting out and older households looking to downsize. Locally, a housing needs survey³⁹ 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.

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 quantum 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 1 and 2 respectively. The leisure led scheme forming scenario 3 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 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 likely to be 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



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

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.

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 Works** 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 Update⁴² 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 dependent 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 Assessment⁴³ 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 Adur⁴⁴ and AWDC (2018) Economic Strategy⁴⁵ 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 2022](#)

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 (WSSCC) (2020) Economy Reset Plan⁴⁶, 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." (WSSCC, 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 quantum 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 Strategy⁴⁸.

- 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.

- 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.



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

- 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 Study⁴⁹ 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 Assessment⁵⁰ and Viewshed Analysis⁵¹.
- 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 Moonscope 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?

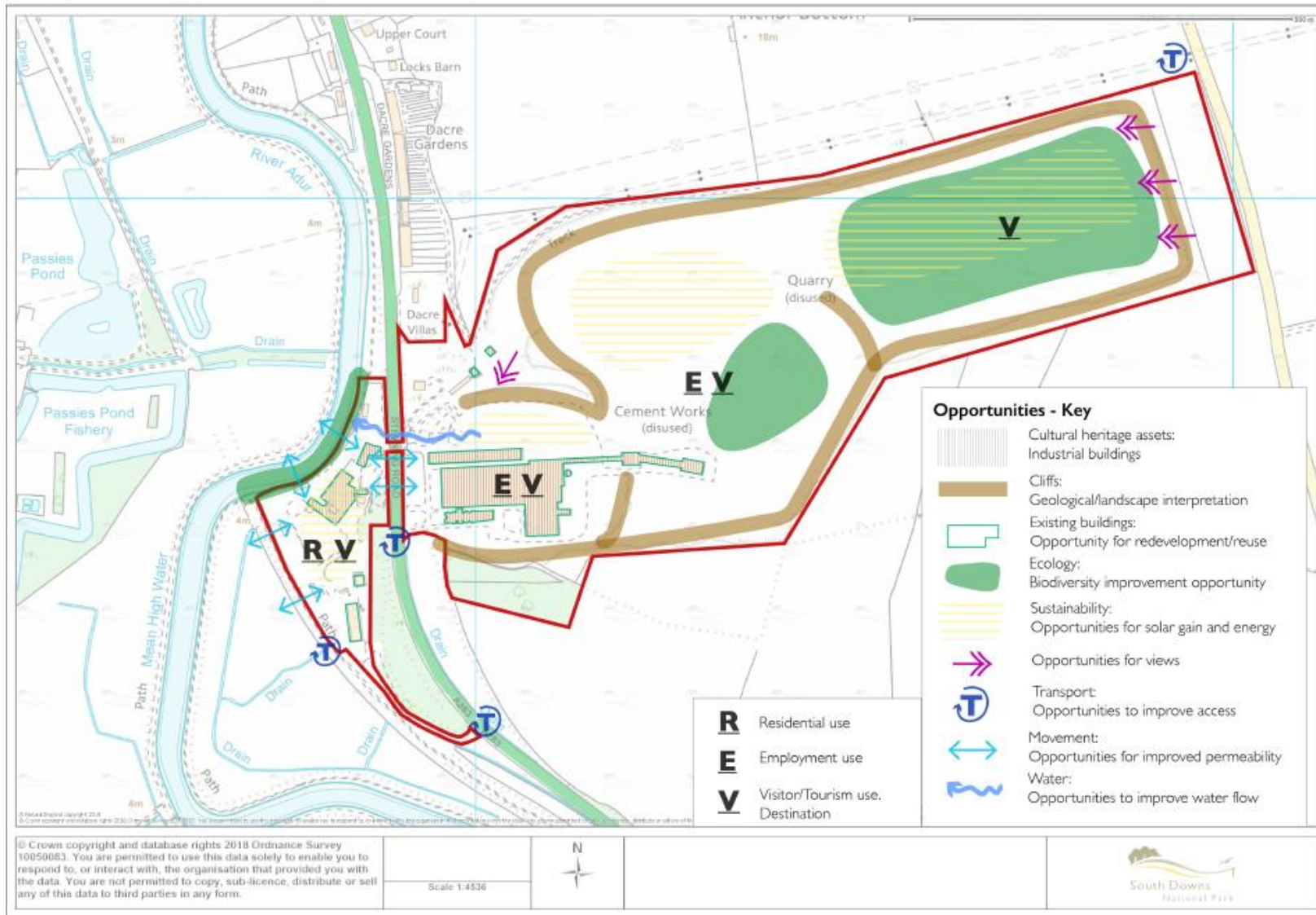
Appendix I: Planning Timeline

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

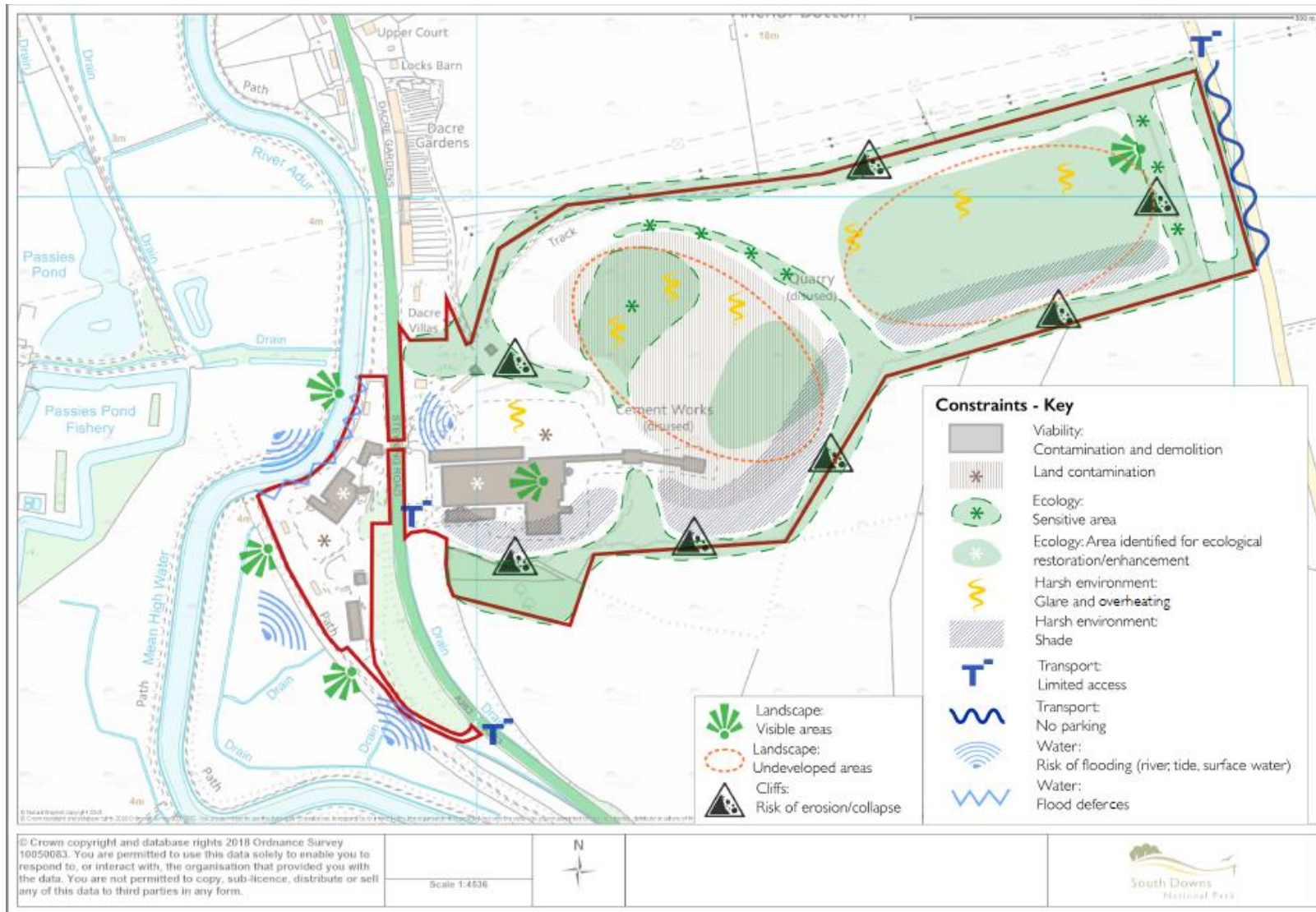
Appendix 2: Development Scenarios

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 figure 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.