Bournemouth, Dorset and Poole

Minerals Strategy

Adopted 6 May 2014

Dorset County Council

Bournemouth Borough Council

boroughofpoole.com

Bournemouth, Dorset and Poole Minerals Strategy – May 2014 (Adopted)

Foreword

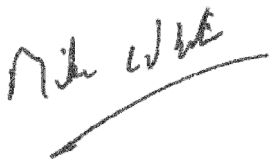
Minerals are essential to society and it is vital that a sufficient supply is maintained to provide for the needs of communities and the economy. This places a responsibility upon areas with mineral resources (such as ours) to plan effectively for the sustainable use of their mineral reserves.

The Bournemouth, Dorset and Poole Minerals Strategy (the Minerals Strategy) covers the administrative areas of the three Mineral Planning Authorities of Dorset County Council, Borough of Poole and Bournemouth Borough Council, which happens to be the same geographical area as the Dorset Local Enterprise Partnership. It sets out the strategic planning policy framework for minerals up to 2028, including a spatial steer as to potentially suitable locations for some forms of mineral extraction.

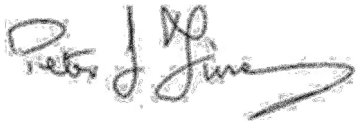
The Plan area is host to a diverse range of important minerals including Portland Stone, Purbeck Stone, ball clay, sand and gravel and oil and gas reserves. The area is also a highly challenging one for mineral extraction. Some of our mineral resources exist very close to settlements which are sensitive to quarrying activities. Furthermore, the local environment contains or is close to protected landscapes, habitats and designations, including the Dorset and East Devon Coast World Heritage Site (Jurassic Coast), two Areas of Outstanding Natural Beauty, internationally important heathlands and wetlands, and the nearby New Forest National Park (in neighbouring Hampshire), not to mention locally important assets. This has required a great deal of care in preparing the policies in this plan.

Adoption of the Minerals Strategy on 6 May 2014 provides the statutory policy framework to plan positively for minerals needs up to 2028. This will help us to manage our mineral reserves in a sustainable manner while minimising the adverse impacts of mineral extraction upon people or the environment.

David Smith - Cabinet Portfolio for Planning and Environment, Bournemouth Borough Council



Mike White – Deputy Leader and Portfolio Holder for Regeneration and Inward Investment, Borough of Poole



Peter Finney – Executive Member for Environment and the Economy, Dorset County Council

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Policy Index

1 Introduction

1 Introduction

What is this document?

1.1 This is the Bournemouth, Dorset and Poole Minerals Strategy.

1.2 The Minerals Strategy sets out the vision, objectives, spatial strategy and policy framework for minerals development in Bournemouth, Dorset and Poole. It considers the need to contribute to national, regional and local mineral requirements and seeks to balance these needs against social, environmental and economic considerations.

Status and Use of the Minerals Strategy

1.3 The Bournemouth, Dorset and Poole Minerals Strategy forms part of the development plan for all the District, Borough and Unitary authorities within Dorset.

1.4 When using this plan, note that:

- the Minerals Strategy is designed to be read as a whole
- the Minerals Strategy should also be read in conjunction with any relevant adopted local planning policy documents
- national policy guidance also applies.

1.5 The Minerals Strategy replaces a number of saved minerals policies of the Dorset Minerals and Waste Local Plan (1999). Appendix 2 provides a list of those policies which are to be replaced.

1.6 Areas designated by policies in the Minerals Strategy are defined on the Policies Map. This plan is attached to the Minerals Strategy at Appendix 3. Additional illustrative maps are contained within this document to show areas designated in greater detail.

Background

1.7 The Minerals Strategy is one of a number of development plan documents that make up the Minerals and Waste Local Plan. The minerals documents include:

- the Minerals Strategy, which includes development management policies;
- the Mineral Sites Plan;
- the Adopted Policies Map.

1.8 Other documents within the Minerals and Waste Local Plan are or will be:

- the Statement of Community Involvement, which sets out the standards and methods of consultation to be used in preparing development plan documents and determining planning applications;
- Dorset County Council's Minerals and Waste Development Scheme, which sets out the programme for preparing the Minerals and Waste Development Framework;
- Annual Monitoring Reports;
- the Waste Plan

Preparation of this document

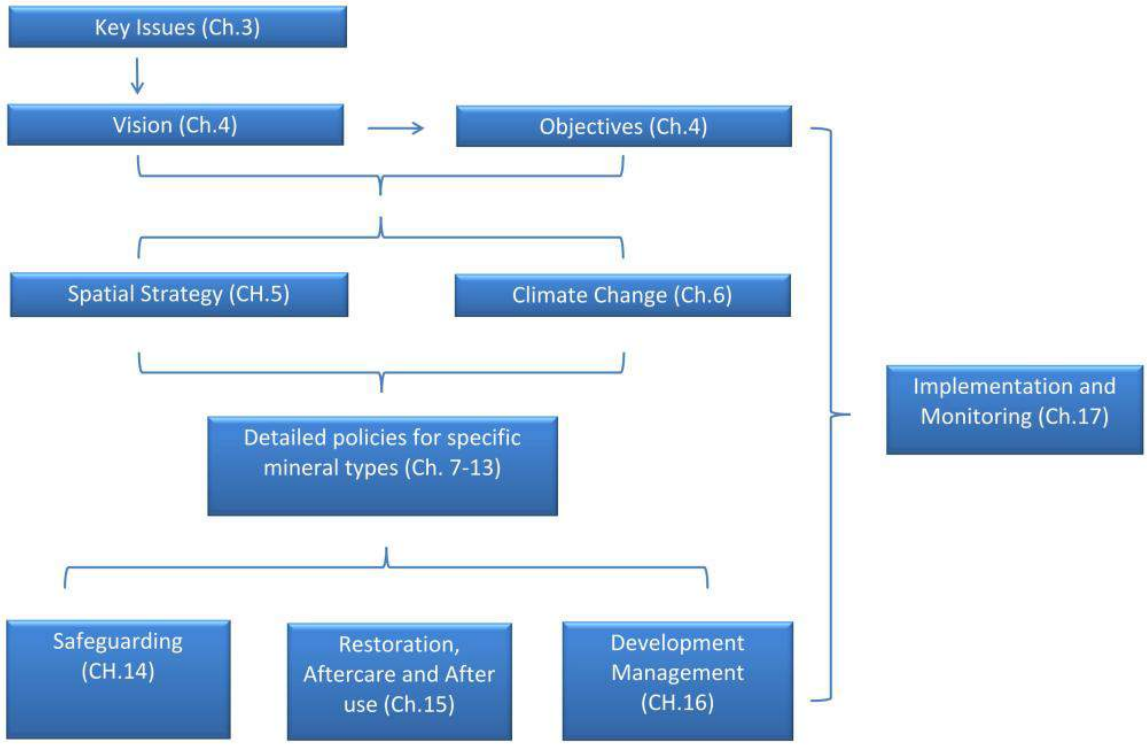
1.9 This document has been developed following ongoing stakeholder discussions and evidence gathering from an early stage. The Minerals Strategy has also been developed taking into consideration:

- the outcomes of an independent review carried out by the Planning Officers Society;
- comments made during formal consultations and informal meetings/site visits;
- the outcomes of the Sustainability Appraisal*;
- a Conservation Regulations Assessment (CRA)*;
- a Strategic Flood Risk Assessment;
- further evidence from detailed studies, surveys and reviews;
- changes as a result of meetings with specialist bodies and advisors, in particular industry representatives and development management colleagues, particularly in determining deliverability;
- the detail of policies, working particularly with internal specialist consultees.

* Further detail on these overarching appraisals/assessments can be found at the end of this chapter. Other more specific evidence/assessments are referred to throughout this document as appropriate.

1.10 The Minerals Strategy aims to address a series of key issues (see Chapter 3). The key issues are translated into six objectives (see Chapter 4) which are delivered through the implementation of the spatial strategy (see Chapter 5). Figure 1 illustrates the relationship between the key issues, objectives, spatial strategy and more detailed aspects of the Minerals Strategy.

Figure 1 Summary Diagram: Minerals Strategy



Mineral Sites Plan

1.11 The Mineral Sites Plan, once adopted, will identify specific sites for future minerals development. It will be a separate development plan document from the Minerals Strategy but will be driven by the strategies and site assessment criteria set out within it.

1.12 Work began on the preparation of the Mineral Sites Plan in July 2007. A 'call for sites' was issued to industry, landowners and agents and as a result a number of potential mineral sites were put forward for consideration. These were consulted on between October and December 2008. Work is ongoing to gather further details and fully assess these sites and any others that emerge. This work is useful evidence to support the deliverability of the Minerals Strategy and as such has been referred to where appropriate within this document.

What time period will the Minerals Strategy cover?

1.13 This plan will cover a period from adoption up to the end of 2028. The end date will influence the level of provision that will need to be made for the supply of minerals.

1.14 Although the Minerals Strategy covers a period up to the end of 2028, it is likely that a review will take place well before this time. The National Planning Policy Framework also allows for the Plan to be reviewed in whole or in part allowing it to remain up to date and respond quickly to changing circumstances. The Minerals and Waste Development Scheme sets out which minerals and waste development documents will be produced and the timetable for their preparation. This will include details of any review of the Minerals Strategy.

Overarching Assessment of the Minerals Strategy

1.15 The Sustainability Appraisal and the Conservation Regulations Assessment have been important to the development of the policies contained within the Minerals Strategy and the process of undertaking each is set out below.

Sustainability Appraisal

1.16 Delivering sustainable development is central to spatial planning. Sustainability appraisal is a means of assessing the potential impact of the Minerals Strategy and its objectives and policies on the environment, the economy and society. The appraisal is based on a framework of sustainability objectives and indicators devised through our sustainability appraisal scoping report.

1.17 Sustainability appraisal has been undertaken at each key stage in the preparation of the Minerals Strategy in order for the results to be fed into the developing policies. The full Sustainability Appraisal report is available on the council's website www.dorsetforyou.com/mcs

1.18 The impact of the Minerals Strategy policies will be monitored against the sustainability objectives. Monitoring information will be published on the council's website. These effects will influence future reviews of the policies.

Conservation Regulations Assessment

1.19 The Conservation of Habitats and Species Regulations (2010) ('the Regulations') require that a competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which (a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and (b) is not directly connected with or necessary to the management of that site, must make an appropriate assessment of the implications for that site in view of that site's conservation objectives [1].

1.20 A Conservation Regulations Assessment has been produced for the Minerals Strategy and is available from www.dorsetforyou.com/mcs

1.21 Screening of options and proposed policies took place in preparing the Draft Minerals Core Strategy, the Revised Draft Minerals Core Strategy and the Pre-Submission Draft Minerals Core Strategy.

1.22 The recommendations made in the Conservation Regulations Assessment were incorporated into the Minerals Strategy.

1 Regulation 61 (1) - Conservation of Habitats and Species Regulations (2010)

2 Background

2 Background

2.1 Minerals make an important contribution to our society and play a role in the Government's drive for sustainable communities. They provide the material needed for the development of the economy, through the construction of homes and buildings and hard infrastructure, as well as through their use in the manufacture of products and their use in fuels.

2.2 Dorset has a wide range of mineral types required locally, nationally and even internationally. The extractive industry provides economic benefits to the County, enhancing local economic development. It offers employment both directly for those working in the quarries and mines or the transport system and indirectly in other industries in the supply chain or that support the workforce.

2.3 Dorset's wealth of building stone resources make a positive contribution to the local landscape, maintaining Dorset's intrinsic character and historic buildings both within Dorset and elsewhere.

2.4 Minerals are a finite resource available only in certain locations. The Government recognises that the increased use of recycled and secondary aggregates is vital to ensure the most sustainable use of resources. Extraction of primary aggregates will still be necessary to underpin sustainable economic development.

2.5 Unlike most other forms of development, mineral extraction can only take place where the mineral occurs. The spatial distribution of mineral resources, and therefore the potential for workings, is dictated first and foremost by geological considerations rather than demand. While the locations of minerals in some cases coincide with important habitats or attractive landscapes, there is usually some degree of flexibility about the precise location of new workings, particularly for the more widespread aggregates.

Policy Context

National Policy

2.6 The Minerals and Waste Development Framework is prepared under the Planning and Compulsory Purchase Act 2004 (as amended).

2.7 At the national level, Government policy and guidance is primarily provided by the National Planning Policy Framework (NPPF) and the Planning Practice Guidance web based resource. All relevant information was taken into account in the preparation of the Minerals Strategy.

2.8 The NPPF sets out a number of objectives for minerals, which include:

- planning for a steady and adequate supply of aggregates;
- liaison between mineral planning authorities;
- maintaining landbanks for primary aggregates and other minerals; and
- safeguarding mineral resources and the minerals supply infrastructure.

Regional and Subregional Policy

2.9 The Localism Act received Royal Assent on 15th November 2011. The Act provided the Secretary of State with power to make an order to revoke the regional strategies and saved structure plan policies. Whilst at the time of preparing the Minerals Strategy the regional strategy and saved structure plan policies were in force, and have been duly considered, so was the Government's intention to revoke them. The evidence underpinning the Draft Regional Spatial Strategy for the South West was an important consideration for the Minerals Strategy but the further development of the Strategy also needed to be justified with up-to-date evidence having regard to national, sub-national and local considerations.

2.10 In particular, there remains uncertainty over future rates of overall housing and economic growth in Dorset and surrounding counties. It may be assumed, however, that any emerging spatial development strategies for Dorset will continue to reflect the principles of sustainable development and seek to concentrate a major element of growth in and around the main urban centres of south east Dorset.

2.11 The impact of the abolition of the regional planning policy framework will be critical for the Minerals Strategy in terms of regional and sub-regional aggregates apportionments. Further information is contained within Chapter 7. There is no similar regional guidance on provision for any other minerals found in Dorset.

2.12 The Mineral Planning Authority is committed to continued and regular discussions with Mineral Planning Authorities within the south west and Hampshire to the east. These authorities are seen as important to the success of the Minerals Strategy and the subsequent Mineral Sites Plan. Cross-boundary issues and mineral movements have been fully considered in developing policies. [(2)]Data has been gathered on movements of aggregates and ball clay, as outlined in chapters 7 and 8. Close regard to this will be made to ensure that steady and adequate supplies are maintained.

Local Policy

2.13 When planning for an adequate and steady supply of minerals, it is necessary to take account of anticipated development both within the plan area and in other locations which might place a demand upon Dorset's minerals. It is important to recognise that the use of nearby or locally won mineral supplies can help to reduce transport distances. There is a business imperative for reducing travel distances of aggregates used in construction because these are high in bulk but relatively low in value. This tends to restrict the extent of the market for much of sand and gravel production to a distance of no more than 40 miles from the source. Consequently, the majority of demand for aggregates will emanate from neighbouring areas. Other products such as stone are often more specialised in their application and so demand is less reliant upon planned development within and adjoining the plan area.

2 See Submission Document 9: Local Strategy Statement

2.14 There are two key questions which consideration of development levels helps to address:

- Are there any proposals in adopted or emerging development plans which would be likely to sterilise significant minerals reserves within the plan area?
- Are the levels of growth planned locally and beyond likely to result in a marked increase in minerals demand over and above that which is planned for?

2.15 Ongoing liaison with local authorities in Bournemouth, Dorset and Poole will ensure that planned development is unlikely to sterilise critical minerals supplies and that safeguarded areas take account of factors which would limit mineral extraction. Chapter 14 of the Minerals Strategy also includes a more formal means of consultation on planning applications. Minerals Consultation Areas are established within which district/borough councils will be required to consult the Mineral Planning Authority if an application is made for non-minerals development that could lead to sterilisation of mineral resources.

2.16 Development planned in other areas can also have a bearing upon demand for minerals, especially for sand and gravel. The neighbouring areas of Devon, Somerset, Wiltshire and Hampshire are most relevant as they account for the majority of 'external' demand for sand and gravel.

2.17 Whilst there is potential for growth within Dorset and beyond, it does not represent a marked increase from previous growth assumptions which would have informed regional apportionment figures for aggregates. This provides a good degree of confidence that the provision for minerals set out in this strategy should be sufficient to cope with planned growth in and around the area.

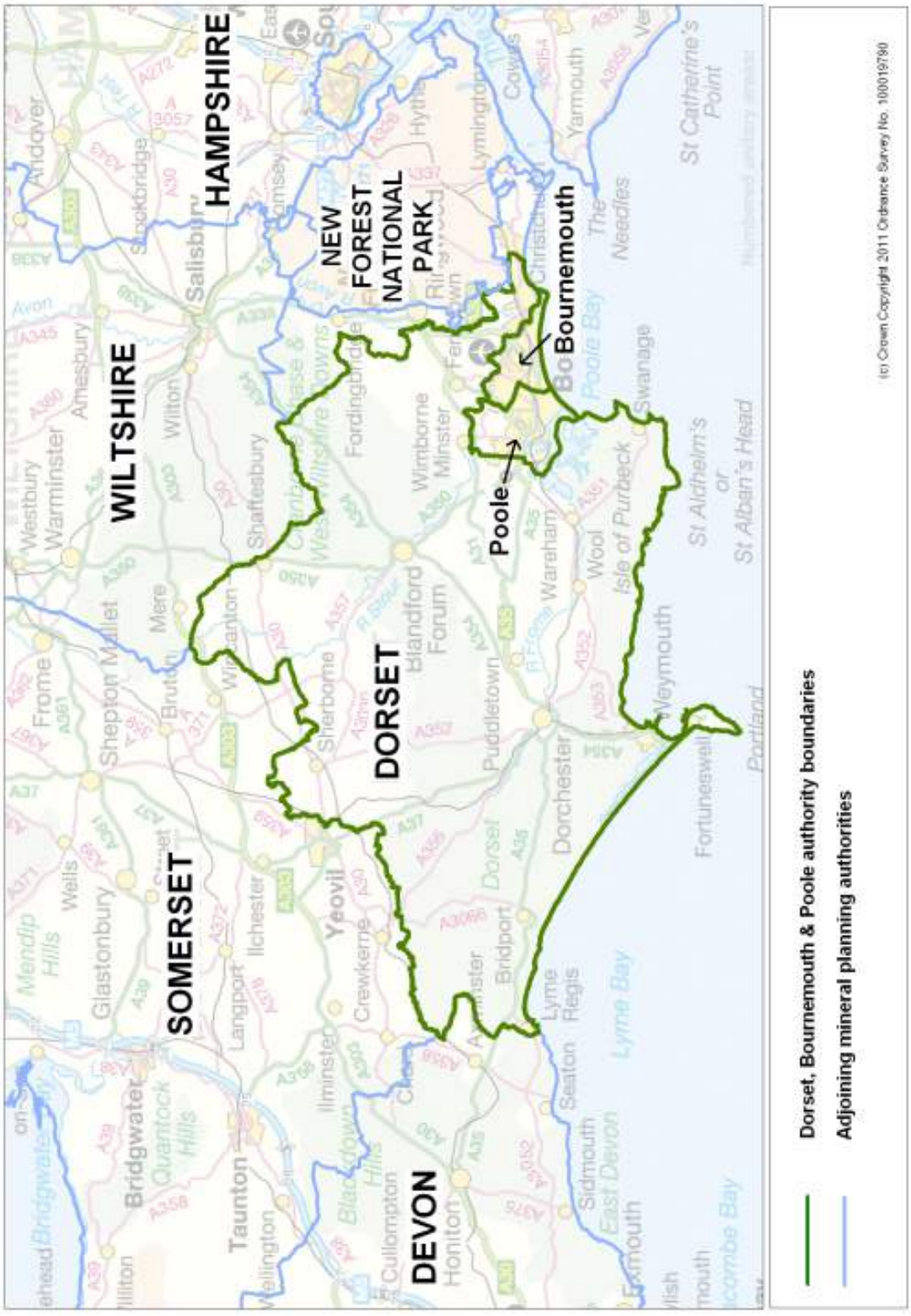


Figure 2 Dorset in context

Community Strategies

2.18 The purpose of community strategies is to identify issues and opportunities important to local communities and to identify actions that will be taken or measures that will be put in place to address these. Community strategies are therefore relevant to local spatial planning. They may not be so relevant in the future with the introduction of Neighbourhood Plans.

2.19 In Dorset, community strategies have been prepared for Dorset, Bournemouth and Poole, as well as each district council. North Dorset also contributes individual community strategies based on market towns, which come together within an umbrella community partnership. Each of these community strategies have been reviewed and Table 1 summarises the main issues and objectives relevant to minerals planning.

Table 1 Objectives of Community Strategies Relevant to Minerals Planning

Issues	Objectives	Relevance to the Minerals Strategy
Protect Dorset's environment	Protect and enhance biodiversity Conserve landscape character Develop in suitable areas Support measures to reduce flooding and coastal erosion Provide access to the countryside	Potential for conflict between minerals extraction and the protection of Dorset's Environment. There is however the opportunity, through minerals extraction, to achieve some benefits through restoration.
Reduce transport impacts	Reduce congestion Promote sustainable transport options	Potential for conflict between minerals transportation and the objective to reduce transport impacts.
Provision of housing and infrastructure	Provide a variety of housing	Extraction of materials for use in construction, delivered through this strategy, is essential to achieving this objective.

Maintain and enhance the quality of the built environment	Preserve built heritage Supply locally sourced materials	Provision of local stone, delivered through this strategy, is essential to achieving this objective.
Encourage sustainable economic development with minimum use of resources	Support creation of jobs Support and promote tourism and land-based industries	Minerals extraction will support the creation/maintenance of jobs however there may be potential conflicts with tourism and other industries through the impacts of extraction.
Efficient use of natural resources	Reduce water use Increase recycling Increase use of recycled materials and use of materials from sustainable sources	Direct conflict through the extraction of primary aggregates. There will be a contribution through increased aggregates recycling.
Reduce carbon footprint	Reduce emissions	Potential for conflict between minerals extraction and the reduction of emissions.

3 Spatial Characteristics

3 Spatial Characteristics

Spatial Portrait

3.1 Dorset is located on the south coast of England. It is a largely rural county with large expanses of highly valued countryside. The total area of the county, including Bournemouth and Poole, is 265,273ha, which is home to a population of 710,500. 62% of the population lives in the South East Dorset conurbation, centred on Bournemouth and Poole. Weymouth (population: 50,900) is the next largest urban area. Elsewhere the county has a relatively sparse population.

3.2 The quality and variety of the landscape of Dorset is recognised through the designation of much of the county as Areas of Outstanding Natural Beauty (AONB), whilst its long and largely unspoilt coastline is protected as Heritage Coast and a World Heritage Site (with East Devon). In ecological terms, the county has a rich diversity of habitat types, including chalk downland, lowland heath, river valleys, wetland, cliffs and beaches.

3.3 A large portion of Dorset, stretching from Dorchester east to the Hampshire boundary comprises low undulating countryside, crossed by the rivers Frome, Piddle, Stour, and the Moors and Avon Valleys. It contains the surviving parts of heathland which have been greatly reduced over the years by agriculture, afforestation and urban development. The ecological importance of the heathland is outstanding, containing internationally rare plant and animal species.

3.4 An extensive swathe of chalk downland runs across Dorset from northeast to southwest and through the south of the county round Weymouth to Purbeck. It is characterised by wide, rolling, rounded hills with steep-sided valleys, and is almost entirely within the area of the two AONBs. Arable farming is the dominant use. Much of the little unimproved downland that remains on the steeper slopes are Sites of Special Scientific Interest (SSSI).

3.5 To the north west of the chalk scarp are clay vales where dairy farming is the main land use. The landscape in this area is wooded, with small fields and low hills. The main ecological value is in the deciduous woodland, hedgerows and watercourses and the remaining areas of unimproved grassland.

The main characteristics of the Plan area include:

- a valued diversity of landscapes, with 53% of the county designated as two AONBs as shown in Figure 3.

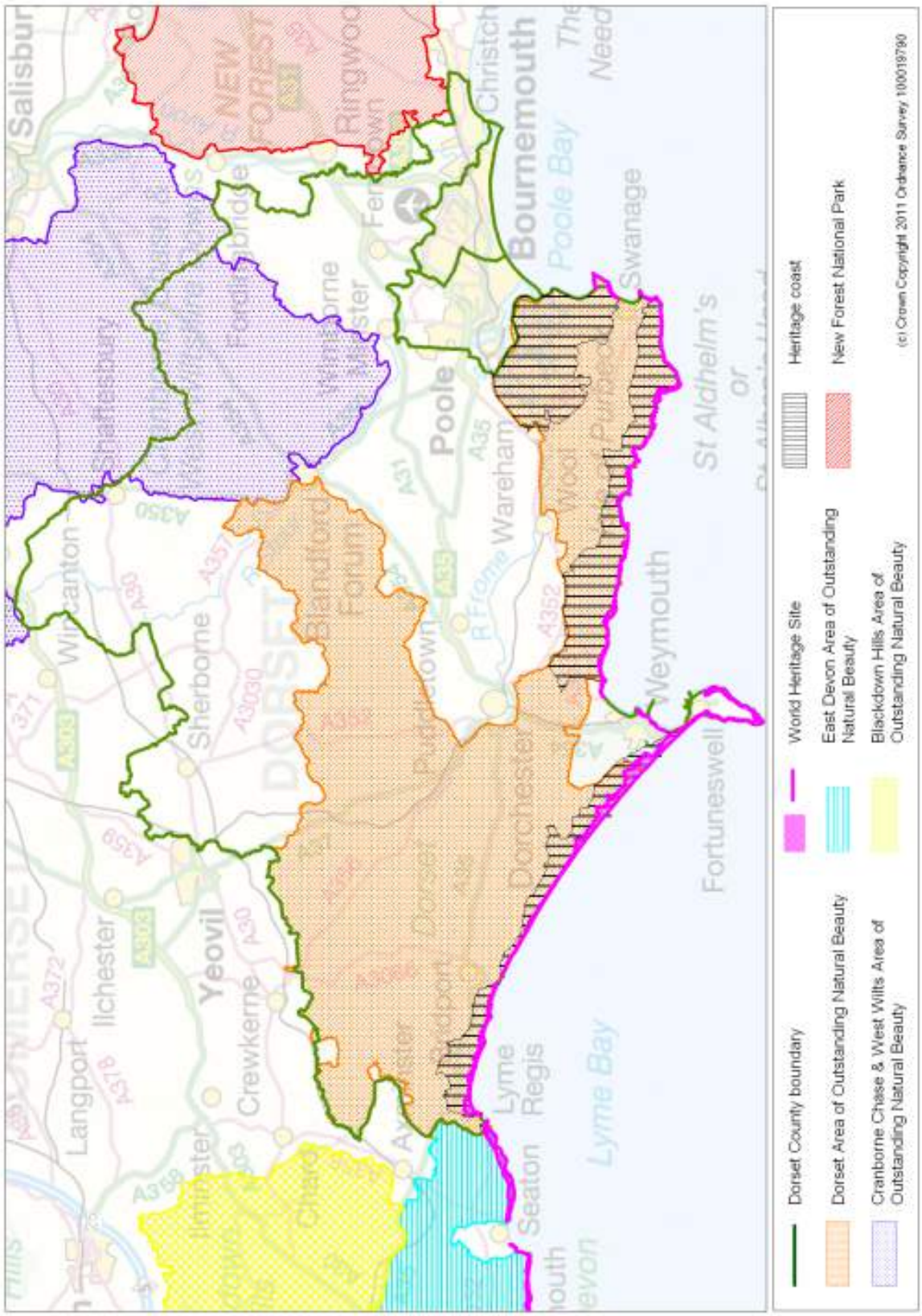


Figure 3 Landscape Designations

- the first natural World Heritage Site in the country, the Jurassic Coast, designated for its geology and geomorphology, and an extensive Heritage Coast, managed to conserve its natural beauty;
- a county containing large areas protected for their biodiversity interest, with almost 20,000 hectares designated as SSSI. Furthermore, 11% of the UK's rare lowland heath is located in Dorset and virtually all of this land is designated at a European level as a Special Protection Area (SPA), and at an international level as a Ramsar site. Much of the area is further designated across two Special Areas of Conservation (SAC). Figure 4 shows the distribution of Natura 2000 designations in the county;
- a rich heritage of prehistoric sites, conservation areas, listed buildings and historic parks and gardens;
- a wealth of wetlands, with 5% of England's reedbeds and some stunning rivers and streams. Other important wetland habitats include wet grasslands, fens and marshes. Some of Dorset's rivers are particularly special as they are chalk streams – a globally rare habitat;
- important aquifers and groundwater protection zones which are present in locations around the Plan area;
- continuing population growth, largely due to in-migration, with the South East Dorset conurbation specifically identified for housing growth;
- a stable economy driven by the diverse mix of sectors and by the balance of service and manufacturing businesses;
- an economy dominated by the South East Dorset conurbation and centred on tourism, retailing, education, advanced engineering, business services and finance. Outside the conurbation, the economy of other towns is principally focused on tourism, creative and agricultural based industries. In addition, the county town of Dorchester is largely service based;
- a network of transport routes linking the main towns. However, good quality north-south transport links are generally absent; there is poor and unreliable access to national transport networks, particularly to the north and from the western part of Dorset, towards Hampshire / London. There is also poor access to the Port of Poole due to congestion. The A31/A35 trunk road is a critical access route to the strategic network but suffers severe capacity issues, particularly at Wimborne, Ferndown, Ringwood and Bere Regis. In the west of the county this route passes through sensitive landscapes and communities, which imposes severe environmental constraints;
- important gateways to and from the South East Dorset conurbation which include Bournemouth Airport, the Port of Poole and generally adequate road and rail links to London and the south-east, but links to the north and rest of the south-west are poorer;
- three railway lines running through Dorset and further port facilities at Weymouth and Portland;
- The New Forest National Park situated adjacent to the eastern boundary of the Plan area.

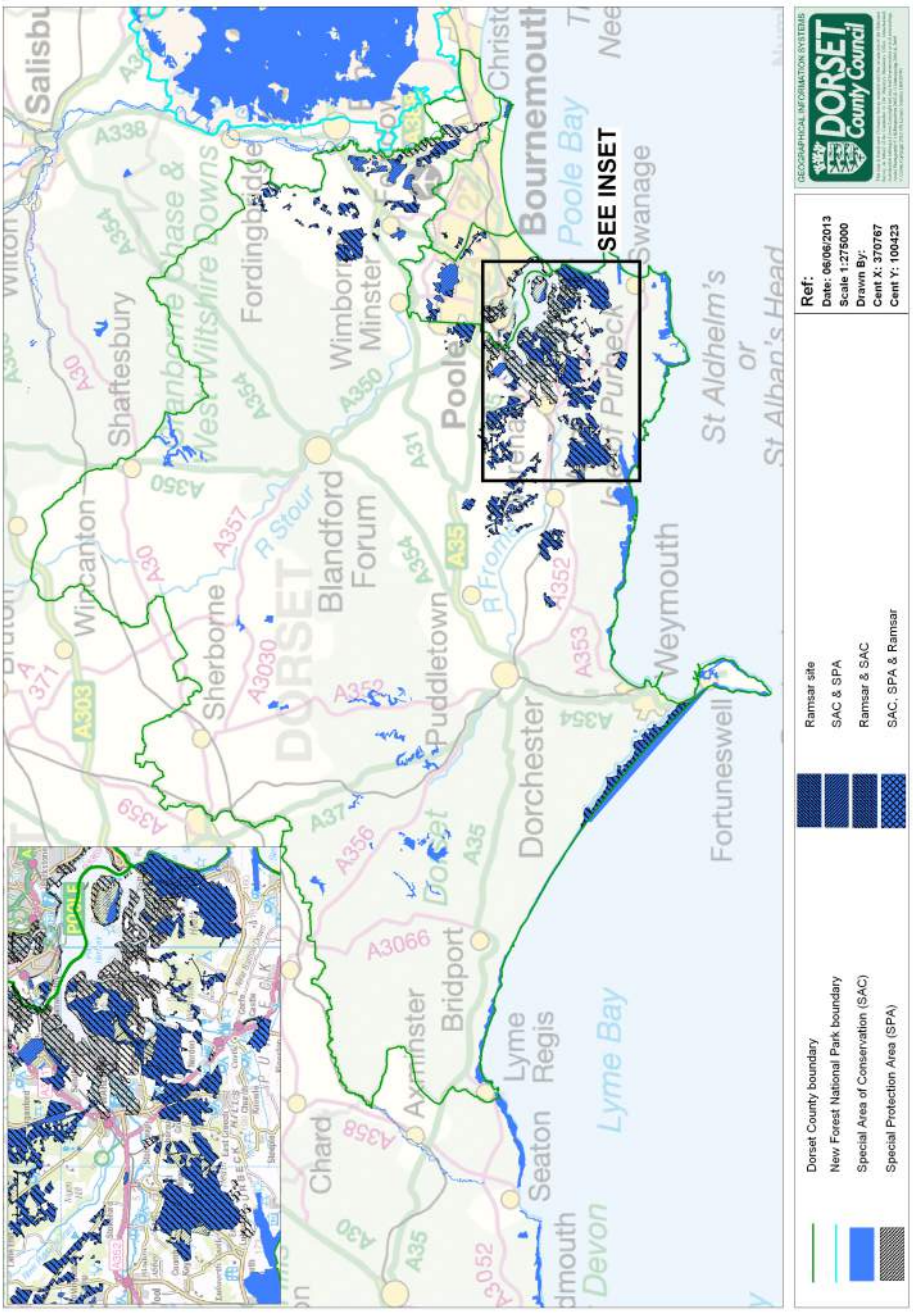


Figure 4 Natura 2000 Designations

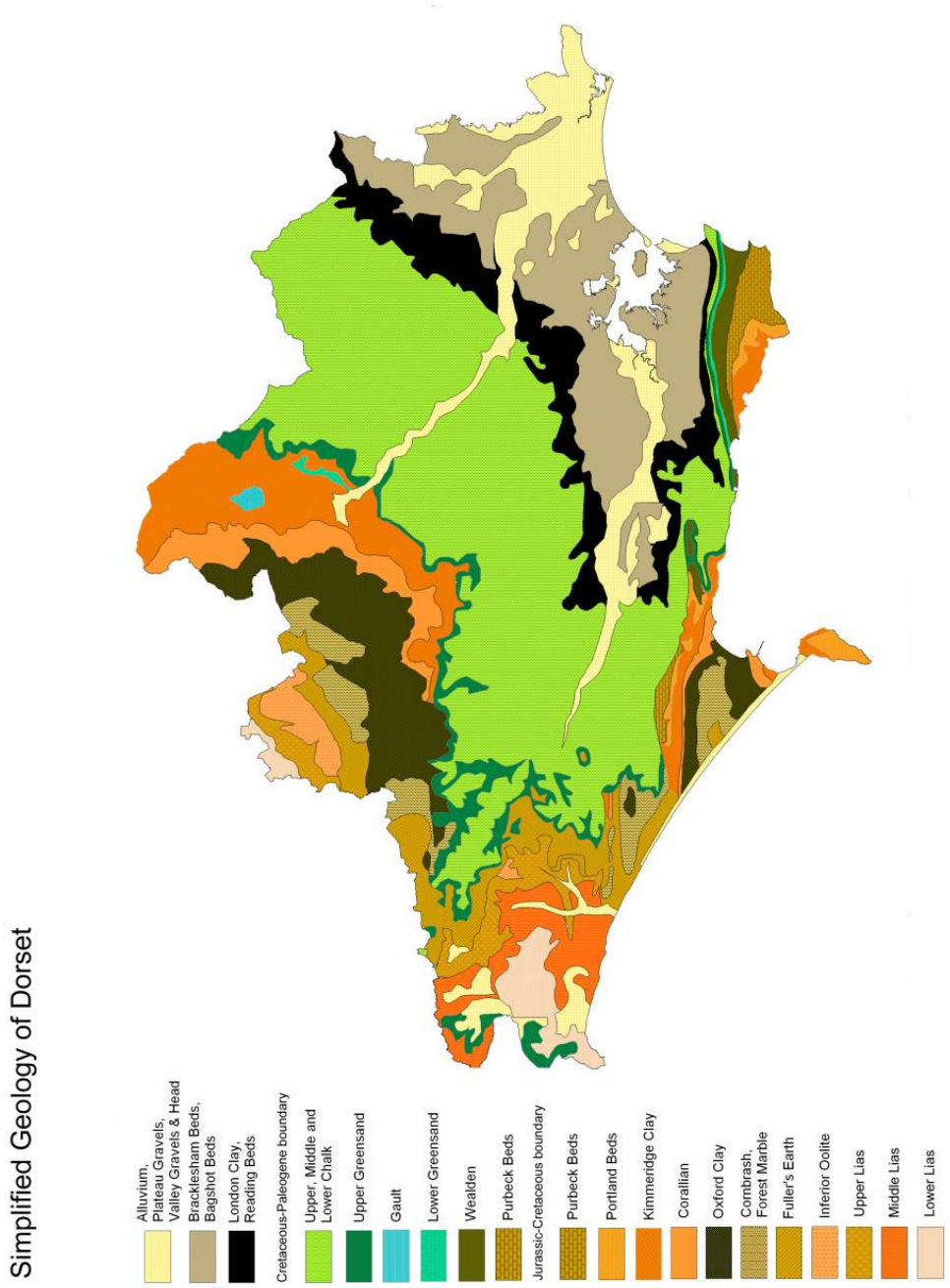


Figure 5 Simplified Geological Map of Dorset

Geology and minerals

3.6 Dorset's varied geology (see Figure 5) is a major determinant of the landscape and its character, contributing to its visual attractiveness, recreational value, ecological interest and agricultural productivity. Its geology also means that Dorset is a mineral rich county with a diverse range of resources, including some that make an important contribution to the county's economy.

3.7 As such the extraction of mineral resources is tightly constrained by the valuable landscape and nature conservation interests in the county and adjoining counties. Much of the Purbeck Stone and ball clay resource is located within the Dorset AONB and is within or close to the Heritage Coast. Purbeck Stone and Portland Stone forms part of or is in close proximity to the Jurassic Coast. Much of the sand and gravel bearing areas coincide with important landscapes and designated habitats, but much also lies in areas where there are opportunities to avoid or mitigate against the adverse impact of development by recreating habitats such as lowland heath.

3.8 The county contains deposits of both sand and gravel and underlying Poole Formation sands. The county is also a moderate producer of crushed rock, which is sourced from both Portland and Purbeck. Dorset's sand and gravel resources are largely concentrated in the South East area of the county. Urban development and population also concentrate here, and the built-up area sterilises much of the deposit.

3.9 The majority of building stones found in Dorset are limestones. The Isle of Portland provides the nationally important resource of Portland Stone. Additionally, Purbeck Stone, found in the Isle of Purbeck, is an important and distinctive local, and to some degree, national building stone resource. The quarries tend to be small-scale operations scattered about the area, and are part of the cultural and industrial heritage of Purbeck. Purbeck Marble is also found and is of national significance.

3.10 The Corallian formation, Inferior Oolite, Cornbrash and Forest Marble are found in west and north Dorset. The sandstones of the Cretaceous and Palaeogene (formerly the Tertiary) periods are found in west, north and south Dorset. Dorset's architectural heritage is largely due to the use of this variety of local stones.

3.11 Dorset contains one of only three areas in the country containing internationally important ball clay. This is located in the Wareham Basin.

3.12 The country's largest onshore oil field is found in the Wareham Basin. Permission has also been granted for one of the country's largest underground gas storage schemes at Portland.

3.13 Poor transport links present a problem, particularly for Purbeck stone and other building stones, as well as ball clay, located away from the strategic transport routes. Dorset has one wharf at Poole, handling marine dredged sand and gravel, one railhead at Wool for loading sand sent to London by train and one rail depot at Hamworthy (Poole), bringing crushed limestone from the Mendips.

Benefits of Mineral Extraction

3.14 The mineral industry in Dorset enhances local economic development by offering employment both directly for those working in a quarry or the transport system and indirectly in other industries in the supply chains or that support the workforce.

3.15 In addition, the provision of local Purbeck, Portland and other building stone maintains the intrinsic character of Dorset enabling historic and heritage buildings to be repaired or refurbished in traditional materials. New buildings can also be built in vernacular materials. It also allows traditional masonry skills to be maintained.

3.16 Although the negative impacts of mineral extraction are well documented and can include increased traffic generation, landscape, biodiversity and amenity impacts, mineral extraction has the benefit of providing positive opportunities. By working closely with the quarrying companies, new sites and extensions can be selected so that they provide benefits such as biodiversity enhancement and new recreational facilities. In Dorset, the creation of lowland heath as part of restoration schemes has been successful in a number of cases.

3.17 While there is not always going to be a choice over location, the minerals industry is encouraged to look for sites which will provide opportunities to contribute to Dorset's Biodiversity Strategy and green infrastructure network.

3.18 Finally, the increased use of recycled material extends the life of reserves and therefore results in fewer new quarries or quarry extensions being required.

Key Issues

3.19 The focus of the Minerals Strategy is to identify and resolve a series of key, strategic, spatial issues. These issues are the primary tasks that the Minerals Development Framework will need to tackle, although the Plan also addresses many other important and locally specific issues. The key issues are not necessarily specific to Dorset but their resolution will require a debate of the relevant local circumstances.

3.20 A range of issues pertinent to the Plan were developed through early stakeholder involvement. These issues were later refined through consultation. The key issues the Minerals Strategy needs to address were then defined and are set out below. The issues are explored in greater detail within the chapters that follow.

Key Issue 1

Facilitating the increased production of recycled aggregates in the most suitable locations.

Key Issue 2

Planning for an appropriate, robust and flexible level of aggregates provision having regard to demand.

Determining the most appropriate and sustainable locations for the extraction of aggregates in Dorset

Key Issue 3

Maintaining continued supply of ball clay, a mineral of national and international importance, whilst safeguarding and enhancing landscape and ecology importance.

The need to access a range of saleable clays, at one time, in order to produce blends of ball clay led by industry demand.

Key Issue 4

Identifying the most appropriate locations to maintain provision of Purbeck Stone, a building stone of national and local heritage significance, in an area of high landscape sensitivity.

The need to access the range of Purbeck Stone beds in order to meet demand whilst establishing a scale of extraction appropriate to the sensitive area.

Key Issue 5

Maintaining plandrovision of Portland Stone for its heritage significance and use as a principal building stone in an area extensively and historically quarried.

The impact of surface quarrying on the landscape, environment and local amenity due to lack of control over operations, including restoration, with virtually all of the permitted area covered by one old planning permission with minimal conditions.

Key Issue 6

Determining which minerals and minerals extraction/processing/transportation sites should be safeguarded and how should this be achieved.

Key Issue 7

Maintaining a continued supply of onshore hydrocarbons from within licensed areas, whilst safeguarding and enhancing landscape, areas of ecological importance and amenity interests.

Key Issue 8

Achieving high quality restoration, at the earliest possible opportunity, as an integral part of all minerals development. Ensuring restoration and afteruse is considered within the context of, and contributes to, the surrounding landscape character and local ecological interests.

4 Vision and Objectives for Mineral Extraction in Dorset

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4.1 The vision for the Minerals Strategy has been developed through a combination of stakeholder forum debate and structured consultation periods. The vision reflects the key issues that the Minerals Strategy will deal with in relation to the provision of aggregates, ball clay, Purbeck and Portland Stone, onshore oil and gas (hydrocarbons) and recycled aggregates.

A Vision for Mineral Extraction in Dorset

By 2028, the supply of minerals from and into Dorset will have supported Bournemouth, Dorset and Poole's continuing economic and population growth (which will be concentrated in South East Dorset) and the development of sustainable communities.

An adequate and steady supply of Dorset's minerals will have been secured efficiently and in environmentally acceptable ways.

The plan will have supported the sustainable production of oil and gas and the extraction of aggregates and ball clay.

Continued provision of building stones of heritage importance, including Purbeck and Portland Stone, will have been made. Quarries across the Purbeck plateau will be suited to their immediate, distinctive, limestone landscape and Portland Stone working will have seen a shift to underground mining, with the most sensitive areas of the island having been protected from surface quarrying.

The production and use of higher quality recycled aggregates as a substitute for primary aggregates will have increased.

The above will have been achieved whilst protecting local communities, enhancing the places in which people live, and protecting and enhancing the area's unique natural and built environment, including the AONBs, the Jurassic Coast World Heritage Site, the internationally and nationally designated ecological and geological sites and Dorset's many heritage assets.

At the end of the plan period, mineral workings in Dorset will be making their contribution to the mitigation of and adaptation to climate change through the efficient use of resources, positive restoration of worked and completed sites, the sustainable transportation of mineral resources and the provision of materials for flood defences and coastal protection and stability.

4.2 The remainder of this plan explains the strategy for delivering this vision. The Minerals Strategy should be based on a set of clear objectives for minerals development. The objectives help to implement and deliver the spatial vision and are translated into a spatial strategy and core policies.

Objective 1

To support the economy of Dorset through the steady supply of aggregates, ball clay and hydrocarbons. To contribute to the development of sustainable communities by securing an adequate and steady supply of Dorset's minerals required to construct their infrastructure and buildings and to manufacture the goods they require.

Objective 2

To strengthen the distinctiveness of Dorset's built environment by ensuring the supply of local sources of building materials including Portland and Purbeck Stone.

Objective 3

To ensure the most efficient and appropriate use of all resources through:

- the prudent and sustainable use of minerals
- recycling of construction and demolition waste as aggregate, and the production and use of higher quality recycled aggregates as a substitute for primary aggregates
- encouraging the best use of high quality minerals for the purposes for which they are most suitable and for which there are no more sustainable alternatives.

Objective 4

To maximise the opportunities for environmental enhancement offered through the restoration of worked sites and outside worked areas to enhance Bournemouth, Dorset and Poole's unique natural environment, historic environment and potential for recreation. This will be achieved at the earliest possible opportunity.

Objective 5

To ensure that adverse impacts of mineral working on the environment, local communities, businesses and tourism are minimised and that Natura 2000 sites are protected and enhanced appropriately in accordance with the Habitats Regulations.

Objective 6

To prevent the unnecessary sterilisation of valuable mineral resources and negative impacts of incompatible development on existing minerals operations or facilities.

5 The Overall Strategy for Minerals Provision

5 The Overall Strategy for Minerals Provision

5.1 One of the key features of the planning system is to ensure that the spatial aspects of development are properly considered. The main purpose of the Minerals Strategy is to plan for sufficient minerals extraction and associated development to meet the needs of the economy and society, whilst minimising impacts on environmental assets and amenity.

5.2 The Government is committed to ensuring that the planning system does everything it can to support sustainable economic growth and a sustainable future. Planning must operate to encourage growth and not act as an impediment. At the heart of the planning system, reflected in the NPPF, is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan making and decision taking. New development should be planned for positively and individual proposals approved wherever possible, within a timely manner.

5.3 The Minerals Strategy has been prepared using the best available evidence to assess reserves and future demand whilst building in sufficient flexibility to respond to changing circumstances without the need for policy review.

5.4 To achieve this, the Minerals Strategy identifies in general terms where and how much mineral development is to take place within the plan period. The spatial strategy explained in this chapter underpins the approach taken. The detail and justification for the spatial strategy is provided in the relevant mineral chapters which follow.

5.5 In the case of minerals planning, any strategy is constrained by the fact that minerals can only be worked where they occur and some resources are sterilised by other development. The options therefore for a spatial strategy for mineral extraction and associated development are prescribed to a large extent by the geological distribution of mineral resources within Dorset.

5.6 The Spatial Strategy is set out below and is illustrated on the Key Diagram (Appendix 4).

Spatial Strategy

i. **Providing an adequate and steady supply of a range of minerals** - Dorset has a wide range of mineral types, including aggregates, clay, building stone and industrial and energy minerals some of which are unique to the county. With each mineral type comes a different set of issues and strategies although generally it is intended to continue supply unless this would result in unacceptable environmental impacts. Cross boundary mineral movements, recycled aggregates and marine dredged sand and gravel make an important contribution to a sustainable supply of minerals. Safeguarding will be the tool to ensure that mineral resources are protected from sterilisation by incompatible development.

ii. **Providing a continued supply of aggregates** - The continued extraction and supply of sand and gravel and crushed rock is strategically important to the construction industry both in Dorset and beyond. Around 50% of the sand and gravel extracted in Dorset is exported to other authorities in the south west and to the south east of England. A similar amount of sand and gravel and crushed rock is brought into Dorset from surrounding counties. Work has been undertaken to determine the most appropriate level of provision of aggregates in order to achieve continuity of supply. Provision will be made to maintain a landbank of permitted sand and gravel reserves equivalent to at least 7 years' worth of supply over the period to 2028, based on the current agreed local annual supply requirement. In 2011, this was 1.58 million tonnes of sand and gravel, equating to approximately 9.36 million tonnes over the plan period, through the identification of specific sites from within two resource blocks. These resource blocks identify the spatial distribution of the sand and gravel resource, excluding major constraints. With regards to crushed rock the existing landbank (held in sites on Portland and Purbeck) is adequate to meet demand at the rate of the agreed local annual supply requirement (in 2011, 0.27 million tonnes per annum) up to 2028 and therefore no new sites will be identified unless exceptional circumstances can be demonstrated.

i. **Maintaining an adequate and steady supply of ball clay** - Ball clay is an industrial mineral which is of national and international importance because of its special qualities and rare occurrence. Its presence within the Wareham Basin (one of only three locations in the country) coincides with heathlands of European importance and the Dorset AONB. Further extraction of ball clay is supported to ensure provision of the range of grades demanded by industry, within environmental constraints. Provision will be made for up to 2.5 million tonnes of ball clay during the plan period, through the identification of specific sites in the Mineral Sites Plan. Extraction will be directed towards the 'Areas of Less Sensitivity' although to ensure an adequate and steady supply of the range of grades of clay, sites will be required within the wider ball clay consultation area.

ii. **Maintaining an adequate and steady supply of Purbeck Stone from within an area of search** - Purbeck Stone is another mineral of national importance. The entire resource is situated within the Dorset AONB. Future extraction of the range of Purbeck Stone beds is supported in order to provide an adequate and steady supply. This is particularly important for heritage purposes. New quarries should however be generally dispersed and designed to respect the character of the distinctive limestone landscape. Provision will be made for an average of at least 20,000 tonnes per year, taking into account landscape, environmental and other constraints, equating to 102,000 tonnes in total over the plan period. This provision will be made through a combination of the identification of sites in the Mineral Sites Plan and a criteria-based approach within a defined area of search

iii. **Encouraging a shift from surface quarrying of Portland Stone to mining** - Quarrying of the nationally important Portland Stone is a long established industry and continued extraction is supported. Due to the history of the consents, there have been continuing impacts on the environment and local amenity. Whilst there are existing permitted reserves of dimension stone sufficient to cover the plan period, mining as an alternative to surface quarrying is actively encouraged in order to minimise impacts. A strategy for seeking improvements to the old planning permission and directing working away from sensitive areas where possible is set out. This is illustrated spatially through the identification of areas where it is considered that surface quarrying would create a significant impact on the environment and/or amenity and by highlighting potential areas for mining.

Delivering the Strategy

5.7 The Mineral Sites Plan will develop this Strategy further by identifying specific sites. The Mineral Sites Plan will provide a level of certainty to local residents, the minerals industry, land and minerals owners and other interested stakeholders as to where future minerals development is likely to take place.

5.8 Until the Minerals Sites Plan is adopted the policies in this plan will provide guidance to determine applications as they come forward.

Presumption in favour of sustainable development

5.9 The National Planning Policy Framework (NPPF) sets out a presumption in favour of sustainable development which places an onus upon planning authorities to take a positive and proactive approach to development that improves economic, social and environmental conditions in the area. The Minerals Strategy has been prepared having regard to the importance of planning positively to support sustainable development in accordance with the NPPF. This is reflected in Policy SS1.

Policy SS1 - Presumption in Favour of Sustainable Development

When considering development proposals the Mineral Planning Authority will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework (NPPF). It will always work proactively with applicants jointly to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area.

Planning applications that accord with the policies in this Local Plan (and, where relevant, with polices in Neighbourhood Plans) will be approved without delay, unless material considerations indicate otherwise.

Where there are no policies relevant to the application or relevant policies are out of date at the time of making the decision then the Mineral Planning Authority will grant permission unless material considerations indicate otherwise – taking into account whether:

- any adverse impacts of granting permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in the NPPF taken as a whole; or
- specific policies in that Framework indicate that development should be restricted.

Identification of Specific Sites in the Mineral Sites Plan

5.10 Policies for the provision of aggregates, Purbeck Stone and ball clay include an amount of material that will be provided for in order to maintain supply. This provision will be made up of permitted reserves and specific sites identified in the Mineral Sites Plan.

5.11 Specific sites, identified in the Mineral Sites Plan will be shown on an Ordnance Survey map base with the specific site boundaries drawn. Unless otherwise stated within this document, these sites will be preferred for mineral extraction and/or aggregates recycling over other non identified sites and planning applications for development of specific sites are likely to be considered as acceptable. Specific sites will be based on the spatial strategies included in the Minerals Strategy, subject to further assessment of potential impacts.

5.12 Sites will be assessed by the Mineral Planning Authority using the deliverability questions and site selection criteria set out in Appendix 1 of this document. Careful site selection is a key issue for sustainable development - the need for the extraction of mineral must be assessed against impacts on the environment and the local community. The criteria have been developed through consultation as a means of measuring the potential impacts of each site in a consistent manner and will be used as a tool to carry out the sustainability appraisal process. The 25 criteria cover a range of potential impacts, including, for example, landscape, air quality, economic development and impacts on settlements.

5.13 Where necessary, potential sites will be subject to appropriate assessment under the Conservation Regulations. Detailed assessment of ecological and hydrological implications on European nature conservation sites of mineral extraction will be necessary to support sites to be taken forward into the Mineral Sites Plan. The Mineral Sites Plan as a whole will also be subject to Conservations Regulations Assessment and Sustainability Appraisal, which will include assessment of cumulative impacts.

5.14 Applications for minerals development for those sites identified within the Minerals Sites Plan will be permitted provided that the application demonstrates to the satisfaction of the Minerals Planning Authority that the proposal complies with the relevant policies of this Plan. Applicants will also be encouraged to enter into pre-application discussions to ensure that, as far as possible, applications will be acceptable. Discussions should be undertaken both with the Mineral Planning Authority and other stakeholders including the local community as appropriate.

5.15 The Mineral Planning Authority has reasonable confidence that sites will be identified and permitted to maintain supply of minerals and achieve the levels of provision set out in the various polices. Chapter 17 outlines the proposed mechanisms for monitoring the effectiveness of the Minerals Strategy. If monitoring shows that the identified need is unlikely to be delivered, it may become necessary to review the strategy/policies.

Sites Not Identified in the Mineral Sites Plan

5.16 It is anticipated that the Mineral Sites Plan will be able to identify sites for the extraction of aggregates. However, for other minerals such as Purbeck Stone and ball clay, it is acknowledged that it may not be possible, for geological reasons, to identify sufficient sites to meet the need for all grades of stone/clay for the plan period. Where sufficient reserves cannot be identified the relevant chapters contain guidance on how to deal with applications for sites that would make up any shortfall in provision. When dealing with these applications consideration will be given to permitted reserves and allocated sites in order to determine whether there is a need for further sites and to assess any potential cumulative impacts of the development. In the case of aggregates the landbank will be an important indicator of need.

5.17 Where sites come forward that are not identified within the Mineral Sites Plan they will need to comply with all the relevant policies within this plan. The specific minerals policies and more general policies contained within the Minerals Strategy provide a sound basis for assessment. Any applications for sites that are not identified in the Mineral Sites Plan must be supported by a satisfactory level of evidence. It would be in the applicant's best interests to provide evidence that they have applied the site selection criteria to their proposed site.

Policy SS2 - Identification of Sites in the Mineral Sites Plan

The Mineral Planning Authority will use the Mineral Sites Plan as the vehicle for the identification of specific sites wherever possible, having regard to the policies in the Minerals Strategy, the site selection criteria and the presumption in favour of sustainable development as set out in the National Planning Policy Framework (NPPF).

Specific sites will be where viable mineral resources are known to exist, where landowners are supportive of mineral development and where any planning applications made are likely to be acceptable in planning terms.

Permission will be granted for unallocated (windfall) sites where it can be demonstrated that there is a need that cannot be met within allocated sites and where development would not prejudice the delivery of allocated sites.

6 Climate Change

6 Climate Change

Introduction

6.1 Climate change is creating the biggest challenge yet to the plan area's environment, and the way of life of its residents now and in the future. There is widespread agreement that climate change is happening and is strongly influenced by human behaviour. Urgent action is needed to alter this behaviour and to consider how to adapt to the changes that are predicted. The main human influence on global climate is emissions of key greenhouse gases. Carbon dioxide (CO_2) is the main greenhouse gas, mostly derived from the combustion of fossil fuels for energy generation and transport. There are important linkages between climate change and minerals planning, as described in this chapter.

Addressing the potential changes through minerals planning

6.2 Projected changes in climate in the South West include warmer drier summers, wetter winters and more frequent extreme weather events such as storms and heat waves. It is estimated that by the end of the plan period the sea level off Dorset could be some 10-15 cm higher in 2030 than it was in 1990 [(3)]. There is likely to be increased coastal erosion, flooding and reduced water supply with potential changes to cropping patterns and species distribution.

6.3 There are two key aspects of climate change that are relevant to minerals planning:

a. reducing carbon emissions; and
b. preparing/providing for the effects of climate change.

6.4 Much of the discussion around climate change is about reducing carbon emissions, but preparing for the effects of climate change is just as important. Planning for the provision of the minerals required by our communities must include achieving lower carbon emissions and greater resilience to the impacts on climate change.

6.5 The Minerals Strategy addresses both these issues in various ways, including:

a. encouraging the reduction of transport of minerals by road and thereby reducing carbon emissions;
b. ensuring that mineral workings do not increase the risk of flooding;
c. where practicable, increasing flood storage capacity;
d. providing opportunities for the provision of winter water storage through quarry reclamation;
e. encouraging the mining of Portland Stone as opposed to quarrying – mining has been shown to produce less CO_2 than quarrying;
f. providing stone that can be used in sea defences and aggregates for use in flood defence works, where appropriate;

3 Comprehensive Climate Change Risk Assessment September 2010: Dorset County Council & Dorset Districts & Borough Councils.

g. encouraging the increased provision of recycled aggregates, and minimising the impacts of extraction of primary aggregates;
h. providing opportunities, through restoration schemes, to benefit biodiversity with particular emphasis on the creation of habitat for species affected by climate change; and
i. encouraging the growing of bio-mass energy crops as a possible after-use on mineral development sites, subject to suitability in the environment.

Climate change and new minerals development

6.6 Minerals are essential in maintaining our economy and lifestyle, but their extraction, processing and transport are probably responsible for about 7% of total global energy consumption. In addition, the process of restoring a site and the restored site itself have the potential to affect and be affected by climate change. It was estimated that in 2007 the UK mineral industry produced about 4 million tonnes of CO_2, approximately 0.6% of the UK's total greenhouse gas production for that year [(4)].

6.7 Reducing this carbon footprint in the face of accelerating demand for commodities and construction materials is a major challenge facing the minerals industry and its regulators both now and in the future. To assist in meeting this challenge, proposals for minerals development which require planning permission will be required to demonstrate that the wider issue of climate change, including reduction of CO_2, has been satisfactorily addressed.

Policy CC1 - Preparation of Climate Change Assessments

Proposals for mineral developments and aggregates recycling operations should be supported by an assessment of how climate change mitigation and adaptation measures have been incorporated in the design and operation of the proposed development and considered in its location. This assessment will include demonstrating that the proposals are energy, material, and water efficient. It must also demonstrate how emissions generated from traffic will be minimised.

Local authority carbon management action

6.8 The Carbon Trust estimates that UK local authorities spend £750 million a year on energy, and are one of the largest single sources of emissions, with over 25 million tonnes of CO_2. The Boroughs of Bournemouth and Poole and Dorset County Council are seeking to reduce these figures and at the same time show leadership in the area of carbon management. Some of the actions and approaches that have been taken are as follows.

4 DECC News Release, February 2009

6.9 Bournemouth Council has established the *Low Carbon Bournemouth Community Action Plan* which identifies actions that could be taken to tackle climate change through sustainable energy management. It adopts national targets of at least an 80% cut in greenhouse gas emissions by 2050 and at least 34% reduction in emissions by 2020. The Borough of Poole's Corporate Strategy includes a commitment to decrease the carbon footprint of Poole through reduced CO_2 emissions, both from large organisations and in the wider community.

6.10 In addition, the *Bournemouth, Dorset and Poole Renewable Energy Strategy* focuses on the use of renewable energy to meet electricity and heat needs in Dorset. The *Bournemouth, Dorset and Poole Energy Efficiency Strategy and Action Plan* identifies actions to improve energy efficiency and curb energy demand across Dorset.

6.11 Dorset County Council is committed to reducing it's greenhouse gas emissions. The *Carbon Management Action Plan*, developed in 2007, set the County Council an 11% reduction target in carbon dioxide emissions by 2010. Performance against this plan is monitored annually. During 2009 further review of the carbon management programme was undertaken and has been outlined in the *Dorset County Council Carbon Management Beyond 2010* report. In addition Dorset County Council is subject to the *Carbon Reduction Commitment*, which places new legal duties on the County Council to effectively manage its carbon emissions.

7 Aggregates

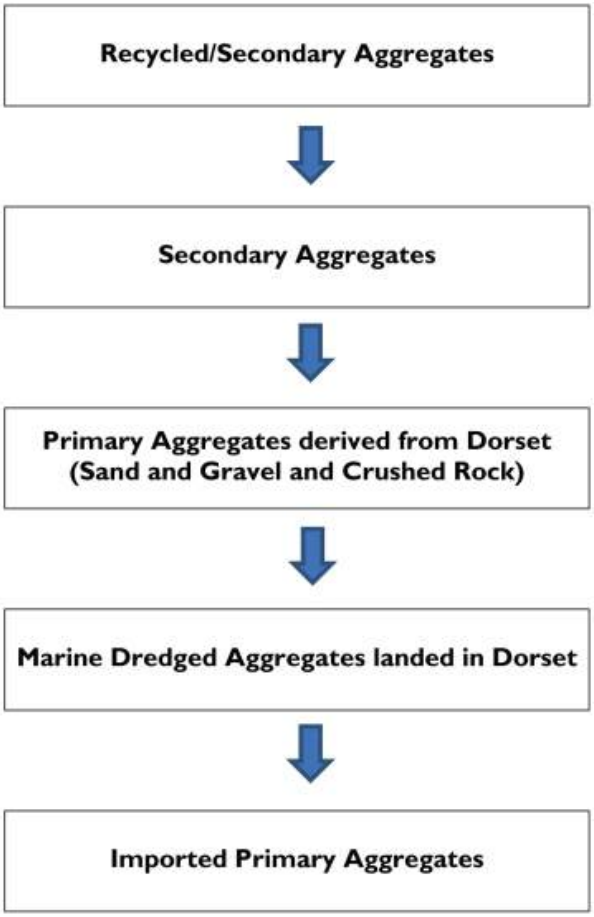
7 Aggregates

Introduction

7.1 Aggregates are essential to support sustainable economic growth. They are used for the construction and maintenance of hard infrastructure such as roads, airports, schools, houses, hospitals and flood and sea defences. They may be natural, secondary or recycled. The strategy for a sustainable aggregates supply in Dorset seeks to ensure that there is sufficient supply of material to support the development that is needed. This is consistent with the National Planning Policy Framework (NPPF). Aggregates can be produced from a number of sources and this chapter considers all forms of aggregate and the contribution that they can make to meeting Dorset's identified need.

7.2 This chapter follows the preferred hierarchy as follows;

Figure 6 Preferred Hierarchy for Aggregates Provision



Recycled and Secondary Aggregates

Key Issue - Aggregates Recycling

Facilitating the increased production of recycled aggregates in the most suitable locations, particularly in the west and north of the county

Introduction

7.3 Recycled aggregates are construction, demolition and excavation (CDE) wastes which can be re-used as aggregates, usually after some form of processing such as screening, washing or blending with primary aggregate. CDE waste includes crushed brick, concrete, soils and sub-soils and road planings. These materials may be used as they are, to provide bulk fill for construction projects or combined with primary (i.e. land-won or marine) material to manufacture concrete or material suitable for road surfacing and for re-use in materials for sea defences. These combined materials are known as hybrid aggregates.

7.4 Secondary aggregates are materials that are produced as industrial by-products, such as spent foundry sand, crushed glass, fragmented plastic or rubber, that can be used as aggregates. They can also be produced from other mineral operations, such as the sand removed to gain access to ball clay at sites such as Doreys. This is referred to in Chapter 8 on ball clay and in Policy BC3.

7.5 Article 4 of the revised EU Waste Framework Directive[(5)] sets out five steps for dealing with waste, the 'waste hierarchy'. Recycling is the third of the usual five stages of the hierarchy - prevention, preparing for re-use, recycling, other recovery and disposal. Recycling of aggregates has an important role to play in delivering the Waste Directive, reducing the extraction and use of primary aggregate, helping to make efficient and sustainable use of mineral resources and reducing the environmental impacts associated with their production. Government discourages the simple landfill of material suitable for recycling as aggregate by means such as the Landfill Tax.

7.6 The Minerals Strategy encourages the increased production of recycled aggregates. It also seeks to ensure that a wide range of processed recycled material is produced, to increase opportunities to reduce the amount of material extracted from the land or the sea-bed.

7.7 Although there are many benefits of using secondary and recycled aggregates as a resource, recycling of aggregates does have negative impacts. It reduces the amount of material for use in quarry restoration. This may require the review of existing quarry restoration schemes at sites relying on this material. In some situations this could lead to variations or delay in the restoration of quarries, particularly where restoration needs to be to dry land to avoid the risk of bird strike near airports. Recycled aggregate production can also cause noise, dust, visual and transport impacts, as with any quarry operation.

5 Directive 2008/98/EC

7.8 There is also the issue of the amount of energy required in the processing of recycled aggregates, and the transport impacts from taking the material to be recycled to the recycling sites; crushing, washing and blending it; and then transporting it to where it will be used. Against this can be set the fact that use of recycled aggregates conserves primary aggregates, facilitates the use of primary aggregate to its 'highest and best use' and can mean less quarries are developed.

Types of Facilities

7.9 The Minerals Strategy recognises that recycled aggregate production facilities include two distinct scales of operation. At one end of the scale are the smaller plants that primarily crush and screen material and produce lower specification materials more suited for uses such as constructional fill. These sites, which can include transfer stations, may also separate and bulk up material to be transported to larger sites. At the other end are the larger recycling sites which both produce higher volumes of output and may carry out more processing of the material being recycled. This can include washing and blending recycled material with primary aggregate to produce a high quality product suitable for a wider range of uses.

7.10 These larger and more specialised plants are of strategic importance in delivery of the strategy for recycled aggregates. Their typical permitted capacity or production levels are around or in excess of 50,000 tonnes per annum of high quality material. They generally benefit from long term (normally 25 years) or permanent planning permissions which justify the level of investment needed to produce high quality recycled aggregates. For example such facilities usually require an aggregate washing plant.

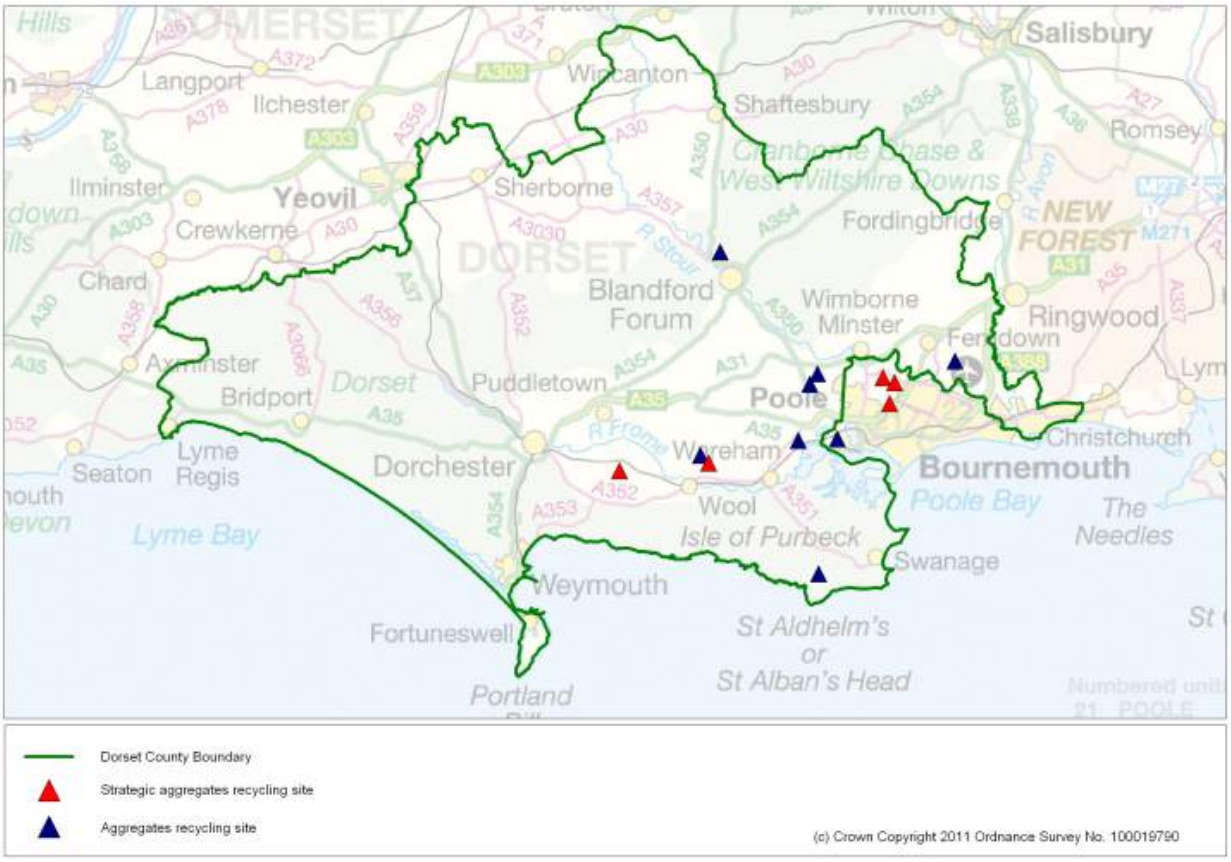
Locational Needs and Spatial Characteristics

7.11 Aggregate recycling sites have specific locational needs. Production and distribution of recycled aggregate is market driven. As with primary aggregate, the value of recycled material is relatively low and does not travel far. Sites should preferably be close to the sources of the material to be recycled and also close to the markets that the facilities serve. A location close to urban areas with good road access is favoured. The facilities may be located on brownfield land or at existing minerals or waste sites. In some cases, a location on an industrial estate is beneficial in terms of good access to material to be processed and good access to markets. A location on an industrial estate usually requires high levels of control of noise and dust, and rents can be prohibitively high.

7.12 A location within an existing quarry can be beneficial, particularly for the larger or strategic recycling sites, given that there is generally an existing washing plant with silt lagoons on-site, good road access and existing screening. Permissions for recycling operations within a quarry will normally be restricted to the life of the quarry in cases where it would not be appropriate to permit a permanent recycling operation. For example, the recycling use might conflict with a long term restoration plan for an after use such as nature conservation or recreation; or, it might compromise the ability of the site to be restored in keeping with local landscape character; or, where the quarry is away from the source of waste and the market and/or with poor access, the recycling use might be justifiable during the life of the quarry but not afterwards.

7.13 Figure 7 reflects these locational needs, with recycling sites located in relatively close proximity to the urban areas, especially the south-east Dorset conurbation and also close to Dorchester. This also reflects the location of the majority of current and worked out aggregate quarries. In contrast, the more sparsely populated areas of west and north Dorset have very limited coverage of recycling facilities. Those areas of Dorset within the viable catchment area of recycling facilities across the border would be served by those facilities, or by facilities within Dorset provided it was economically feasible to transport material to and from them. It is expected that some of Dorset's CDE waste arisings would flow out of the county to aggregates recycling sites in adjoining counties, and recycled material would return for use in Dorset.

Figure 7 Aggregate Recycling Facilities in the Plan Area



Current Production

7.14 No sub-regional or local apportionment for the production of alternative materials or recycled aggregates in Bournemouth, Dorset and Poole has ever been set. A report published in 2005[6] suggested that of the 4.47 million tonnes of recycled aggregates produced in the region in 2003, approximately 11.2% (501,000 tonnes) were produced in Dorset (including Bournemouth and Poole). However, the Mineral Planning Authority has undertaken a survey of known aggregates recycling sites in the Plan area[7] which provides more relevant and accurate information on output, capacity and the nature of facilities within the county. This information indicates that total average output over the past five years has been in the region of 190,000 tonnes per year. By comparison, the total permitted capacity for aggregate recycling production is over 580,000 tonnes.

7.15 Results show that there are thirteen known aggregate recycling sites of varying scales, which produce between them a variety of washed aggregate, fill material and soils. Five of the sites can be regarded as strategic facilities, with either a capacity or average output of 50,000 tonnes or more. Their distribution is shown on Figure 7.

The Strategy for Provision of Recycled Aggregates

7.16 An increased supply of recycled aggregates reduces reliance on primary won aggregate. This is taken into account in the assessment of the level of aggregates for which to make provision, as set out later in this chapter. Production of recycled aggregate is market driven. The Minerals Strategy seeks to ensure a steady, annual increase in the production of recycled aggregate, particularly the production of products of a high specification.

7.17 This will be achieved through:

- the maintenance of current production and, where possible and appropriate, an increase in output from existing facilities or development of new or improved facilities - through renewing temporary permissions and issuing long-term or permanent permissions, provided these are justified and adverse impacts can be satisfactorily mitigated;
- safeguarding existing recycling facilities for the life of their permission; and
- encouraging replacement capacity where production capacity is lost through termination of a permission.

7.18 Based on the information collected, there is scope for increased production at existing sites. New sites are also encouraged, and can be expected to arise where supply and demand exist.

7.19 Development proposals should comply with Policy RE1 and other relevant policies in this plan, including the Development Management policies. Proposals will need to demonstrate that the key issues such as access, landscape, amenity and environmental

6 Technical and Strategic Assessment of Aggregate Supply Options in the South-West Region - Capita Symonds, 2005

7 See Background Paper 3: Recycled Aggregates

impacts have been addressed and any adverse impacts satisfactorily mitigated. To ensure that European wildlife sites are safeguarded from any effects of development, proposals should comply with Policy DM5 (Chapter 16).

Policy RE1 – Production of Recycled Aggregates

Production of recycled aggregates, including high grade washed recycled aggregate, will be facilitated through permitting long term or permanent facilities at locations which:

a. are near to the source of material to be recycled and in locations favourable to the production of recycled aggregates (for example industrial locations, existing active quarries or waste sites, urban fringe and brownfield sites); or
b. replace temporary aggregate recycling permissions where the need for permanent retention can be demonstrated and where it can be shown that the temporary facility has operated without causing adverse environmental impacts and where long-term or permanent operation would not impede or conflict with restoration of any other use of the site.

Where it is considered that permanent or long term facilities for aggregates recycling may be inappropriate, temporary facilities will be permitted or renewed at suitable locations, including existing quarries and appropriate waste management sites, provided that any negative impacts can be avoided or mitigated to an acceptable level.

In cases where a recycling facility is permitted for operation within an existing quarry, the life of the permission will normally be restricted to the life of the quarry operation.

The Extraction of Primary Aggregates

Key Issue - Aggregates

Planning for an appropriate, robust and flexible level of aggregates provision having regard to demand.

Determining the most appropriate and sustainable locations for the extraction of aggregates in Dorset

7.20 Natural (or primary) aggregate is obtained from mineral sources subject only to processing through crushing and sizing. Two naturally occurring types of aggregate are produced in Dorset: land-won sand and gravel, and crushed limestone rock. As the character and geographic location of these are different they will be dealt with separately in this chapter.

Sand and Gravel

Spatial characteristics

7.21 Sand and gravel in Dorset is produced primarily from Poole Formation sand (geologically considered a bedrock deposit) and river terrace or plateau sand and gravel (geologically considered a superficial deposit).

7.22 Poole Formation sand is the most important important source of sand in the plan area, outcropping in the south east of the county. It is sometimes called 'soft' or building sand. It forms hills and ridges in a broad zone stretching from Dorchester to Wareham and around the fringes of Poole and Verwood. These sandy, less fertile areas, give rise to the ecologically important heathlands.

7.23 Between these areas of higher land run the river valleys of the Frome, Piddle, Stour and Avon. Extensive spreads of river terrace sand and gravel are deposited along the flanks of these valleys. It is sometimes known as 'sharp' sand and gravel. In the north west, the valley of the River Axe contains exceptionally deep gravel deposits, around 20m thick. The river valleys are often highly attractive unspoilt areas where to date there has been only limited extraction of sand and gravel. Within some river terrace deposits, large flint pebbles and cobbles are found, particularly east of Dorchester. These potentially form a source of building and decorative stone, but also may be crushed or used in restoration.

7.24 Plateau gravels are found capping many of the hills and ridges. Only isolated pockets now remain available, the majority already being worked out, built upon or of ecological importance. These deposits are of only limited economic importance.

7.25 Figure 8 shows the general spatial distribution of these three types of sand and gravel. They occur predominantly in the south east of the plan area and coincide with the location of most of the urban development in Bournemouth, Dorset and Poole.

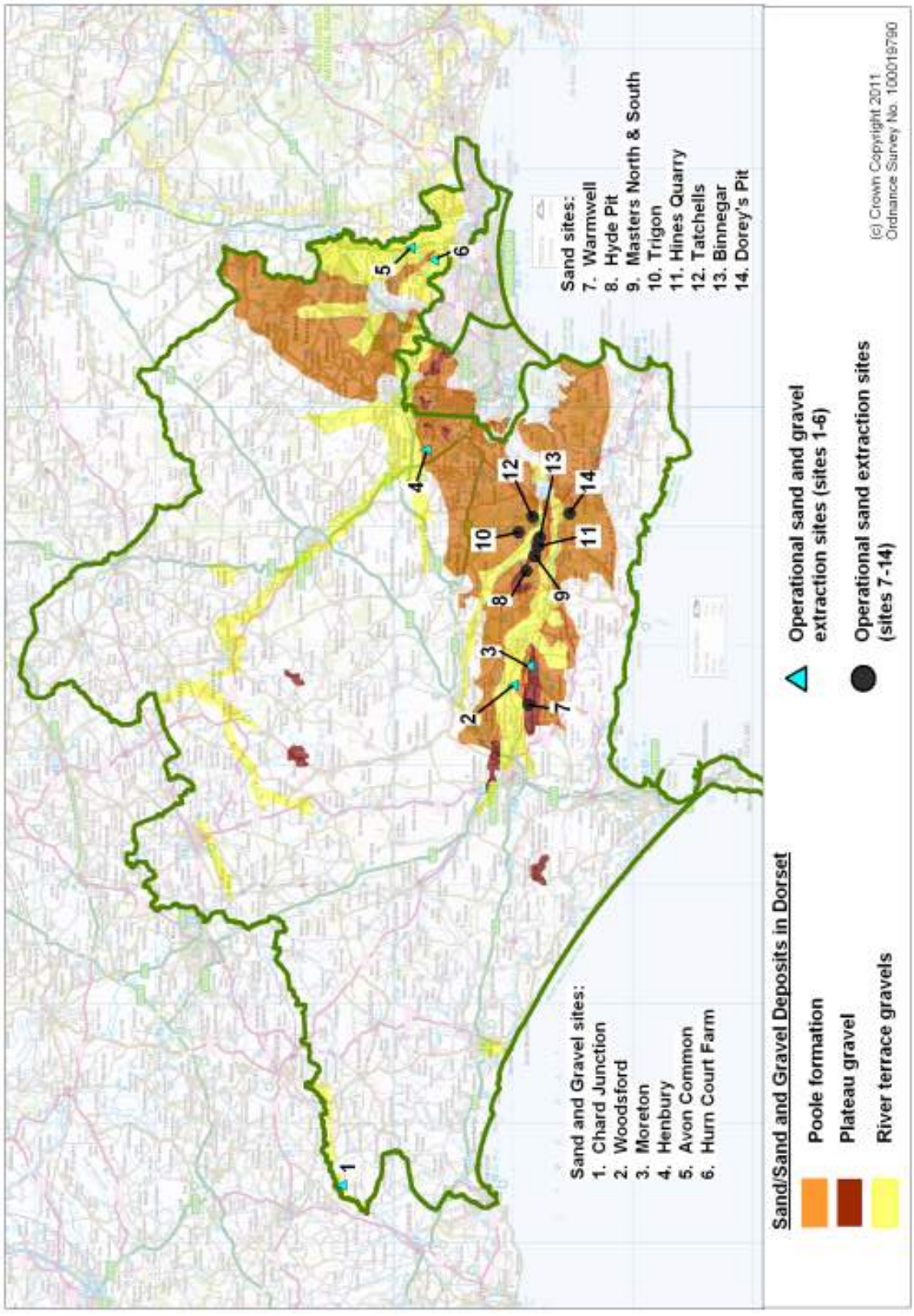


Figure 8 Sand and Gravel Quarries with Reserves at the end of 2010

Sand and gravel - the current picture

7.26 Dorset is the largest producer of sand and gravel in south west England. Sales in 2011 totalled 1.49 million tonnes (mt), of which approximately two thirds (1.07 mt) was sand from quarries largely working in the Poole Formation. The remaining third (0.42 mt) came from sand and gravel pits working river terrace deposits. At the end of 2010, there were 14 quarries in Dorset with permitted reserves totalling just under 17 million tonnes. Just over half of these reserves were from quarries predominantly producing sand. The number of active quarries varies over time as some exhaust their reserves and close or new sites open. Figure 8 shows the sand and gravel quarries with permitted reserves at the end of 2010.

7.27 The Poole Formation consists of an alternating sequence of fine to very coarse grained sand. The large variations in particle size and colours enable a wide range of products to be provided. It is not restricted to uses such as plastering or asphalt production commonly associated with 'soft' sand. In areas of the Poole Formation where ball clay is found, sand often forms a deep overburden or lies between the clay seams. This sand is now regarded as a secondary aggregate for statistical purposes. Sand extracted below the clay will continue to be treated as a primary aggregate.

7.28 Understandably, the industry is often unable to break down their permitted reserves of sand into soft or sharp sand. Following discussions with companies and their agents, sales and reserves figures have been divided by source (either Poole Formation or river terrace) where commercial confidentiality restrictions allow. This enables a useful assessment of supply and will avoid the risk of specific shortages of particular types of material being hidden within an overall total figure.

Key issues facing the extraction of sand and gravel

7.29 The production of the Minerals Strategy has considered the most appropriate level of provision of sand and gravel. Until recently, the Government published figures apportioning future aggregates provision between the English regions. These guideline figures were then broken into sub-regional apportionments by the regional planning bodies, advised by the Aggregates Working Parties. The latest regional apportionment figures were published in June 2009 and cover the sixteen year period 2005-2020. They required the former South West region to make provision for 85 million tonnes of sand and gravel over the sixteen year period. This was a reduction from the previous 2003 figure of 106mt.

7.30 In addition to figures for primary aggregates, the guidelines assumed that marine dredged gravel landed in the region will total 12mt over the period, compared with 9mt previously. Alternative aggregates (secondary and recycled materials) were assumed to increase from 121mt to 142mt. These regional guidelines were apportioned between each sub-regional area. This process of 'managed aggregates supply' was considered to provide an effective means of securing an adequate provision of construction materials without releasing excessive numbers of sites. The 2009 guidelines resulted in a reduced sub-regional apportionment for Dorset, compared with the previous 2003 figures. Based on the historic proportional contributions to supplies averaged over the period 2004-2008, the annual apportionment figures for sand and gravel fell from 2.27 million tonnes per annum (mtpa) to around 1.97mtpa.

7.31 The NPPF advises that Mineral Planning Authorities should plan for a steady and adequate supply of aggregates by preparing a Local Aggregates Assessment (LAA), based on a rolling average of 10 years sales data along with other relevant local information and an assessment of all supply options. This is a different basis for the calculation of appropriate future mineral supply than the previous apportionment process.

7.32 Total aggregate sales during the period 2002 to 2011 (the last 10 years) amount to approximately 15.78 mt, giving an annual average of 1.58 mt. For the purposes of the Minerals Strategy it is assumed that steady and adequate provision will continue to be made up to and including 2028, applying the annual production figure of 1.58 mt. It is recognised that this figure is not fixed and will vary annually with changing production figures, reflecting increases and decreases in levels of production. The 'rolling basis' of the methodology set out in the NPPF means that the appropriate annual supply for aggregates will be regularly revised by the Mineral Planning Authority through the LAA.

7.33 To maintain the necessary level of provision, the NPPF advises Mineral Planning Authorities to ensure that there is a stock of mineral planning permissions which will satisfy the annual supply requirement for a period of at least 7 years. This is known as the landbank - the total remaining quantity of mineral reserve with planning permission for extraction. At the end of 2011 there were just over 17.5 million tonnes of permitted sand and gravel reserves in Dorset. At the current level of average production (1.58 mtpa) this landbank would last just over 11 years if no further permissions were granted:

Permitted Reserves / Level of Provision = Remaining landbank

17.5 mt / 1.58 mtpa = 11.1 years

7.34 In order to assess the adequacy of the landbank on an ongoing basis, the co-operation of the industry will be needed to provide sufficient information to the Mineral Planning Authority each year on production and remaining reserves at each quarry. Since sand and gravel production and permitted reserve levels will be monitored and reviewed annually through the Annual Monitoring Report, the Minerals Strategy and Mineral Sites Plan, it is not considered necessary to plan for the maintenance of a landbank beyond the end of the plan period.

7.35 The requirement to produce a LAA annually will ensure that aggregate production levels are monitored and reported on regularly. This will indicate if and when the level of sales exceeds the level of provision. If sales are shown to exceed provision consistently, a review of the provision of aggregates will be triggered, although this is considered unlikely to occur during the plan period.

7.36 The Mineral Sites Plan, when adopted, will identify the sites required to deliver the aggregates provision strategy. If sites allocated through the Mineral Sites Plan become exhausted the Minerals Strategy will provide a sound basis for assessing new applications within the identified resource areas through application of the development management policies. In addition, should any exception ('windfall') sites come forward under Policy SS2 during the lifetime of the Plan, these will contribute to the delivery of the aggregates provision strategy.

Addressing the key issues and delivering the strategy - sand and gravel

7.37 The amount of sand and gravel that will need to be provided for through the Minerals Strategy and the Mineral Sites Plan can be calculated as;

Annual production figure X Years covered by the plan (17 years, 2011 to 2028) - Existing Permitted Reserves (at the end of 2011) = Requirement for new sites

(1.58 mtpa x 17 years) – 17.5 mt = 9.36 mt

7.38 There will be a need to identify new sand and gravel sites containing around at least 9.36 mt in the Mineral Sites Plan. It may be necessary following further assessment, to identify more than 9.36 mt of future allocations in the Mineral Sites Plan. Deliverability of annual aggregate supply is a key issue. It is not enough to simply identify a lump sum figure which is adequate to meet future needs over the long term - the Mineral Sites Plan must demonstrate with reasonable certainty that the appropriate annual level of production can be achieved year upon year. This may require identification of more than the minimum level of future production. Every effort will be made to ensure an appropriate split in provision, based on past trends, between sand from the Poole Formation and sand and gravel from river terrace or plateau deposits in order to avoid shortages of particular types of aggregate.

Strategic preferences for the extraction of sand and gravel

7.39 The County Council commissioned the British Geological Survey (BGS) to undertake an assessment [8] of the status of the sand and gravel resources in Dorset, Bournemouth and Poole. The assessment provides estimates of the total sand and gravel resources in the river terrace deposits and in the Palaeogene bedrock formations (largely Poole Formation). The figures for total resources were adjusted by excluding:

- Built up areas
- Areas with planning permission for sand and gravel extraction
- Areas within an Area of Outstanding Beauty (AONBs)
- Areas designated as Special Protection Area (SPA), Special Area of Conservation (SAC), Site of Special Scientific Interest (SSSI), National Nature Reserve or Heritage Coast

7.40 The BGS study findings confirmed that extensive sand and gravel resources exist in southern and eastern Dorset. Excluding the above constraints the sand and gravel resources in river terrace deposits amount to around 684 million tonnes. Sand within the Palaeogene bedrock (outside the excluded areas) totals around 1,803 million tonnes. These unconstrained areas have been mapped by the BGS and comprise an intricate pattern of areas of land, some large and some small, underlain by sand and gravel.

7.41 To represent the unconstrained sand and gravel spatially, two resource blocks were created, one for superficial river terrace sand and gravel and one for bedrock sand (primarily Poole Formation and Branksome Sand). These are shown in Figures 9 and 10. The resource blocks show the general area of land within which there is a high level of confidence that there is sufficient mineral to meet the relevant annual level of provision until 2028. Future sand and gravel quarries will be located within these resource blocks. The boundaries of the resource blocks are based on the BGS report mapping but have been drawn more widely to represent the general location of the sand and gravel resource and to acknowledge that the mineral in the ground may extend beyond the specific boundaries defined in the BGS report.

7.42 However, since the boundaries of the resource blocks are drawn generally they include some areas of constraint (such as SPAs and SACs) which had previously been removed for the purposes of the BGS study. As far as possible urban areas and the AONB have been excluded. The resource blocks do not correspond exactly to the areas of sand and gravel identified by the BGS, but given the quantities of aggregate identified in the BGS study there is confidence that the level of provision can be met from within the resource blocks.

8 Background Paper 1: Dorset, Bournemouth and Poole Sand and Gravel Assessment; External Report CR/11/049 - British Geological Survey, 2011

7.43 Inclusion of constrained land within the resource areas does **not** mean that future quarries will be located on the constrained land. There are many other constraints to development not considered within this study, such as proximity to houses, conflicting land uses, amenity and accessibility. It is not possible to include these in this high level study. These will be taken into consideration when specific sites are assessed for inclusion within the Mineral Sites Plan. The site assessment process will seek to identify the least sensitive locations for sand and gravel development (see Appendix 1). It will also need to take into account proximity to markets and suitability of transport links. Any identified impacts will need to be adequately mitigated in accordance with other policies and assessments. Future quarry proposals will be identified from land within these resource blocks subject to the normal and rigorous site assessment process which will either exclude constraints or ensure that any impacts are appropriately mitigated.

7.44 No sites will be brought forward for sand and gravel which fall within and/or are likely to affect European or internationally designated nature conservation sites. Nationally designated SSSIs are also afforded statutory protection. Detailed assessment of the ecological and hydrological implications of sand and gravel working in the resource blocks close to European or international sites will be necessary to support sites to be taken forward into the Mineral Sites Plan. Where significant doubts remain over possible effects on European sites, a precautionary approach to avoid inclusion of such sites will be taken.

7.45 The Mineral Planning Authority has carried out work to establish whether the level of provision set out is likely to be achievable, given the highly constrained environment of Dorset. A call for sites exercise was carried out asking industry to put forward potential future sites for consideration by the Mineral Planning Authority. This exercise provided evidence that sufficient reserves can be found from within the resource area to meet the need throughout the plan period. It was also evident through this exercise that future sites are likely to come from both the Poole Formation and the river terrace deposits.

7.46 It will be the task of the Mineral Sites Plan to identify sufficient sites for the extraction of sand and gravel, from within the resource blocks, to meet future needs. When specific sites are brought forward they will be judged on their individual merits following the site selection criteria (see Appendix 1) and will need to comply with all the relevant policies in the plan. Sites identified in the Mineral Sites Plan will be preferred for mineral extraction over other non-identified sites. Planning applications for development within identified sites are likely to be considered as acceptable.

7.47 Close liaison with delivery partners has been and will continue to be essential to the delivery of this strategy. Current technical meetings with adjoining counties and some mineral operators take place through the Aggregates Working Party (AWP).

7.48 In addition to sites to be identified in the Mineral Sites Plan, opportunities for unallocated (windfall) sites may arise. Windfall sites generally become available unexpectedly during the life of the plan and are likely to arise within the minerals resource areas. They tend to be small sites but do provide reserves of aggregate to contribute to the overall need. Windfall sites can include sites where mineral extraction is required before other development in a given location can go ahead, such as the creation of agricultural reservoirs, or where the prior extraction of minerals is required before other development takes place that may otherwise sterilise the resource (also see section on borrow pits, paragraphs 7.89 - 7.91). These types of application will be considered on their merits, having regard to all the policies in the Minerals Strategy.

Policy AS1 - Provision of Sand and Gravel

An adequate and steady supply of locally extracted sand and gravel will be provided by maintaining a landbank of permitted sand and gravel reserves equivalent to at least 7 years' worth of supply over the period to 2028, based on the current agreed local annual supply requirement for Bournemouth, Dorset and Poole This will be achieved from:

i. remaining reserves at existing permitted sites;
ii. new sand and gravel sites, including extensions to existing permitted sites, as identified in the Mineral Sites Plan;
iii. new sites not identified in the Mineral Sites Plan, provided:

   a. monitoring indicates that the sites identified in ii. above are unlikely to meet Bournemouth, Dorset and Poole's landbank requirements; or
   b. the proposed development is for the prior extraction of aggregate in advance of non-minerals development; or
   c. the development is part of a proposal for another beneficial use; or
   d. the development is for a specific local requirement.

Future sites required to contribute to meeting this supply will be located within the resource blocks identified on the Policies Map.

Sites will only be considered where it has been demonstrated that possible effects (including those related to hydrology, displacement of recreation, species, proximity, land management and restoration) that might arise from the development would not adversely affect the integrity of the Dorset Heaths SAC, Dorset Heathlands SPA and Dorset Heathland Ramsar site either alone or in combination with other plans or projects.

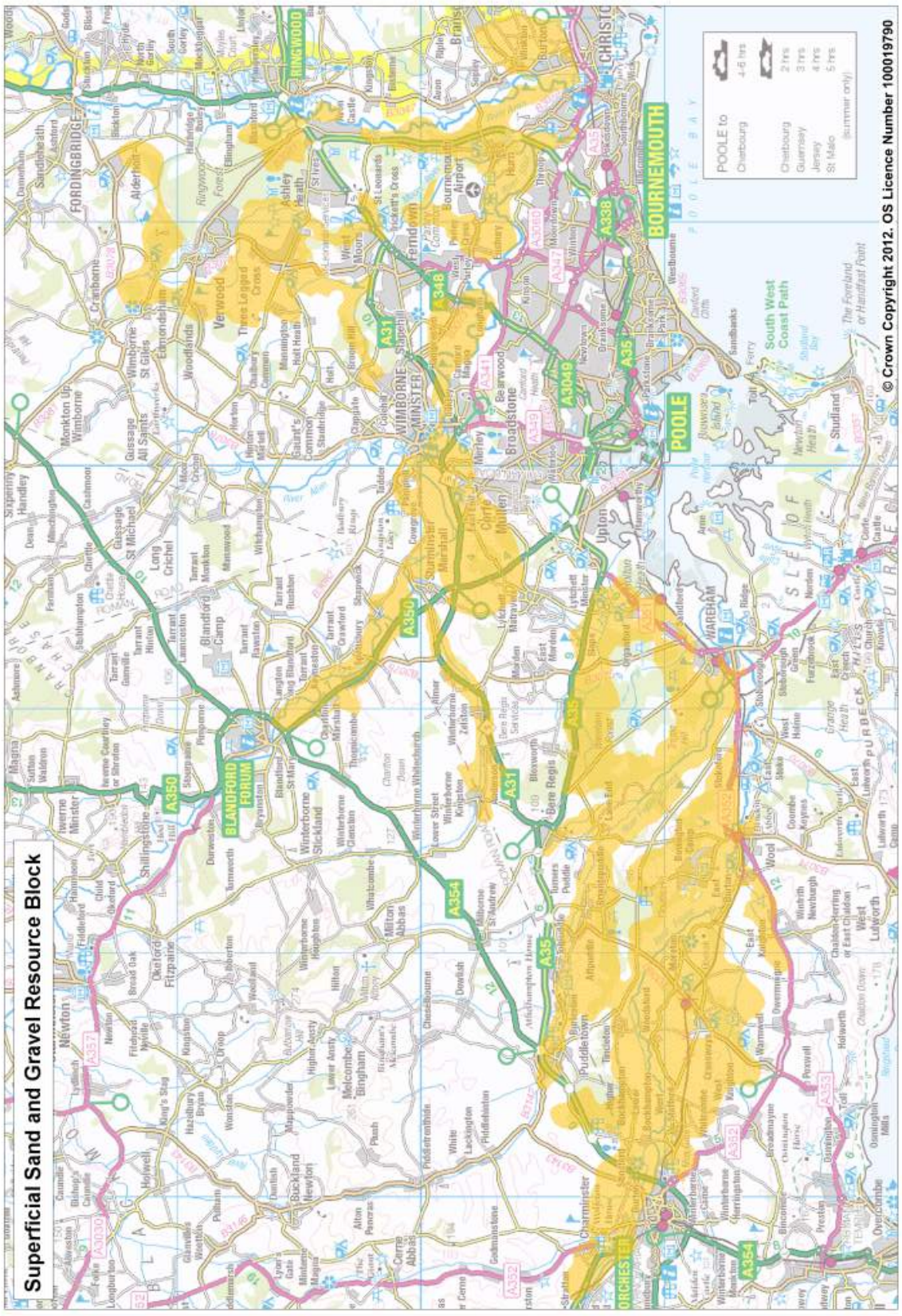


Figure 9 Superficial Sand & Gravel Resource Block

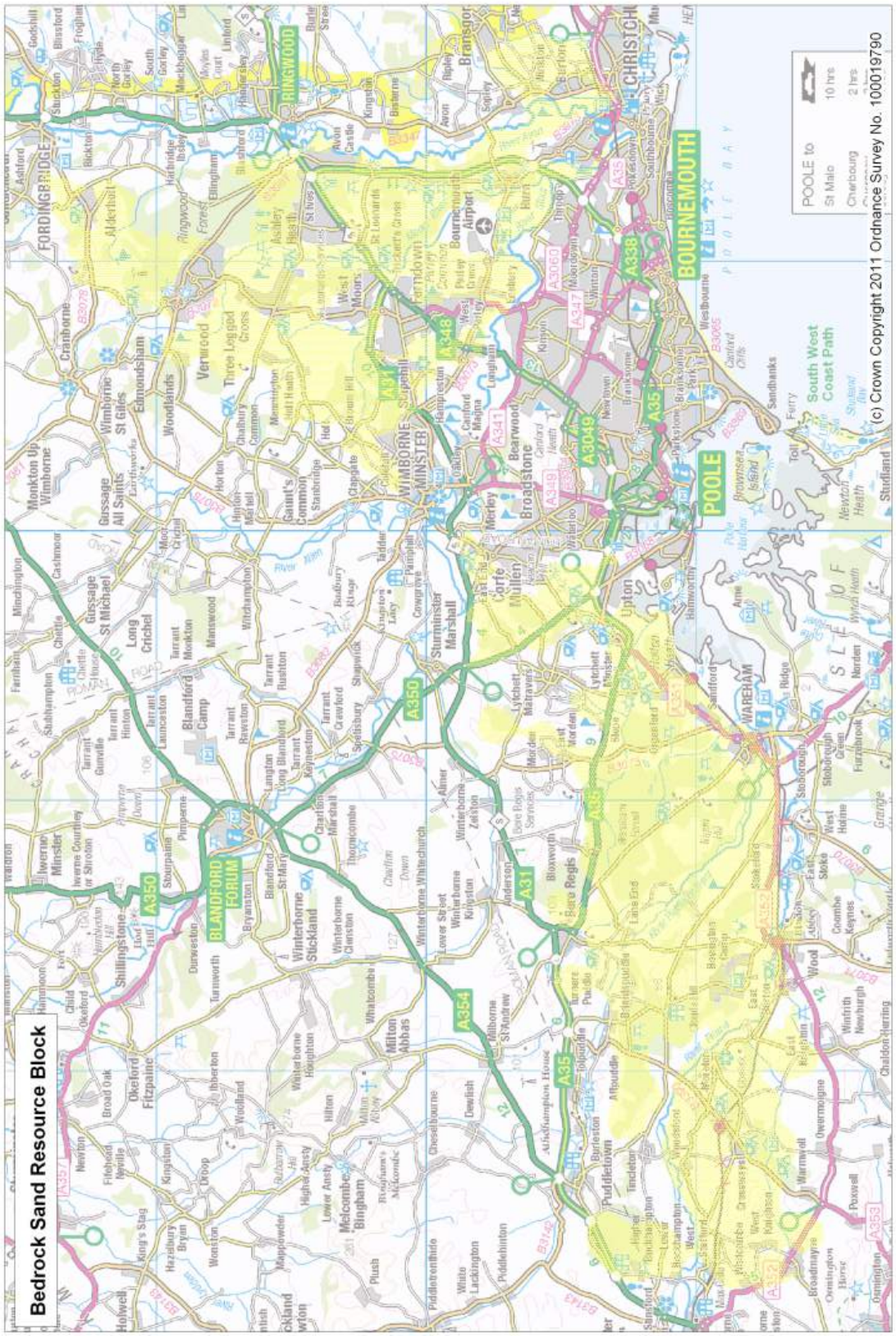


Figure 10 Bedrock Sand Resource Block

Extraction of sand and gravel in the AONB

7.49 Sand and gravel is widely found within the Dorset AONB and is currently extracted at Chard Junction, a quarry on the Dorset/Devon Border serving the western markets. Major extraction of sand and gravel in AONBs is generally discouraged because of its potential to cause serious harm to the landscape. The NPPF acknowledges this, stating that planning permission should be refused for major developments in designated areas except in exceptional circumstances, where it is in the public interest. The Minerals Strategy should as far as practicable, ensure that sufficient levels of permitted reserves are available from outside the AONB.

7.50 Where there is no harm to the AONB or where the harm is minimal and can be satisfactorily mitigated against, then extraction of sand and gravel may be appropriate in exceptional circumstances. This could be where sand is found in conjunction with ball clay. This specific issue is addressed in Chapter 8.

Monitoring and maintaining separate landbanks

7.51 Poole Formation sand and river terrace/plateau sand and gravels are geologically different and it is considered appropriate to monitor their supply separately. This will ensure that, should there be a decline in either type of aggregate, this will not be masked by overall production and the level of the combined landbank. The Mineral Planning Authority would then be able to take appropriate action to address a decline. Further analysis based on production from quarries within the different geological deposits makes it possible to identify separate landbanks.

7.52 At the end of 2011, the average of the previous ten years of production was 1.58 mtpa. This comprised 1.01 mtpa or 64% of Poole Formation and 0.57 mtpa or 36% of River Terrace sand/gravel. The figures of 36% for River Terrace and 64% for Poole Formation represent relative levels of production of the different types of aggregate. They are not intended to comprise a cap on future production levels. As the ten year rolling average varies year by year relative production levels may also vary.

7.53 Applying these relative proportions to the estimated reserves[9] (at the end of 2011) of River Terrace (approximately 7.6 mt) and Poole Formation (approximately 9.9 mt) aggregate gives indicative landbanks of 13.3 years for River Terrace/plateau sand and gravel and almost 10 years for Poole Formation sand.

- River Terrace: 7.6mt/0.57mtpa = 13.3 years
- Poole Formation: 9.9mt/1.01mtpa = 9.8 years

7.54 This exercise will be repeated annually to identify possible shortfalls in provision. Policy AS2 commits to the maintenance of at least a 7 year landbank for each type of sand/sand and gravel.

9 Mineral with a current permission for extraction, but not yet extracted

Policy AS2 - Landbank Provision

The Mineral Planning Authorities will maintain a separate landbank for both Poole Formation and River Terrace aggregate equivalent to at least 7 years' supply in each case.

Crushed Rock

Spatial characteristics

7.55 Limestone suitable for crushing for use as aggregate is found in both Purbeck and Portland. These two distinct areas have very different spatial characteristics and are particularly sensitive in terms of landscape and biodiversity interest. Further details on the spatial characteristics of Purbeck and Portland can be read in chapters 9 and 10.

7.56 The coastline of Portland is designated as part of the Jurassic Coast World Heritage Site and there are many areas of geological and ecological importance on the island, partly as a result of past quarrying activities. Currently crushed rock is produced at five quarries on Portland. Crushed aggregate and armour stone is produced alongside dimension stone from most of the quarries. Each of the operational quarries has reserves of dimension stone offcuts and wastage for use as aggregate. On Portland, stone from the cherty series, which forms the deepest quarried bed, is only suitable for crushing. Extraction of this stone results in a deeper void space in the quarry once extracted.

7.57 Similarly, Purbeck is an area of considerable environmental quality. The only aggregates quarry in the Isle of Purbeck is Swanworth Quarry, near Worth Matravers, which produces crushed rock from the Portland Beds. The Jurassic Limestone is generally regarded as a weaker or softer rock than Carboniferous Limestone and is normally unsuitable as a concreting aggregate. Swanworth Quarry is situated within the AONB and the Heritage Coast.

7.58 95% of crushed rock extracted in Dorset stays in the plan area. However, to meet local needs it is thought that around a third of a million tonnes of crushed rock and fine aggregate from the Mendips is brought to Dorset each year.

Crushed rock - the current picture

7.59 Annual output of crushed rock from Dorset varies according to demand. Total sales in 2011 were approximately 150,000 tonnes and remaining reserves at the end of the year were conservatively estimated to be approximately 13 million tonnes. Average annual production of crushed rock since 1999 is approximately 290,000 tonnes, while the average of the last 10 years of production is approximately 265,000 tonnes. Current reserves are made up entirely of stone from Portland and Purbeck.

The crushed rock landbank.

7.60 The key issue to resolve is the amount of crushed rock production needed over the plan period. The NPPF (paragraph 145) requires the Mineral Planning Authority to make provision for a minimum of 10 years worth of supply for crushed rock. This is to ensure on-going supply for the construction industry. Average annual production of crushed rock over the ten year period 2002 to 2011 was approximately 0.27 million tonnes per annum. Using this figure as the basis for the 10-year rolling average methodology and with permitted reserves at the end of 2011 conservatively estimated to be approximately 13 million tonnes, this is sufficient for around 48 years of production This comprises the crushed rock landbank as it stands at the end of 2011. The period of 48 years is well beyond the life of the Mineral Strategy and it is therefore considered that there is no need to identify any further sources of crushed rock at the present time.

Permitted Reserves / Level of Provision = Remaining landbank

13 mt / 0.27 mtpa = 48 years

7.61 In Chapter 10, the strategy for future extraction of Portland Stone encourages the relinquishment of those parts of the planning permissions within sensitive areas, such as those close to housing. If this happens, the remaining permitted reserves of crushed rock would be reduced. However, it is expected that any reduction would form only a small proportion of the total, and the landbank would remain sufficient for well over the Plan period.

7.62 There may be exceptional circumstances where it is appropriate to grant permission for the production and processing of crushed rock at a new site. This could be where there has been a marked changed in mineral demand or unexpected reduction in supply. Specific examples of exceptional circumstances are set out in Policy AS3 below

7.63 To ensure that European wildlife sites are safeguarded from any effects of development, any proposal resulting from a change of circumstances and an identified need for additional stone should comply with Policy DM5 of Chapter 16.

Policy AS3 - Crushed Rock

New sites for the processing and production of crushed rock will only be permitted within the Plan period in exceptional circumstances including but not limited to:

a. where development would enable a sustainable supply of minerals close to the market;
b. where an existing more sensitive site will be relinquished.

Marine dredged aggregates

7.64 Marine dredged sand and gravel is extracted from the sea bed from licensed areas off the coast of Hampshire, the Isle of Wight and West Sussex. The ability of marine aggregates supplies to make a contribution to local construction aggregate demand relies upon the material being able to access the market via a wharf. Marine dredged aggregates are landed at a wharf in the Port of Poole. Without this wharf, marine aggregates would not contribute to Bournemouth, Dorset or Poole's need for aggregate as the closest alternative point of landing is at Marchwood, in Southampton.

7.65 Marine aggregates make a relatively small but important contribution to the overall need for minerals in Dorset. Until the economic downturn impacted, landings were around 100,000 tonnes per annum. Landings are currently down to 60,000 to 70,000 tonnes per annum.

7.66 The principal constraints on the level of marine landings during the plan period are the production capacity to dredge and deliver the material to the wharves, security of port access (loss of wharves), channel and berth restrictions and the road transport system away from the wharf. There are also considerable pressures on wharf facilities throughout the country from other uses and the cost of land is likely to be a threat to future supply and expansion.

7.67 Without expansion, there is currently limited additional capacity at Poole Wharf. Landings are considerably constrained by the capacity of the wharf, as 4,000 tonnes is the maximum load that can be landed at any one time and total storage capacity of processed material is around 10,000 tonnes. Despite these capacity issues, substantial marine aggregate reserves remain along the South Coast and eastern English Channel for the long term.

7.68 With limited spare capacity at Poole wharf, there is little flexibility to deliver additional resources of marine dredged aggregates into Dorset unless the wharf were to be used as a trans-shipment wharf. This is where large articulated lorries take material directly from the ships for onward processing. This could be an option if increased supplies of aggregates are needed in the future and other sources constrained.

7.69 Unlike on land, the constraints to dredging are less about the availability of suitable unconstrained resources. This is demonstrated by the tonnages currently permitted. Dredging is subject to a system of licensing. The licensed areas, from which minerals are dredged and imported into Dorset, have a total permitted tonnage of 9.75 million tonnes per annum, of which in 2010 only 3.66 million tonnes were removed.

7.70 It is considered that capacity remains to continue a steady supply of landings of up to 100,000 tpa within the plan period in order to contribute to the overall need for aggregates in Dorset. The Mineral Planning Authority will safeguard the facility at Poole Port to enable and encourage landings and processing to continue. Policy SG3 deals with the issue of safeguarding wharves.

7.71 Marine dredged sand is also used for beach replenishments. Between 2005 and 2010 3.32 million tonnes of marine sand was pumped directly onto the beaches at Bournemouth, Sandbanks, Poole and Swanage. It is understood that further beach recharge is being considered for Bournemouth and West Bay in the coming years. This method of beach recharge requires no land transportation.

Impact of Marine Planning on aggregates resources

7.72 Adopted by the UK Government, the UK Marine Policy Statement is part of a new system of marine planning being introduced across UK seas. The Marine Policy Statement will enable an appropriate and consistent approach to marine planning across UK waters. It will ensure the sustainable use of marine resources and strategic management of marine activities from renewable energy to nature conservation, fishing, recreation and tourism. The policy statement contains a requirement for the marine planning authority to consider safeguarding marine mineral deposits.

7.73 Marine planning will contribute to the effective management of marine activities and more sustainable use of marine resources, creating the framework for consistent and evidence based decision making. This will be achieved through the Marine Policy Statement, Marine Plans and marine licenses.

7.74 Marine Plans must be consistent with the Marine Policy Statement, ensuring a strong link between national policy and individual developments. Plans will present and interpret national policies and apply area-specific policy, spatially where appropriate, to the management of marine resources and activities. The C-SCOPE Marine Plan for Dorset was published in 2012 and is intended to provide non-statutory guidance. It provides policies, and advice for users, managers and regulators of the marine plan area to ensure that their plans and activities contribute to sustainable development in the area.

7.75 The Marine and Coastal Access Act 2009 created a new type of Marine Protected Area, called a Marine Conservation Zone (MCZ) as shown in Figure 11. MCZs will protect nationally important marine wildlife, habitats, geology and geomorphology. The Marine Conservation Zone Project concerns the selection of MCZs in English inshore and offshore waters. Sites will be selected to protect not just the rare and threatened, but the range of marine wildlife. MCZs, together with other types of Marine Protected Area, will deliver the Government's aim for an 'ecologically coherent network of Marine Protected Areas'. This means the Marine Protected Area network will be a collection of areas that work together to provide more benefits than an individual area could on its own.

7.76 Discussions have taken place with the British Marine Aggregates Producers Association to consider the implications of the new marine planning system on the supply of marine aggregates to Dorset. The industry's view was to welcome the development of the Marine Protected Area network, on the basis that knowledge of sensitive and important habitats and species should reduce some of the risks and uncertainties associated with marine development. The planning process should recognise that marine aggregates extraction can only occur where commercial viable geological deposits exist. These deposits should not be sterilised by other activities that will prevent further extraction.

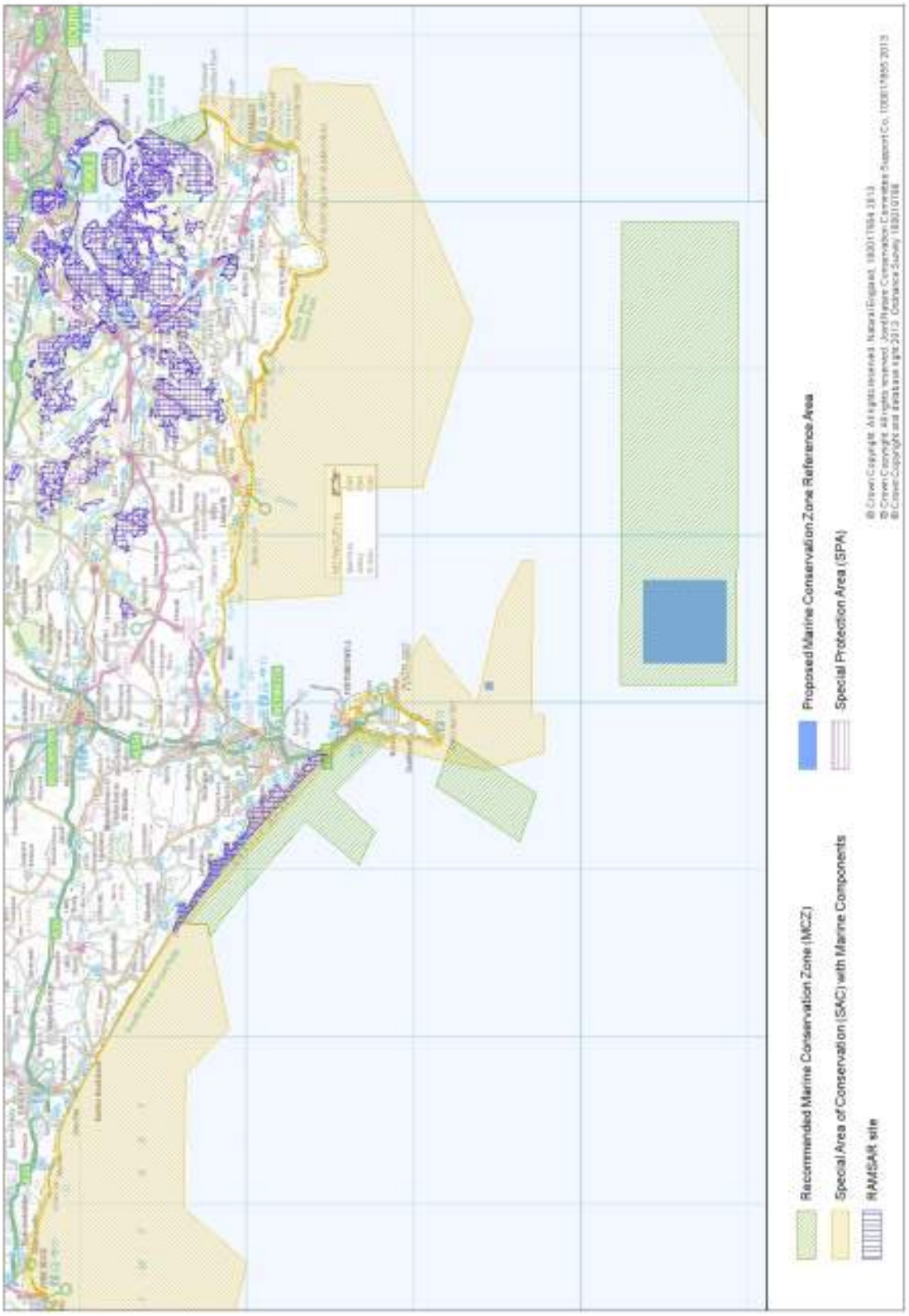


Figure 11 Marine Protected Areas

Further Imports and Exports

7.77 Imports and exports are an important consideration in ensuring a sustainable supply of aggregates nationally. This section explains the quantity of both sand and gravel and crushed rock that is imported to meet the need for aggregates in Dorset and the contribution that Dorset makes to the need for aggregates in other counties through exports.

Cross boundary movements

7.78 Around 7% of the sand and gravel produced in the plan area is sent to Hampshire, based on 2009 figures, while a slightly smaller quantity is brought into Dorset from quarries across the county boundary in Hampshire.

7.79 Relatively small quantities of sand and gravel are also imported from Devon and Wiltshire, with significantly larger amounts of aggregates being returned to these counties. Around 18% of Dorset's production of sand and gravel is sent by road to Somerset (about the same quantity of crushed rock and fine aggregates is sent back, partly as return loads).

7.80 Sand and gravel from Dorset is also supplied to south-east England, including sand sent to London via rail sidings at Wool.

7.81 Cross boundary movements have been indicated on the Key Diagram (see Appendix 4).

Port of Poole

7.82 In addition to marine dredged sand and gravel, Tarmac currently imports around 50,000 tonnes per annum of aggregate through Poole Port from Northern Ireland. This material supplies 40% of the material processes at an asphalt plant in Poole. Products for use in road building, play areas and driveways are produced at the site mainly supplying the Dorset market, with about 15% being exported to Hampshire. Imports by sea are necessary for this plant's operations due to the rising costs of road haulage and the availability of stone locally. There is the potential for the port to handle further quantities of imported aggregates, although the Mineral Planning Authority is unaware of any further examples at the current time.

7.83 Imerys exports a large proportion of its overseas customer's ball clay requirements through the Port of Poole. This makes a significant positive contribution to the operation of the Port.

Portland Port

7.84 Other than Poole, the only area where minerals (marine dredged or imported) might be landed within the plan area is Portland Port. However, the relatively low value of aggregates, the geographic location of Portland and distance to major markets, the storage space required and the need to process dredged material makes development of aggregates wharves at Portland unlikely.

Rail transportation of aggregates

7.85 Use of rail for the transport of aggregates is encouraged in national policies for minerals planning. Until recently, a rail depot at Hamworthy received crushed limestone from Mendip quarries in Somerset for local distribution. Approximately 100,000 tonnes was brought in annually. For economic reasons this activity is currently not operating, but could recommence if conditions change. Policy SG3 provides protection through seeking to safeguard facilities (including rail depots and wharves) from other developments that could prejudice their future use.

7.86 The rail network serving the plan area is not conducive to the establishment of additional rail depots. In the north, where the Salisbury-Exeter line passes in and out of Dorset, the Mendip quarries are relatively close, but road links are more direct. The north-south single line from Yeovil to Dorchester passes through a rural area with limited opportunity and need for such a facility. Work is being undertaken to increase capacity on the main line from London to Weymouth, which serves the Hamworthy depot. Possible establishment of new depots along this line will continue to be investigated and encouraged by the Mineral Planning Authority.

7.87 For dispatching sand to London, sidings at Wool serve as a railhead to load material extracted at Warmwell Quarry near Dorchester. Approximately 100,000 tonnes of sand are sent by rail annually. Figure 12 below shows the existing wharf, rail depot and rail head and the railway lines discussed in the text.

Figure 12 Dorset Wharves and Depots

Policy AS4 - Wharves and Depots

The Mineral Planning Authority will permit new mineral handling rail depots and wharves, and the expansion and/or modernisation of existing sites, where the need for the facility can be demonstrated.

7.88 Where activities require planning permission, proposals should comply with Policy DM5, to ensure that European wildlife sites are safeguarded from any effects of development, as well as other relevant policies in this plan.

Borrow pits

7.89 "Borrow pits" are short term quarries worked in close proximity to (and for the specific purpose of supplying) major road construction and similar civil engineering projects. Sometimes the use of such sites can facilitate the construction project and reduce the impact of heavy goods vehicles on the surrounding road network and the community, compared with bringing aggregates from more distant existing quarries. Minerals won from borrow pits can also contribute to the County's aggregate requirements and may help to avoid the use of better quality reserves from established quarries.

7.90 It is not appropriate to have a site specific policy relating to borrow pits, due to the difficulties predicting their possible location, and need for them. Furthermore, applications for borrow pits are only occasionally received by the Mineral Planning Authority. It is however considered necessary to have a policy for use as and when circumstances require.

7.91 Although there are clear advantages in using borrow pits, it is important to ensure that these short term benefits are not outweighed by damage to other important features such as biodiversity or archaeology. Any proposal for a borrow pit must demonstrate that the location is the most suitable source of material for the project, and that appropriate environmental safeguards covering both working and reclamation are included.

Policy AS5 - Borrow Pits

Proposals for borrow pits associated with construction projects will be permitted provided that all of the following apply:

a. the site lies on or in close proximity to the project so that material can be conveyed to its point of use with minimal use of public highways and without undue interference with footpaths and bridleways;
b. the material extracted will only be used in connection with the project;
c. it can be demonstrated that supply of the mineral from the borrow pit would have less environmental impact than if the mineral were supplied from an existing source;
d. the borrow pit can be restored without the use of imported material, other than that generated on the adjoining construction scheme; and
e. use of the borrow pit is limited to the life of the project.

8 Ball Clay

8 Ball Clay

Key Issue

Maintaining continued supply of ball clay, a mineral of national and international importance, whilst safeguarding and enhancing landscape and ecology importance.

The need to access a range of saleable clays, at one time, in order to produce blends of ball clay led by industry demand.

Introduction

8.1 Ball clay has been regarded for many years as an industrial mineral which is of national and international importance because of its special qualities and rare occurrence. The British Geological Survey (BGS) describes ball clay as 'relatively scarce globally' and hence of importance to the UK's economy. UK ball clay is an essential ingredient of perhaps, half of the world's production of sanitaryware.

8.2 Within the UK, ball clay only occurs commercially in the Wareham Basin of Purbeck and within two areas of Devon. Dorset clays are noted for their high plasticity and unfired strength and also low carbon content. They are particularly suited for tile manufacture and also in electro-porcelains, refractories kiln furniture and sanitary ware.

8.3 The Wareham Basin area is however subject to extensive national landscape designations and international and national nature conservation designations. The BGS suggests that the area contains, perhaps, the most diverse range of potentially conflicting resource development and management pressures in England. This makes the identification of new sites, to ensure continued supply, a difficult task.

8.4 The strategy for the continued supply of ball clay has been prepared following detailed discussions with the industry. The unique nature of the ball clay, its limited occurrence within the UK, the demanding technical specifications of its industry users and the sensitive location in which it is found are all debated within this chapter in order to develop a sustainable strategy for its continued supply.

Spatial Characteristics

8.5 The Dorset ball clay resource in the Wareham Basin is located in the district of Purbeck and covers an area of around 146km^2, shown spatially as the Ball Clay Consultation Area on Figure 16.

8.6 The landscape of the area consists of a gently rolling plain of heathland, farmland and forest and is drained by two main rivers, the Frome and the Piddle, which flow eastward into Poole Harbour. The southern skyline is formed by the Purbeck Ridge, but the most prominent relief feature is Creechbarrow, just north of the ridge (see figure 13). The landscape is characterised by a mosaic of semi-natural habitats, including heathlands, wetlands, woodland, grassland, estuaries, rivers and standing water and the enclosed landscape of the pine forest. Significant urbanisation exists to the east of the area around Wareham and Poole.

8.7 Agricultural improvements, forestry, urbanisation and to a lesser extent mineral extraction have severely fragmented and reduced the extent of many of the natural habitats in the area during the last decade. Due to its range of habitats and aesthetically attractive landscape, the Wareham Basin has extensive landscape and nature conservation designations. A large part of the area, and most of the basin south of the River Frome, lies in the Dorset Area of Outstanding Natural Beauty (AONB). In addition, the unspoilt coastline is protected as Heritage Coast and World Heritage Site. There are extensive areas of international nature conservation importance, including Ramsar sites, sites designated as Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) (see figure 14). National nature conservation sites include National Nature Reserves (NNRs) and Sites of Special Scientific Interest (SSSIs). The nature conservation importance of the area is well known and the protection of the remaining heathland and wetland is of national and local importance.

8.8 Scheduled Monuments and other non-scheduled features and archaeological sites, Conservation Areas and buildings of historic importance, such as Creech Grange, are found throughout the Wareham Basin.

8.9 Extensive areas of the basin are in the ownership of the National Trust or under commercial forestry. In addition, large areas are also used by the Ministry of Defence for training purposes.

8.10 The beauty of this area is recognised by many people who visit in large numbers. The area provides many recreation opportunities for visitors, such as walking and cycling routes, National Trust destinations as well as the historic villages within the district. Tourism makes a large contribution to the economy of this part of Dorset.

Ball Clay - the Current Picture

8.11 Ball clay operations in Dorset are currently managed by one company. Extraction is currently entirely from surface quarries. Operations comprise three large quarries; Dorey's and Povington, situated within the AONB, south of the River Frome, plus a third operation of a similar scale at Trigon located north west of Wareham outside the AONB. In addition, two smaller operations Furzeyground and Hawkpost are also situated within the AONB. Extracted material is transported by lorry to a centralised storage and processing facility at Furzebrook, near Wareham, for blending. From these five sites around 20 saleable clays are currently being worked and are producing in the region of 21 saleable blends. Figure 13 shows the permitted site boundaries for operational sites. It should be noted that this does not always relate to working areas as some areas within permitted areas are being restored or in the case of Trigon, being used for landfill.

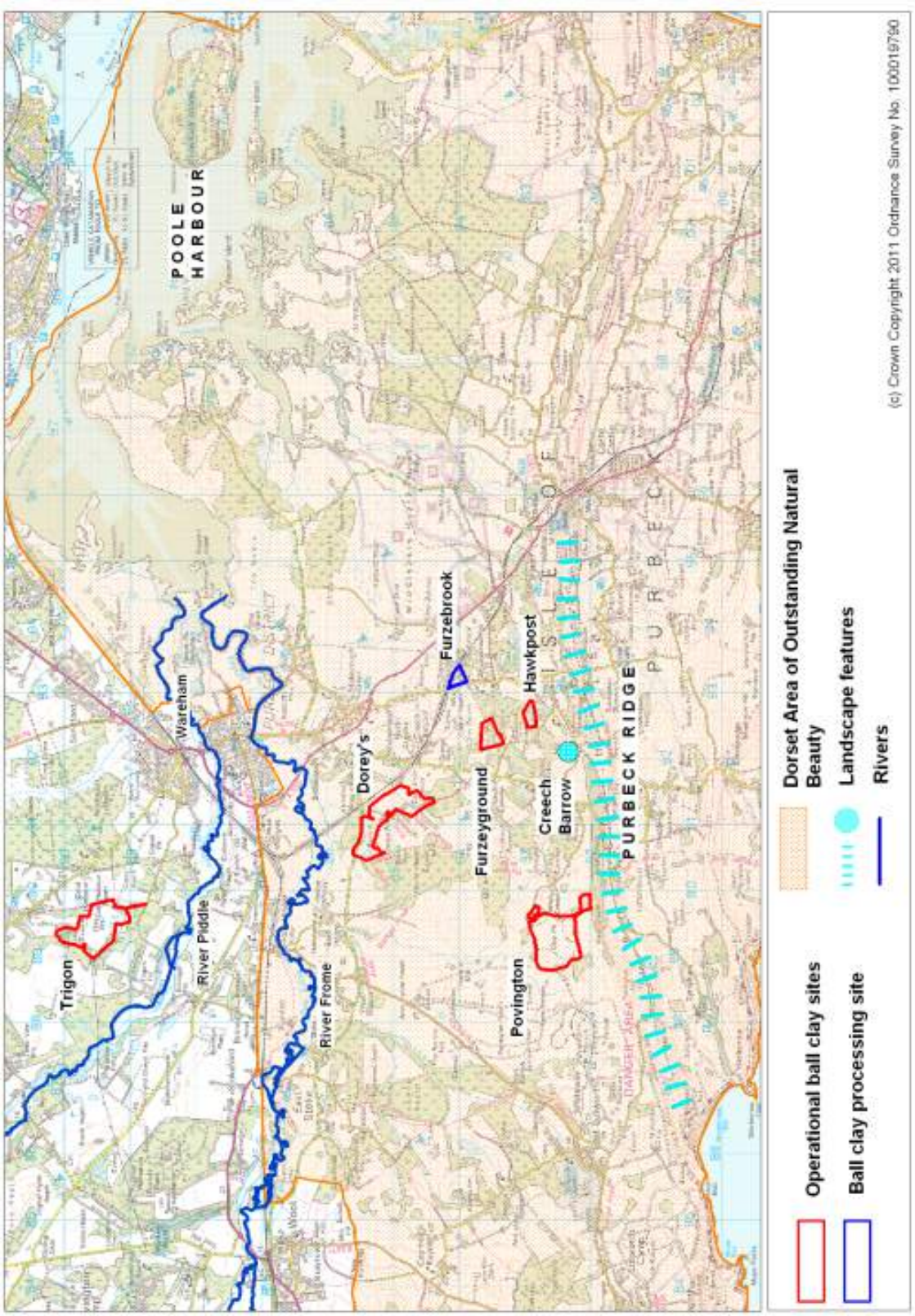
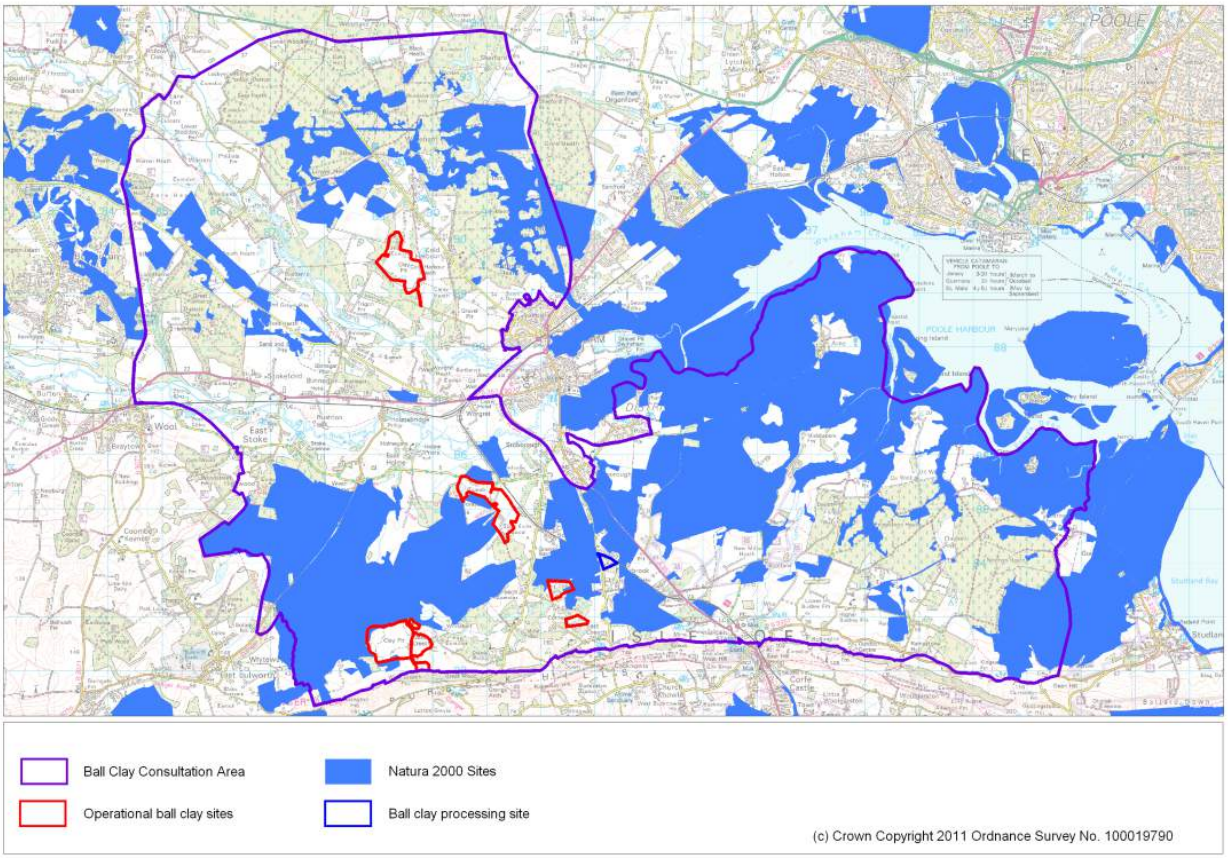


Figure 13 Existing Ball clay sites, landscape designation and features

Figure 14 Existing Ball clay sites and Ecological designations



8.12 Ball clay is a mineral of high export value. The economic importance of ball clay to the economy of Dorset is highlighted by the quantities exported. Based on anticipated 2011 figures around 64% of ball clay produced is transported in bulk to Poole and 9% by container to Southampton both for onward travel internationally, largely to Europe. About 20% of clay remains within the UK, mainly for use in the potteries of Staffordshire.

8.13 In addition, about 7% of ball clay produced is taken to South Devon for blending with clays produced there. Ball clays found in Dorset are of such a high quality they are needed to blend with Devon clays in order to produce products with specific properties.

8.14 The ball clay industry currently employs 40 people directly in Dorset and around a further 60 indirectly, as well as supporting local businesses.

8.15 Annual production of ball clay has fluctuated largely due to the global economic downturn. Considering production trends over the last 30 years and from discussions with the ball clay industry it is anticipated that future average annual demand for ball clay in Dorset will be around 250,000 tonnes per annum (tpa). This figure is higher than in previous years but would allow the Plan and the ball clay industry to adapt to changing circumstances and market fluctuation and allow for growth. This reflects the Governments commitment to securing economic growth through positive planning.

8.16 Estimated reserves at the five permitted ball clay sites totalled 1.5 million tonnes in July 2012. Based on an assumed anticipated annual demand of 250,000 tpa this gives an overall theoretical life of 6 years. Each individual site is important in contributing towards the current product range required by the market. It is misleading to give a figure for the overall life of Dorset ball clay reserves, but the figure gives an indication of the scale of permitted reserves, demonstrating the need for further reserves to be found to ensure continued supply. The larger sites, Doreys, Povington and Trigon, produce key ingredients or grades for producing the majority of clay products. The grades found at Furzeyground are more limited than those found at the larger operational sites and so make a lesser contribution to the overall longevity of the business in Dorset.

8.17 An application has recently been permitted for an extension to Doreys. This extension will provide additional life and contribute to the range of clay blends produced in Dorset (the additional permitted reserves have not been included in the figures that follow in this chapter). Notwithstanding this extension, if ball clay production is to continue, further reserves will be required.

Key Issues facing the extraction of ball clay

8.18 The key issue facing the extraction of ball clay in Dorset is the maintenance of a continued supply of a range of clays, whilst recognising the need to conserve and enhance the areas of high landscape and ecological importance in which the clay is located. The importance of ensuring this range of clays is vital to the continued viability of production of ball clay from Dorset.

8.19 The ball clay industry in Dorset is sustained by material of higher grade which requires very little secondary processing other than simply shredding. Importantly, this high grade ball clay is used to upgrade poorer-grade clays. Ball clay is a finite resource and the ball clay industry actively optimises the blending of clay grades to husband the resource in order to maintain the full range of blended products for as long a period as possible.

8.20 The British Geological Survey (BGS) was commissioned by Dorset County Council to undertake a study of the distribution of the ball clay resource. One of the key conclusions of this study was that the highest quality ball clays are found in the middle to west and southeast parts of the Wareham Basin. This study has been drawn upon in the preparation of the overall strategy for the provision of ball clay.

8.21 The Poole Formation hosts the ball clay resources and four 'host' clays are recognised. Of these, the Creekmoor Clay is the most important host clay, providing the highest quality ball clay (containing the lowest average silica and highest kaolinite values). It is these clays that are blended with more inferior clays, particularly found in sites outside the AONB (i.e. Trigon), in order to meet industry requirements. Making the best use of high quality materials is a key component to sustainable development.

8.22 The Creekmoor Clay outcrops in two principal areas south of the River Frome. These are within the AONB and much of the resource coincides with major conservation designations. In addition, parts of the outcrop are currently under commercial forestry. Although other subcrop areas lie north of the River Frome and outside the AONB, the BGS study confirms that it is unlikely that significant quantities of commercial quality ball clay will be found. Even if suitable ball clay deposits can be found within these less sensitive landscape areas there are important ecological designations which would need to be protected.

8.23 Based on quality and likely operational requirements, the main potential for developing Creekmoor Clay has been identified as south of the River Frome and south west of Wareham. Both areas are situated within the AONB and include ecologically sensitive areas.

Addressing the key issues

8.24 In order to address the key issues and develop a strategy to support the continued supply of ball clay, a detailed assessment [(10)]was undertaken to consider landscape and ecological related impacts contained within the ball clay bearing areas, and the ability of these areas to accept further extraction. There are many other constraints that will impact on future ball clay extraction but landscape and ecology were considered to be the most strategically significant. It should be noted that the assessment was undertaken primarily at a strategic level and that further detailed assessments will be needed through the development of the Mineral Sites Plan and/or applications.

8.25 The assessment of landscape character, designations, European protected and Biodiversity Action Plan species, ancient woodland and other important habitats concluded that impacts would be adverse. The impacts on much of the visual resources will be substantial

10 Background Paper 6: Potential Ball Clay Sites, Landscape and Ecology Impact Assessment, March 2011

and severe. This reflects the sensitivity of the receiving landscape which is highly designated, is very popular, accessible and a key recreational resource, contributing to south east Dorset's Green Infrastructure Network.

8.26 The assessment demonstrated the sensitivity of the ball clay bearing areas. The strategy for the continued production of ball clay must be carefully balanced against these competing priorities. However, given the recognised national and international importance of ball clay and its economic value, significant weight must be given to its continued extraction.

Delivering the Strategy - Provision of future reserves

8.27 Unlike aggregates, there are currently no national guidelines on future ball clay demand/provision or landbank requirements. Future demand relies on industry figures, supported by BGS information[11] The amount of ball clay for which the Minerals Strategy and the Mineral Sites Plan should plan for can be calculated as:

Requirements for new sites = Anticipated annual demand x Years covered by the Plan - Existing permitted reserves

Requirement for new sites = (250,000 x16) - 1.5 million tonnes [12]

Requirement for new sites = 2.5 million tonnes

8.28 Work has been undertaken to establish whether the aspiration of 2.5 million tonnes is an achievable figure given the highly constrained environment of the ball clay bearing area. A 'Call for Sites' exercise was carried out asking industry to put forward potential future sites for consideration by the Mineral Planning Authority. This exercise provided evidence which has been developed through further discussions and the identification of further reserves for consideration.

8.29 The level of demand being planned for within this strategy is higher than historic levels to allow for growth. Actual demand over a 7 year period (2005-2011) equates to an average of 220,000tpa. If this trend continues levels of permitted reserves will last longer than the 6 years suggested in para 8.16.

8.30 The strategy for the extraction of ball clay supports a steady supply to ensure provision of the range of grades demanded by the industry. However, this is in the context of the environmental constraints. The Mineral Planning Authority will work with and encourage the ball clay industry to identify and bring forward sites for allocation in the Mineral Sites Plan to ensure that provision can be maintained. It is acknowledged that significant investment is needed to undertake the complex geological investigation and environmental assessments required to allocate sites. It is therefore accepted the Mineral Sites Plan will be unlikely to identify sufficient sites to allow provision to be maintained at a level of 250,000 tpa during the plan period. However, the plan contains a suite of policies to assess planning applications as they come forward. This flexibility should allow ball clay to be delivered throughout the

11 Background Paper 06 - BGS Ball Clay: A Geological Appraisal to Inform Resource Planning

12 Note: Given the timing of the Doreys planning permission the additional permitted reserves have not been included in this calculation)

plan period, subject to sites meeting rigorous testing requirements set out within the relevant polices. If the industry is unable to come forward with sustainable sites then there will be a need to review the Plan and the level of provision being planned for.

8.31 Potential future sites for ball clay extraction are considered to be capable of delivering about 870,000 tonnes of reserves. When combined with existing permitted reserves (1.5 million tonnes), this would provide just short of ten years of supply if the assumed level of demand of 250,000 tonnes is maintained. Beyond this amount, the supply of ball clay is less certain, principally due to the landscape and ecological sensitivity of the area in which ball clay tends to be found.

Future applications likely to provide around 870,000 tonnes

Remaining shortfall = Requirement for new sites - future applications

Remaining shortfall = 2.5 mt - 870,000 tonnes= 1.63 million tonnes

8.32 Detailed testing of specific sites through the Mineral Sites Plan, and the planning applications process, including consideration of mitigation measures, will be required to demonstrate that delivering the strategy can be achieved without causing significant environmental impacts, unless otherwise justified through Habitat Regulations Assessment. Total provision over the plan period, based on an anticipated extraction rate of 250,000 tpa, should not exceed 2.5 million tonnes (excluding existing permitted reserves). Although the plan covers a period up to the end of 2028 it is likely that a review will take place well before this time. This review will enable any issues with regards to the deliverability of all grades of ball clay beyond 2028 to be identified.

8.33 Once the Mineral Sites Plan has tested in detail the ability of the ball clay bearing areas to produce and identify sites, regular monitoring will be essential to ensure that the aim of maintaining an adequate and steady supply of ball clay is realistic and achievable.

8.34 If monitoring highlights that the overall strategic aim of maintaining a steady supply of ball clay is unlikely to be delivered, it may become necessary to review this element of the Minerals Strategy in order to include more achievable and realistic levels of provision. This revision could consider a gradual reduction in the production or could reassess the constraints of the ball clay bearing area and possible mitigation which may allow extraction to take place. Conversely, if monitoring highlights that actual production is lower than the anticipated rate of 250,000 tpa this can be taken into account when considering the need to bring forward further sites.

Strategic Location of Sites

8.35 Future sites will need to be identified within the ball clay consultation area. Potential areas identified through the landscape and ecology assessment, and shown on figure 15 as 'Areas of Less Environmental Sensitivity', are an important starting point for the industry to investigate further as land within this area is generally less constrained than the wider Ball Clay Consultation Area. Careful attention should be paid when considering sites on the fringe of the Areas of Less Environmental Sensitivity that may lie in close proximity to European sites and could be indirectly affected by minerals development.

8.36 Although site investigation should be directed towards the Areas of Less Environmental Sensitivity proposals for sites, both within and outside the Areas of Less Environmental Sensitivity will be required in order to deliver an adequate and steady supply of all grades of ball clay. Sites will be considered on their individual merits in accordance with the policies in this plan. Formal Appropriate Assessment may be required for some sites when further detail is known either at the Mineral Sites Plan or planning application stage.

8.37 Impact on amenity and access considerations are also likely to limit the number of sites that come forward from within the identified 'Areas of Less Environmental Sensitivity'. The 'Areas of Less Environmental Sensitivity' do not include Trigon Heath SNCI and Old Farm Plantation which are being managed for their heathland wildlife for the duration of the Trigon landfill planning consent.

8.38 Strip mining, or similar small scale extraction methods, being discreet and unobtrusive, are thought to be suitable methods of extraction within sensitive landscapes. Rolling restoration could minimise landscape impacts by limiting the amount of land open to mining at any one time. Extraction could be screened by woodland or other existing natural features and sites could be generally dispersed.

8.39 Further investigations will be needed to identify sites where it would be acceptable to extract specific clays, such as Creekmoor Clay on a small scale. This might be where it is outcropping or found close to the surface. Such opportunities may exist within a broad area centred around Grange Hill and West Creech Hill and in the south around Norden Station and North East of Corfe, shown on Figure 15. It is acknowledged that these are particularly sensitive areas in terms of landscape, including historic cultural landscape, and ecology. The Mineral Planning Authority is keen to work with the industry to identify such opportunities through the Mineral Sites Plan. Site access, layout, design, working methods and phased restoration would need to be carefully planned in these sensitive locations including the identification of opportunities for creating priority habitats.

8.40 There is currently no evidence to show that an adverse effect on the integrity of European sites is a real possibility, such that it would create problems for the delivery of the strategy. However, it is acknowledged that for ball clay a situation may arise in the latter part of the plan period where the tests of Article 6 (4) may need to be considered and Government guidance *'Habitats and Wild Birds Directives: Guidance on the application of article 6 (4)'* (Defra, 2012) should be followed in such an instance.

8.41 No sites will be allocated within the Mineral Sites Plan for ball clay extraction which fall within and/or are shown likely to adversely affect the integrity of European designated nature conservation sites. Detailed assessment of ecological and hydrological implications of ball clay extraction close to European sites will be required for sites to be taken forward into the Mineral Sites Plan or made the subject of an application.

8.42 Further safeguards exist. It is a matter of law that at the Mineral Sites Plan stage, and at the application stage, further Habitats Regulations Assessment will be necessary.

8.43 The sites identified within the Mineral Sites Plan will comply with all relevant policies in the Minerals Strategy and will be preferred over other non-identified sites. However, where there is a demonstrated need for an alternative site, such as where allocated sites do not contain the required grade of ball clay, the Minerals Strategy provides guidance to deal with these applications.

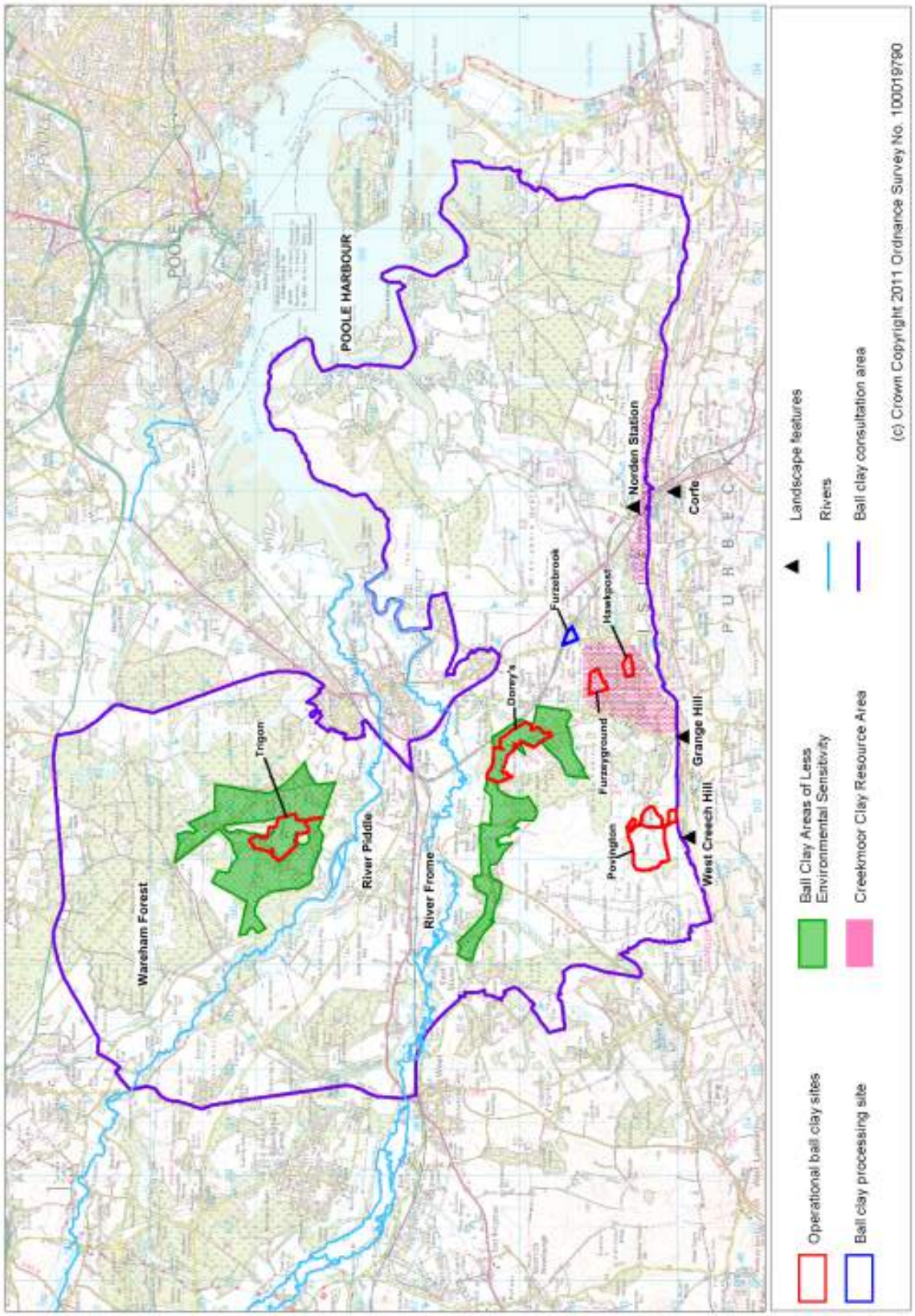


Figure 15 Potential Areas for Future Ball Clay Extraction

Policy BC1 - Provision of Ball Clay

The Mineral Planning Authority will aim to ensure an adequate and steady supply of all grades of ball clay through the provision of up to 2.5 million tonnes of reserves over the plan period from within the Ball Clay Consultation Area.

The sensitive environment of the ball clay bearing areas should be recognised and permission will be granted for the extraction of ball clay where all of the following specific criteria are met:

a. The scale, nature, location and duration of the proposal would not have a significant impact on the landscape character and quality of the AONB.
b. Where sites are situated within the AONB, the scale and method of working should be appropriate in scale and specifically tailored to reduce harm.
c. Where it has been demonstrated that possible effects (including those related to hydrology, displacement of recreation, species, proximity, land management and restoration) that might arise from the development would not adversely affect the integrity of the Dorset Heaths SAC, Dorset Heathlands SPA and Dorset Heathland Ramsar site either alone or in combination with other plans or projects, unless in exceptional circumstances the provisions of Article 6(4) of the Habitats Directive are met.
d. A detailed restoration and aftercare scheme demonstrates how the enhancement of landscape, nature conservation habitats and geodiversity interest will be achieved, as appropriate.

Where there are sites allocated in the Mineral Sites Plan and applications are for additional sites, the need for a particular grade of clay should be demonstrated.

Consideration of Alternatives

8.44 The only real alternative to the extraction of ball clay through opencast methods is underground mining. Underground mining has taken place in the past, but the closure of the last mines at Aldermoor and Norden occurred in August 1999. Underground mining has obvious advantages to the environment over opencast extraction, particularly in terms of landscape impact, and as such has been explored for its future potential. At present, the industry and the BGS[13] believe that due to the complex geology of the Wareham Basin and stringent health and safety requirements, underground mining is currently economically unviable.

8.45 However, it is possible that underground mining may become the only feasible method of extracting the better quality clays due to environmental constraints and exhaustion of more accessible deposits. It is thought that any shift in extraction method will be beyond this plan period. The Mineral Planning Authority will encourage the ball clay industry to investigate this method further, where there are environmental benefits from doing so.

13 Background Paper 5: Ball Clay: A Geological Reappraisal to Inform Resource Planning

Transportation of Ball Clay

8.46 Due to the poor road network that exists locally within much of the ball clay bearing areas, access arrangements and transportation should be given careful consideration. This should ensure adverse impacts are minimised.

8.47 The extracted ball clay from the five operational sites needs to be transported to the Furzebrook processing site. Due to the short distances involved, the most efficient means to do this is by road. Rail is no longer a realistic method of transportation over these short distances. The only potential alternative method is through a network of conveyors although these do have the potential to give rise to visual and noise pollution and will rarely be a practical or economic alternative.

8.48 A large percentage of ball clay production from Dorset is shipped overseas either through Poole or Southampton ports. For logistical reasons the ball clay is transported to the ports by road in campaigns therefore it is not possible to stagger the transportation of the mineral and store it at the ports ready for onward shipping. This is due to the limited storage space at Poole Port and because the quality of clay will deteriorate if stored. Ball clay is generally 'dug to order' to allow the appropriate properties to be retained in the clays and so achieve a satisfactory product. Ball clay is also transported within the UK to places such as Staffordshire. This material is currently being transported on the road, being the most economic method of transportation. The Minerals Strategy should encourage the transportation of ball clay by rail internally within the UK.

8.49 Poole Harbour Commissioners would support further investigation into the delivery of ball clay by rail to the port if this could become economically feasible. Presently there is no cargo being handled through the port by rail, although the infrastructure remains intact to do so.

Policy BC2 - Ball Clay Transportation

Where the Mineral Planning Authority has identified unacceptable adverse impacts arising from road borne transportation of ball clay, operators will be expected to use alternative means of transport for the movement of ball clay to and from Furzebrook and for the onward distribution of ball clay from Furzebrook where practical.

8.50 To ensure that European wildlife sites are safeguarded from any effects of development, proposals should comply with Policy DM5 (Chapter 16).

The Associated Sale of Sand and Gravel

8.51 The overburden at ball clay pits can include large amounts of sand which has the potential to be sold as construction aggregate. Working more than one mineral product from a single pit has its benefits by reducing the total amount of ground opened for mineral extraction at any one time, potentially maximising efficiency, minimising waste material and reducing the need for primary material extracted elsewhere.

8.52 Proposals for working the ball clay can include the extraction of sand, which would be stockpiled for later sale to the market, or transported to a nearby sand and gravel site for processing. The quantities of sand and gravel present at some sites could greatly exceed the volume of ball clay.

8.53 Taking this material off site for sale does have negative impacts. It leads to a reduction in the amount of material available for restoration, possibly affecting final landforms. If stockpiled it may have landscape impacts. Finally it results in an increase in the volume of lorry traffic on the surrounding road network.

8.54 Extraction of sand and gravel in association with ball clay is currently occurring at Trigon. Annual output is around 50,000 tonnes per annum. However, the clay extraction causes a much larger tonnage to be dug and stored. As Trigon is situated outside the AONB and with relatively good transport links, this is seen as an acceptable level of activity. Sand and gravel extraction is also occurring at Dorey's Pit. Doreys is situated within the AONB and specific controls exist on this site restricting output of sand and gravel to 30,000 tonnes per annum. Although these examples of current permitted extraction levels are a useful guide, and demonstrate the sensitivity of the AONB, each proposal for sand and gravel extraction will be considered on its merits taking into account all material planning considerations relevant to the individual site before reaching any planning decision.

8.55 Due to its national and international importance, extraction of ball clay has been and will continue to be acceptable within the AONB, subject to environmental safeguards. Sand and gravel is relatively common. It is unlikely to be possible to demonstrate that exceptional circumstances exist that would justify extraction of large volumes of sand and gravel within the AONB in the public interest, even if in conjunction with ball clay extraction.

8.56 The strategy for dealing with future extraction of sand and gravel from ball clay sites gives appropriate consideration to acceptable volumes from sites within the AONB. It is not appropriate to specify a numerical limit for what is considered an acceptable level of extraction. Suitable levels will be considered on a site by site basis, bearing in mind how the site is proposed to be worked, arrangements for stockpiling and processing and access arrangements. Mineral extracted within the AONB will comprise only the interburden and overburden sand which is necessarily dug in order to access the ball clay.

8.57 Extraction, within the AONB, will also require thoroughly considered restoration schemes, establishing original landforms, such as heathland or field systems. Large water bodies are unlikely to be in keeping with the natural environment of the ball clay bearing area.

8.58 The extraction of sand and gravel in association with ball clay in sites outside the AONB would generally be acceptable. This issue is dealt with in further detail in Chapter 7.

Policy BC3 - Extraction of Sand and Gravel in association with Ball Clay within the AONB

Extraction of sand and gravel in association with ball clay workings within the Dorset AONB will be permitted where it can be demonstrated that:

a. the material is derived from the overburden and interburden;

b. the operation is of a reasonable scale;

c. any adverse visual and landscape impacts are avoided or capable of mitigation to the satisfaction of the Mineral Planning Authority;

d. restoration of the site would not be compromised, maintaining and enhancing the area's landscape character and ecology;

e. the road network can safely accommodate the additional vehicle movements without significant environmental or amenity impact; and

f. any adverse impacts on the ecology, amenity and recreational areas are capable of mitigation to the satisfaction of the Mineral Planning Authority.

Restoration

8.59 The issue of restoration, aftercare and afteruse of minerals development is dealt with in detail in Chapter 15. However, due to the particular ecological importance of the Wareham Basin there are considered to be specific opportunities that should be considered when identifying sites for ball clay extraction and developing restoration proposals.

8.60 A proactive approach has been taken through the Landscape and Ecology Impact Assessment to identify specific opportunities where restoration could help create and link up fragmented areas of heathland and areas of open access land. The Mineral Planning Authority will continue to work to identify further opportunities and actively encourage the minerals industry to look for positive outcomes of minerals extraction.

8.61 Restoration should also have regard to the AONB Management Plan which provides a framework for the conservation and enhancement of the Dorset AONB guiding all activities that might affect it.

Ball Clay Consultation Area

8.62 An important aspect of sustainable development is to safeguard resources from sterilisation, by other forms of development, for the use of future generations. In 1953, a ball clay consultation area was defined covering some 146km^2 of the Wareham Basin. This has recently been updated in consultation with the industry and the revised boundary is shown on Figure 16.

8.63 The consultation area creates a boundary within which Purbeck District Council are required to consult Dorset County Council over planning applications for non-minerals development. Further detail on safeguarding and development proposals that trigger consultation are included within Chapter 14.

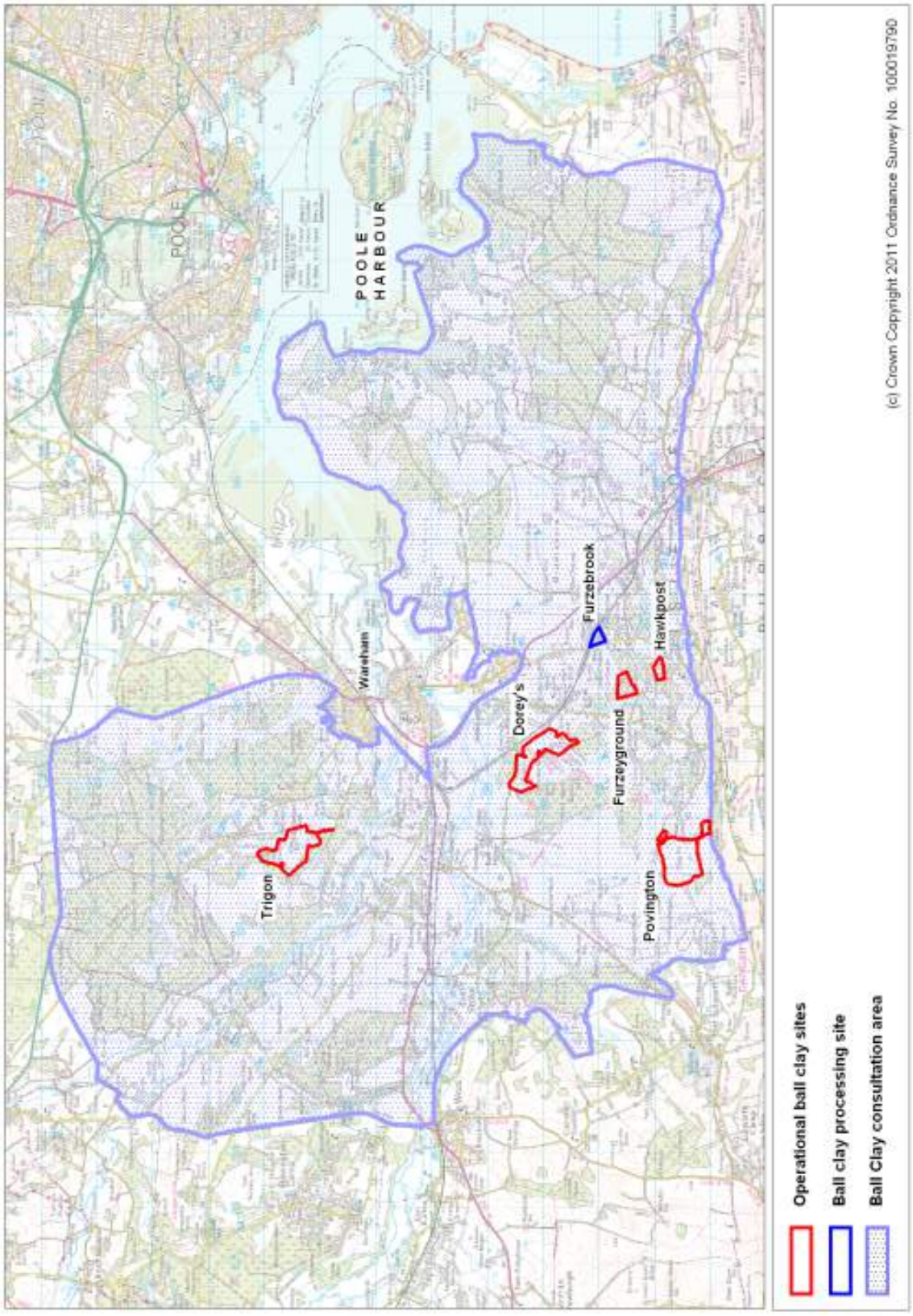


Figure 16 Revised ball clay consultation area