1 Summary

1.1 The enquiry should consider the geodiversity of an area, in particular, how this adds to local environment and character. Evidence given here from World Heritage Sites such as the Jurassic Coast and from National Parks, Geoparks and Areas of Outstanding Natural Beauty shows that local character and landscape is often a driver for visiting an area. This can be both exploited and also shown to enhance tourism experience. Bodies such as the English Geodiversity Forum, which has a wide membership at local and national level can assist with data and natural capital information on this.

2 Introduction

2.1 I am writing on behalf of the English Geodiversity Forum to provide evidence and additional information relevant to the current enquiry relating to Rural Tourism in England. The English Geodiversity Forum was established in 2013. It promotes England’s geodiversity, seeking to widen the profile of, and support for, geodiversity and its influence on national and local policies. The English Geodiversity Forum has drawn up this Geodiversity Charter for England and supports its vision and actions and encourages all to support the charter.

2.2 The English Geodiversity Forum is a collective voice for geodiversity across England. It aims to achieve this through: 
   - Supporting and assisting the delivery of geodiversity action through mechanisms such as the Geodiversity Charter and the UK Geodiversity Action Plan.
   - Promoting and sharing good practice in relation to geodiversity and geoconservation.
   - Raising awareness and understanding of geodiversity.
   - Advocating the inclusion of geodiversity in local, national and international policies.


2.4 England’s geodiversity is exciting, world-class, inspiring and touches on all aspects of our lives.
   Geodiversity is recognised as an integral and vital part of our environment, economy and heritage that must be safeguarded and managed for current and future generations. To maintain and enhance our geodiversity it is important to recognise its role in:
   - our understanding of England’s geological history and global geosciences
   - natural heritage, both terrestrial and marine, and landscapes in all their diversity.
• supporting habitats and species and the many essential benefits they provide for society
• adaptation to changes in climate and sea-level through sustainable management of land and water and working with natural processes
• sustainable economic development
• the history, character and cultural development of our society through intellectual growth and creative expression alongside industrial and technological development
• public health, quality of life and national well-being and connecting

2.5 We believe that it is important to consider the role of geodiversity in linking tourism with local environment and character as well as considering the benefit a good knowledge of this can provide when assessing sustainability and infrastructure needs.

3 Definitions
3.1 Geotourism has been defined as "a form of natural area tourism that specifically focuses on landscape and geology. It promotes tourism to geosites and the conservation of geodiversity and an understanding of Earth sciences through appreciation and learning. This is achieved through independent visits to geological features, use of geo-trails and view points, guided tours, geo-activities and patronage of geosite visitor centers" (Newsome, D. and Dowling, R.K. (2010). Geotourism: The Tourism of Geology and Landscape. Goodfellow Publishers). It should link to the culture and heritage of a place and support the well-being of residents by raising their sense of pride and ideally, contributing to the local economy. Tourism revenues and residents in turn should be part of the plan to care for and conserve local geodiversity assets (rocks, landscapes and associated heritage features).

3.2 Geodiversity is the variety of rocks, minerals, fossils, landforms and soils, together with the natural processes that shape them. Geodiversity is a foundation for life and our society. It influences landscape, habitats and species as well as our economy, historical and cultural heritage, education, health and well-being. (Geodiversity Charter for England. English Geodiversity Forum).

4 Evidence

4.1 Geodiversity Charter for England

4.1.1 The Geodiversity Charter for England was launched with a Parliamentary Briefing in October 2014 and outlines how geodiversity affects all of our lives. The Charter can be viewed on the following website: www.englishgeodiversityforum.org.

4.1.2 England is characterised by contrasting landscapes and coastlines. All of this and the way in which we use and enjoy the land is shaped by the rich geodiversity found here, spanning over 700 million years of time. The geological record reveals a dramatic journey of moving continents, mountain building, volcanic activity and changing climate and sea levels. Landscapes as diverse as Dartmoor, the Fens and the Lake District are all characterised by their geodiversity.
4.1.3 In the early 19th century William Smith produced maps of counties to show how understanding of underlying bedrock could contribute to engineering projects and industry. These beautiful maps are still relevant and useful 200 years later. Charles Darwin was influenced by the diversity of the fossil record when developing his theory of evolution. There have been many other pioneers of geology influenced and inspired by the geological record of England.

4.1.4 Biodiversity is underpinned by geodiversity. Without the variety of rocks, landforms, soils, water and nutrients that support the locally, nationally and internationally valued habitats, species and ecosystems these could not exist. Unless the geodiversity is robust and conserved then the range of biodiversity will be diminished.

4.1.5 For this reason the English Geodiversity Forum was established to raise the profile of, and support for, England’s geodiversity. The Forum is a partnership of organisations and groups with a shared ambition of encouraging ‘action’ for geodiversity, promoting and sharing good geoconservation practice, raising awareness of geodiversity, and advocating policy inclusion of geodiversity at all levels.

4.1.6 The Geodiversity Charter for England is a first step in achieving this ambition. Growing support for the Charter includes a range of national and local geological organisations and groups including the Geologists’ Association, British Geological Survey, GeoConservationUK, and the Geology Trusts and a range of other bodies including Natural England, the National Trust, the Heritage Lottery Fund and the Natural History Museum.

4.2 Jurassic Coast World Heritage Site

4.2.1 The Jurassic Coast World Heritage Site, inscribed due to the outstanding importance of the geodiversity has recently completed a survey relating to Dorset’s Environmental Economy, December 2015 PLACING AN ECONOMIC VALUE ON THE JURASSIC COAST. This is available on the following website http://jurassiccoast.org/wp-content/uploads/2016/02/Dorsets-Environmental-Economy-Jurassic-Coast-Dec-2015.pdf.

4.2.2 It highlights and makes the following conclusions: The headline result from the work undertaken in this report is that we estimate that the Jurassic Coast influences circa £111mn of output and up to 2,000 jobs in the wider Dorset and East Devon area, on an annual basis.

4.2.3 The visitor survey showed that the Dorset environment and the Jurassic Coast in particular was highly influential in attracting people to visit Dorset and East Devon and businesses who responded to the business survey recognise that the higher visitor numbers have had a beneficial impact upon their business. Businesses also recognise the value added by the Jurassic Coast brand, and many adopt the brand for their own purposes. The development of the brand has been a key activity for the wider Jurassic Coast team and there is certainly evidence – although difficult to quantify – that it has generated significant benefits for the business community.
4.2.4 The Jurassic Coast is clearly valued by Dorset and East Devon residents. By asking
their ‘willingness-to-pay’ in the absence of continued public support we can begin to
understand that the value they attach appears to be greater than the support
currently indirectly provided.

4.3 The value of Geodiversity to Society – Natural Capital

4.3.1 The Natural Capital Committee defines natural capital as ‘those elements of the
natural environment which provide valuable goods and services to people’. In the
main, these goods and services are related to ecology/biodiversity rather than to the
full range of natural capital. Specifically, the values associated with abiotic nature
(geodiversity) are frequently undervalued or ignored.

4.3.2 Geodiversity is often defined as the variety of the physical environment and is the
abiotic equivalent of biodiversity. It is this variety that means that the geodiversity of
our environment is valuable to society in many different ways (geosystem or abiotic
ecosystem services). This is best illustrated by Figure 1. For example, geodiversity
provides:

- a huge variety of physical habitats for biodiversity;
- places to bury our dead and our waste;
- natural stores of water in aquifers, oil, natural gas;
- building materials and industrial minerals;
- gemstones and precious metals;
- therapeutic landscapes for health and well-being;
- attractive places to visit (e.g. coasts, lakes, mountains);
- artistic inspiration;
- information about the history of the planet and climate change.

Murray Gray, 2015
4.3 Large Case Study 1 - Black Country in the Urban West Midlands.

4.3.1 The Black Country was the World’s first industrial urban conurbation. It was a powerhouse of the UK’s economy for more than 200 years and together with the adjacent second city of Birmingham provided inventions and ingenuity that transformed the lives of everyone on the planet. All of this was based on the exploitation of the natural capital of the minerals within its ground and the creation of inland transportation systems. The grain of the land was exposed through the mining, quarrying and canal building. These engineering works unveiled a staggering geodiversity (that is greater than any other area of the UK for its size) and created a post-industrial biodiversity and variety of habitats that is far more varied than the rural areas around as well as a unique landscape character which like more rural areas is a direct product of the geology and soils below.

4.3.2 Mining ceased here in 1968 and remaining heavy industries have become integrated into a safer ever-greener landscape through regulation, redesign and redevelopment but the rich legacy of its of natural and related cultural capital remains scattered across this landscape as a permanent heritage seam for the benefit of all for the long term if conserved, nurtured and developed sensitively.

4.3.3 In such urban areas such as the Black Country natural capital has always been directly connected to the people it serves. Generations have literally been immersed within it. It is very ‘visible’ in this setting and has great importance to the quality of the living, learning and working and the health and wellbeing of the citizens enclosed by it. Put simply, it really matters to people here. Any deterioration and loss of natural capital in urban areas like the Black Country therefore has an immediate impact on people, ecosystems and the wider regional and national environment downstream and surrounding them. Consequently even modest support for and development of the natural assets of such areas will have major benefits to large populations and broader geographic environments. In the Black Country this is the living background to 1.1 million residents and offers a unique natural and cultural tapestry to millions of annual visitors who encounter the natural world in engaging ways that they simply wouldn’t find elsewhere in the world. This landscape provides inward wealth and investment on the back of this to the extent that green/heritage tourism alone is now a major strand in the local economy.

4.3.4 Some Facts and Figures
National tourism statistics from Visit Britain show that in 2014 there were 34.8 million overseas visitors who spent £21.7 billion in the UK. There are estimated to be 3.1 million jobs in tourism in the UK. One in twelve jobs in the UK is currently either directly or indirectly supported by tourism.
4.3.5 In 2013 a tourism study by market researchers ‘Enventure Research’ indicated that the visitor economy of the Black Country was worth £825 million per annum at that time, supports thousands jobs and provides educational and sociological benefits to 1.1 million people. Much of this is based around the natural sites and their attendant historic monuments and features. A necessity in retaining this income is the protection of heritage sites, greenspaces, natural habitats and wildlife corridors, including the canal corridors.

Graham Worton 2015

4.4 Local Group Participation
Organisations such as GeoConservationUK and the Geology Trusts involve local people in caring for and enhancing the environment. They produce leaflets on links to geodiversity, trail guides and lead walks etc. The Geologists’ Association produces a list of these guides and examples of successful projects can be seen on the following website (for example) www.berksgeoconservation.org.uk. The thing that both small local initiatives and big enterprises like geoparks need the most is good, coordinated, preferably national scale publicity. This again leads to knowledge and appreciation of areas.

4.5 Window into the Past - Platform for the Future
Promoting Geotourism in the Peak District
A report of the geotourism conference held in Buxton, Derbyshire, November 2015, supported by the English Geodiversity Forum and the Peak District National Park Authority.

4.5.1 On Wednesday 25th November 2015 a day conference on geotourism was held at the Palace Hotel, Buxton, Derbyshire. The unique feature of this conference was that it was an event intended to inform, inspire and listen to people from the local tourism industry, rather than a gathering of geologists telling one another how they have promoted geology. As such, this conference was probably the first of its kind in England.

4.5.2 The title, Window into the Past – Platform for the Future, made subtle reference to the geology of the Peak District, whilst pointing, clearly enough even for non-specialists, towards the tourism potential to be discussed, especially when followed by the sub-title Promoting Geotourism in the Peak District.

4.5.3 The idea for this geotourism conference was generated by discussion at the English Geodiversity Forum, which was established in 2013 to bring together all of the national organisations with an interest in raising the profile of, and support for, England’s geodiversity.

4.5.4 Case Study - World Class Geology!
Tony Devos, Programme Manager, Limestone Landscapes Partnership

4.5.5 Limestone Landscapes was a multi-year project funded by the Heritage Lottery Fund’s Landscape Partnerships scheme. It delivered a range of sub-projects drawn together by their relationship with the Magnesian Limestone Plateau which fans out across an area from Darlington to the north-east coast, from South Shields to Hartlepool, or from the estuaries of the Tyne to the Tees. The underlying rock controls the landscape, and the interaction of people, plants and animals with the Magnesian Limestone has shaped that landscape in a unique and distinctive way.
4.5.6 A range of innovative projects, some with geology as the main theme, and others where it complemented other topics, included:

4.5.7 Kingdom of Quarries – cleaned and cleared scrub from some very overgrown but important rock faces, improved access, produced information leaflets and invited visits from schools and community groups. A white horse was repainted and some Magnesian Limestone sculptures were installed in one quarry. Miniatures of the sculptures were made and hidden around the quarry, so that if children found them, they could keep them.

4.5.8 Quarries Live! – highlighted fantastic geology and the economic importance of four active quarries. Viewing platforms with information boards were installed at the quarries, a set of downloadable booklets written and a series of school and community visits arranged. At a nearby primary school, a ‘Fish for Fossils’ bay was built, where children and tourists can search through fragments of rock (replinished from the quarry) for fossil fish from the famous Marl Slate.

4.5.9 Trails and Tribulations – worked with communities to research and establish five trails interpreting the rocks and the built environment, including a sensory rock trail in a park and others in the countryside, a city centre and by the coast. In Sunderland, the trail looks at how stone has been used in houses and includes a wonderful example of actively growing tufa that has been incorporated into the dock buildings as a feature. The trails also signpost visitors to yet more places to visit.

4.5.10 Village Atlases – involved the people of villages in researching how their place developed and what makes it special. People gathered memories, maps and archives, learned about archaeology, architecture and landscapes, and linked these with the geology, streams and wildlife to provide a fuller understanding of how each settlement came to be. The project worked with six villages as they compiled their atlases, but there is now a target to do the same for every village by 2020; 40% of them have been completed so far.

4.5.11 Using experts – has benefitted all of the projects through the input of all kinds of specialists. Volunteers have benefitted from working alongside experts and at one location joint research is being carried out by an ecologist and a geologist studying the wild flowers growing on unique rocks.

4.5.12 Changing messages – sums up the transformation of the area with regard to how people view their local geology. Old warning signs at accessible rock faces that said DANGER – FALLING ROCKS, now say DANGER! WORLD CLASS GEOLOGY! Rather than a blunt message implying that rocks are dangerous, the new boards provide challenging interpretation of the rocks with a proportionate warning to take care.

4.5.13 Tony says, “Since we have started promoting the geology of the local area, the increase in people understanding what they are living on and why it is special has changed significantly. Many of these individuals who have learnt – especially through the Village Atlas Projects – have made it their mission to conserve and restore not only the geological sites, but also the special wildlife sites that find their home on the Magnesian Limestone rocks”.

5 Conclusions
5.1 There is clear evidence that consideration and inclusion of geodiversity within a tourism plan can improve the quality and that at all stages of planning experts should be included in this process. The Forum recommends that this occurs.

*September 2016*