Introduction
This review considers the biodiversity issues of the regeneration plan area, and includes within that geodiversity, landscape and seascape.

Biodiversity is the variety of life in all its forms. It includes all species of plants and animals, the genetic variety amongst them and the complex ecosystems of which they are part (UN 1992 Convention for Biological Diversity). Geodiversity is the variety of earth materials, forms and processes that constitute and shape the Earth (Wikipedia definition). Landscape is the combined result of physical factors (geology, geomorphology, climate, soil types and vegetation) and human activity over the years. Biodiversity, cultural and historic environments are essential components of the landscape. Seascape includes open sea, shoreline and the interrelationship between land and sea. The character of the seascape will be affected by physical factors, the natural environment, cultural features and human activity.

This part of Cornwall has been heavily altered by generations of extractive industries often creating new landscapes and landforms. Nature has taken advantage of these changes and developed niche and secondary habitats. In recent decades restoration work has sought to build upon existing and former priority habitats (Tomorrows Heathlands and the China Clay Woodlands Projects (Imerys/Natural England)).

Key issues
1. Need for specialist surveys to determine extent protected species and priority species and habitats (Cornwall Biodiversity Initiative Biodiversity Action Plan).

2. In order to maintain biodiversity development should aim to prioritise retention of species-rich and BAP priority habitats in addition to habitats which are known to support protected species. A mosaic of habitat types (even if individually of low species richness) and structures may often be as important in encouraging an overall diversity of species (Wardell Armstrong, July 2008 p50).

3. Future management of nature conservation sites and the wider landscape to ensure a robust and resilient network of habitats at the landscape scale with good connectivity.

4. Detailed landscape assessment work required.

5. Plans should take account of impacts on and opportunities to enhance biodiversity and should follow existing best practice guidance such as Biodiversity and Geological Conservation: Planning Good Practice Guidance for Cornwall - November 2007 (www.cornwall.gov.uk/default.aspx?page=12898). In particular consideration should be given to:

   • Existing designated sites from international down to local importance and assess direct and indirect impacts.
   • Existing protected and Biodiversity Action Plan (BAP) priority species in the area and assess the likely direct and indirect impacts, e.g., how will the
development including additional lighting affect foraging and migration of Greater Horseshoe bats in the Luxulyan Valley/St Blazey area.

- Existing habitats and features (phase 1 survey) to identify key habitats to protect, enhance and ensure landscape scale connectivity.
- Identify opportunities for landscape scale biodiversity structural enhancements, e.g., China Clay Area visioning study.
- Invasive species issues will be of particular importance in this area with several species already being an issue, e.g., Japanese knotweed, Himalayan balsam, Rhododendron, Buddleia etc.
- Any species and habitat records should be made available to the Record Centre (ERCCIS).

**Key messages**

The Core Strategy draft biodiversity and landscape issues papers identify a number of key messages for Cornwall as a whole:

1. Need to ensure that biological and geological diversity is conserved, enhanced and restored.
2. Connectivity between habitats & space is needed to allow species to adapt to climate change.
3. Decisions on development and use of land must integrate biodiversity and geodiversity with other considerations.
4. Biodiversity provides substantial goods and services to our ecosystem, and is an indicator of the health of our ecosystem and quality of life.
5. There are areas outside nationally designated areas that are particularly highly valued locally. Tools such as landscape and seascape character assessment are recommended to provide the basis for developing the appropriate guidance for such areas.
6. The European Landscape Convention (ELC) requires a holistic and inclusive approach towards all landscape which should be embedded at all levels of policy making and implementation.
7. The international and nationally designated landscapes require special protection to conserve their unique qualities.
8. Landscape Character Assessment is a key technique in ensuring that development is not only in the right place, but that its respects.

The Cornwall Environment Evidence Report (May 2010) identifies a number of additional key messages:

9. There are a wide range of environmental designations in Cornwall and the Isles of Scilly which have an important role in protection and conservation. The agricultural sector also has a significant role in conservation, accounting for about 80% of total land area.
10. The estimated ecological footprint of the area is well above a level of resource use considered to be sustainable. There is scope to use water more efficiently and make more of the area’s vast renewable energy resources.
11. Cuts in greenhouse gas emissions are required in Cornwall and the Isles of Scilly to meet emission reduction targets and to minimise the impacts of climate change.
12. Population growth and the associated growth in housing and development are also likely to increase pressure on the environment and the demand for resources.
13. The environment is at the heart of the area’s economy, with a large amount of its revenue dependent on environmental quality.
Context
Cornwall has a rich biodiversity with a wealth of flora and fauna, which is recognised for its importance internationally, nationally and locally. In Cornwall the relationship between land and sea is an important consideration in the context of the Cornish landscape; the county forms a peninsular which, with the exception of the Devon boundary, is surrounded by sea. Consequently, the maritime influence on the County’s landscape is significant.

Cornwall has a variety of coastline, heathland, creeks, granite upland, woodland, moorland and sub tropical gardens. In a global context the sheer diversity of landscape types in such a small area is unique (Cornwall Heritage and Culture Strategy, Cornwall County Council, 2000).

There are a number of designations within the area:
- World Heritage Site - Luxulyn Valley and Charlestown
- Area of Outstanding Natural Beauty (AONB) – coastal area west of Porthpean and east of Par Sands
- Landscape Character Areas (LCAs) - includes part of the following LCAs:
  - LCA17 St Austell or Hensbarrow China Clay area
  - LCA20 Mid Cornwall Moors
  - LCA39 St Austell Bay and Luxulyan Valley
  - LCA40 Gerrans, Veryan and Mevagissey Bays
- Carbis Moor County Wildlife Site (CWS)
- Goss Moor - National Nature Reserve (NNR) and Site of Special Scientific Interest (SSSI)
- Total of 10 SSSI’s, Sites of Importance for Nature Conservation
- Par Beach Local Nature Reserve (LNR)
- Area of Great Landscape Value
- 3 Special Areas of Conservation
- Areas of Ancient Woodland
- Regionally Important Geological or Geomorphologic Sites

Supporting documents
- Core Strategy Place-Based papers
  - China Clay Community Network Area (CNA)
  - St Austell CNA
  - St Blazey, Fowey and Lostwithiel CNA
- China Clay Biodiversity Visioning Report – Cornwall Wildlife Trust January 2009
- Cornwall Biodiversity Action Plan
- Wardell Armstrong Eco-Town Technical Studies for Imerys, July 2008