



# LancewadPlan

## Synthesis of the Wadden Sea Cultural Entities



based on the 59 entity descriptions

### SUMMARY

This project provides a characterisation of the cultural heritage and in particular the historic landscape, of the Wadden Sea Region. The area has been sub-divided into 60 separate cultural entities which were identified and described by workers in their respective countries (The Netherlands, Federal Republic of Germany and Denmark). The cultural entities range from Kop van Noord Holland in the south to the Danish Wadden Sea islands in the north. They include the islands of the Wadden Sea, the Wadden Sea itself, the areas immediately adjoining the coast, and a number along the rivers and estuaries flowing into the Wadden Sea. The cultural entities are described through the historic development, of settlement patterns, flood defences, fields and the economy against a background of natural landscape characteristics. In addition the vulnerability and potential of the cultural heritage has been assessed and issues crucial to their conservation, and management identified. The synthesis provides an overview of the character of the cultural heritage of the Wadden Sea Region, identifies the overarching vulnerabilities and potentials and suggests some future directions where a character based approach to conservation and management might be progressed.

### 1. Introduction

The entire Wadden Sea Region (the area covered by the LancewadPlan project) has been characterised through the creation of a number of cultural entities (CE). The entities are a means of exploring historic landscape character. They were described on the basis of the historic dimension of present landscape features and settlement patterns, through an understanding of the political social and economic developments in the context of the dynamic relationship between people and their natural environment.. Modern development and related planning issues were addressed in order to relate the entities to aspects of their contemporary context critical to their conservation and management. Consideration was also given to vulnerabilities and potentials of the cultural heritage for each of the defined entities. This information is provided in each of the individual entity descriptions, and this section provides a synthesis of the entity descriptions to give a general overview of the character of the Cultural Heritage of the Wadden Sea Region (Part 2), the main threats and potentials (Part 3), and finally, some suggestions concerning the elaboration of a character based approach to planning and management of the cultural heritage embodied in the creation of the entities (part 4).

## 2. Characteristics of the Cultural Heritage in the Wadden Sea Region

The landscape of the Wadden Sea region has developed since the end of the last Ice Age due to the repeated erosion of moraines and sand deposits and subsequent sedimentation by the rising sea. This created bog and marsh areas intersected by tidal inlets and repeatedly flooded. The islands of the Wadden Sea off the coast of Denmark and Schleswig-Holstein in part owe their origins to these glacial deposits against which sand dunes have formed, whereas the Dutch and east Frisian islands are essentially a dissected sand barrier. The dunes are extensive and can reach considerable heights the largest, on Vlieland (CE4) being 40m high. The islands have been, and continue to be, shaped by the complex patterns of erosion and deposition resulting in the formation, of extensive sandflats and in places saltmarsh. The prevailing pattern of winds and currents, generally lead to erosion on the western sides and deposition on the eastern side. In a number of instances this has led to a general tendency for the islands to shift eastward.

For thousands of years the Wadden Sea itself has played a central role in the lives of the people of the region. The intertidal zone of the Wadden Sea contains a diverse cultural heritage. In addition to numerous wreck sites, changing sea levels mean that areas that were once dryland are now within the intertidal zone, and patterns of deposition and erosion reveal remains of human occupation from the Neolithic onwards which are often particularly well preserved.

Whilst there are a number of finds of Palaeolithic flint tools from the region, these are largely in secondary contexts having been redeposited by movement of ice sheets, the earliest substantial indications of human habitation in the Wadden Sea date from the Mesolithic. In the Danish area of the Wadden Sea Mesolithic settlement, from more than 8,000 years ago, consists of campsites along streams, with more permanent settlements located at the former coastline, now submerged by the sea. There is widespread evidence of Neolithic settlement, for instance, Kop van Noord Holland (CE1) has particularly significant Neolithic settlement remains. In a number of locations monuments were built on the higher moraine islands which always remained dry. There are megalithic tombs at a number of locations in Schleswig-Holstein (e.g. Norderdithmarschen, CE44 and Sylt CE54). Similar tombs existed in Lower Saxony, most have been destroyed but a few examples survive as at Tannenhausen in Auricherland (CE23). A move to expand the useable land seems to have occurred during the later Neolithic. For instance in Lower Saxony, finds from this period have been made in areas which had not been previously exploited, such as the edges of the marshes, river valleys and fenland. A bog track leads from Tannenhausen in the direction of the Ewiges Meer in the district of Wittmund. Numerous remains of wagons provide evidence for vehicle traffic at this time.

Parts of the Danish area of the Wadden Sea region appear to have been permanently occupied from the Neolithic with scattered single farms on the Geest. In this area the combination of cattle farming in the marshlands and grain-growing on the Geest can be dated back to the Bronze Age 3,000 years ago, there are dense concentrations of settlements following the Geest edges, and numerous burial mounds from this period. Iron Age settlement is also widespread. It is perhaps in this Danish area that the nature of prehistoric settlement may be most easily appreciated by visitors. In Marbæk Plantage (plantation) there are two protected Iron Age dwellings where remains of the houses and paving can still be seen, and large protected field systems, called Celtic fields, from the

same period. In a small heath land area north of Hjerting is a group of more than 15 protected burial mounds. Around Esbjerg a range of historic dwellings have been excavated, which show the whole development of settlements from the Neolithic to the Middle Ages.

Elsewhere, continuity of settlement can also be demonstrated, for instance on Texel (CE3) occupation appears to have been continuous since the Middle Bronze Age, but in a number of other places there are clear discontinuities in settlement patterns. For instance on Sylt there is a multitude of extant single mounds and mound cemeteries dating from the Bronze Age to Viking Age; however, settlement seemed to cease for a while in the 5<sup>th</sup> and 6<sup>th</sup> century AD, an absence usually ascribed to migration to Britain. During the Viking Age, the island was inhabited again, presumably by Frisians from the western Wadden Sea, this period is represented by cemeteries with large numbers of mounds as at Morsum Kliff. To the south in Halligen (CE42) settlement is demonstrated by a number of finds dating to the late Neolithic, around 2300 BC, however, continuity of settlement on the islands can only be demonstrated from the Viking Age.

In the Carolingian and Viking periods the Dutch Frisian islands, saw significant settlement. Den Burg on Texel (CE3) may be a fortress of Viking origin and a Viking Age trading centre or emporium existed on Wieringen (CE2). Similarly, there are a number of significant fortifications such as the circular earthen rampart of the Tinnumburg, a fortified Viking Age settlement on Sylt (CE54), and the Bökelnburg in Süderdithmarschen (CE43) which is a circular embankment on the very fringe of the high Geest. It was designed as a fortification for the northern part of the Dithmarschen in the 9<sup>th</sup> century, when it was part of the empire of Charlemagne. In the Danish area, until the 11th century AD the villages were often moved, but from the beginning of the Middle Ages most of the villages settled at a permanent location.

The fertile marshlands were important to the economic prosperity of the Wadden Sea, and sea born contacts to the west European area can be traced back to the early Iron Age. A settlement at Dankirke near Vester Vedsted probably played a central role in the trading of luxury goods from first the Roman and later the Frankish area. In burials of the 7th and 8th centuries AD, objects imported from the Saxon-Frisian and Anglo-Saxon area have been recovered.

Human occupation and the need to protect against flooding have always been closely linked in the Wadden Sea, the need to manage flood risk has strongly influenced the form and nature of settlement. The earliest settlements were on the relatively high ground of the Geest, in areas protected by dunes and on the highest salt marsh. Settlement of the marshland began in places during the Iron Age, but much later in other areas for instance during the Roman Iron Age in Norderdithmarschen (CE44). Dwelling mounds are one of the most characteristic settlement forms of the Wadden Sea and occur very widely. There are many examples in the Netherlands, including the well known excavated example at Ezinge. However, the mounds in the Netherlands suffered severely from systematic destruction in the later 19th and early 20th century. Dwelling mounds are also widespread in Lower Saxony in, for instance, Wangerland/Jeverland (CE30), Brookmerland (CE21) Harlingerland (CE24) Krummhörn (CE26) and Rheiderland (CE17), Butjadingen (CE34), Wurdenland (CE36) Freisische Wehde (CE31), Hadeln (CE38) Kehdingenland (CE 39) and Wurstenland (CE37). The latter area includes the famous excavated mound of Feddersen Wierde.

The first settlements on the high saltmarshes were without mounds, but rising sea levels made such locations and other low-lying areas vulnerable to flooding. Mounds were to be constructed as a response to the increased threat of flooding. In some places these mounds began to be constructed at the end of the 1st millennium BC and continued through the Roman Iron Age and into the early medieval period. The dwelling mounds, often constructed along tidal inlets or on higher marshes, vary considerably in size from single farms to entire villages, they are characteristic of the marshland and their distribution is often highly distinctive. For example in Wangerland (CE30), the mounds are aligned along the oldest areas of firm marsh land marking the fringes of the oldest settlement areas. In Schleswig-Holstein dwelling mounds are again a highly characteristic feature. They are rather later in origin than those in the Netherlands and Lower Saxony, they often occur in rows of medieval dwelling mounds with adjacent elongated strips of land, intersected by parallel drainage ditches (e.g. Krempermarsch CE42; Norderdithmarschen CE44). In Lower Saxony and Schleswig Holstein the mounds have not suffered the same degree of systematic destruction as in the Netherlands. Dwelling mounds also occur in the Danish part of the Wadden Sea, and include the very large mound village of Ubjerg, the most northerly Frisian settlement in the Wadden Sea.

Mound construction was essentially a means of avoiding flooding driven by rising sea levels. The construction of dykes, also driven by the need to manage flood risk, and often closely related to mound construction, began on a small scale during the Roman period in the Netherlands but large scale dike construction began in the 11th century AD. In the Netherlands and elsewhere the first examples were ring dikes, such dikes are particularly numerous in Westergo (CE5). Later linear dikes, such as the long dike parallel to the coast in Suderdithmarschen (CE43), were built or the ring dikes gradually extended, until they linked up, as in the case of Altdeich which enclosed the whole of Wangerland (CE30). Dikes and former dikes are common and distinctive features of the Wadden Sea, the old dikes sometimes now used as tracks and roads. The progressive construction of dikes made dwelling mounds less essential. Settlement migrated or new settlements were constructed, focussed on the dikes, or around outfall sluices where a number of harbours developed. This resulted in distinctive forms of settlement; examples include the landscape of right-angle roads and drainage systems, linear villages and embankment-hedges, of Overledingen (CE18), the well preserved Aufstreck-settlements, farms, strung together, one after the other, on the flat embankments used for settlement, which were intended to secure the edge of the moorland in Brookmeland (CE21), and linear settlements, starting in the 12<sup>th</sup>/13<sup>th</sup> century on the north and east edge of the Ahlenmoor (Hadeln CE38), from which the moor was cultivated by turf-cutting.

In general fields are closely related to settlements and often reflect successive changes in flood defence and land reclamation. On Texel (CE3), Terschelling (CE7) and Ameland (CE8) early fields tended to be small and irregular. In a number of instances such as on Wieringen (CE2) and the higher parts of Texel where water filled ditches were not practical, field boundaries were constructed of sod banks. Similarly, there are often clear differences in settlement and land use between the higher Geest areas and lower marshland. In Wangerland (CE30) the Jever Geest with its fens, birch trees, bank hedges and tree-lined roads contrasts with the wide-open sparsely-wooded marsh landscape. Embankment hedges are characteristic features of Geest areas in Lower Saxony. In other areas, the distinction between Geest and marsh is equally distinct but quite different; in Overledinger (CE18) agriculture is concentrated on the marshes along the banks of the rivers Leda and Jümme, and the poorly drained less fertile Geest-ridge

with its bog-areas is mainly used for peat digging. This is just one example of a particular type of field system within the Wadden Sea region. The origins, history and purpose of fields and their boundaries are often complex and vary considerably throughout the region, but wherever they occur and in whatever form they are important elements of the cultural heritage and a critical part of the historic landscape character.

Within the marsh areas themselves there is often a clear distinction between the older marshland, which tends to have small irregular fields defined by drainage ditches oriented along irregular former tidal streams, and more modern polder constructions that were designed with an enhanced drainage system in mind, and often included the straightening of former tidal inlets and digging of new canals. Consequently the more recently reclaimed areas have more rectilinear fieldsystems, such as the organised strip fields of the Grodenmarsch region, or the large rectilinear fields of the polders in Overledingen (CE18), and Rheiderland (CE17). This organised pattern of large rectilinear fields also characterise the extensive polders of the Dutch part of the Wadden Sea. For example polders were constructed at the islands of Texel (CE3), Terschelling (CE7), Ameland (CE8), Schiermonnikoog (CE12), as well as along the mainland coast, and fields were larger and more rectilinear in form. In the first half of the 20th century extensive reorganisation of the field systems and land reallocation swept away much of the earlier pattern of fields on the Dutch Frisian islands and mainland and many of the traditional sod bank boundaries were destroyed in the process. Most areas of polders have different patterns of drainage ditches and other features reflecting the chronology of reclamation. For instance, there are differences in the Tønder Marshlands, in Denmark, between the outer and inner polders. The outer polders are divided by (former) sea dikes and dikes along the large streams (Vidåen) into polders of different ages. The regular pattern of dense drainage and watering ditches, divides the marsh into rectangular fenlands. The inner polders delimited by a sea dike of 1556, are characterised by embanked areas, and many medieval dwelling mounds, stream dikes are also important elements. During 1750-1850 a land reform movement was active in Denmark, part of which was the promotion of "Enclosure", which aimed to merge all plots into consolidated land holdings. This caused some damage to the old patterns of field divisions, but not to the same degree as in many other places in Denmark.

In Schleswig-Holstein, the more recent polders, like those in Nordergosharde (CE52) are characterised by rectilinear and large-scale fields. In Wiedingharde (CE53), roads, drainage canals and fields are more rectilinear and large-scale in the south-east and have a totally straight and planned appearance in the far western polder. By contrast, fields in the old polders are irregular, small scale and intersected by sinuous ditches. Polders in Norderdithmarschen (CE44) still reflect the original landscape with many irregular tidal inlets. In the 20<sup>th</sup> century agricultural changes have continued with creation of larger fields driven by the Common Agricultural Policy and in Schleswig-Holstein, vast interventions in connection with the Programm Nord have taken place since the 1960s.

Woodland is not particularly characteristic of the Wadden Sea, but there are exceptions. In the Friesische Wehde there were formally extensive forests, however intensive exploitation for timber led to deforestation although some fragments still survive. In other places particularly the Dutch Frisian islands, woodland has been planted for commercial exploitation and dune stabilisation. Planting took place on Ameland (CE8) in the late 19th century, but most planting was undertaken by National Forestry Service in the early 20th century. The Service became a major landowner acquiring, for example, 3,000 hectares on Texel (CE3).

A particularly characteristic feature of the Wadden Sea landscape, are duck decoy ponds used for the trapping of wildfowl. Such ponds are widespread in the Dutch part of the Wadden Sea, they were introduced there during the 16<sup>th</sup> century. They subsequently spread to other North Sea countries. Today they are common in many parts of the Wadden Sea in the Netherlands and Germany, but have almost solely been used in Denmark on Fanø. The farms of the Wadden Sea region are often particularly distinctive, for instance, areas like Oldambt (CE16) have many large farms with fine gardens. Many of the farms within the region are characterised by a variety of distinctive vernacular buildings. These include farmhouses with pyramid-shaped roofs, the so called 'cloche' farmhouses (*stolpboerderij*) in the Kop van Holland (CE1) and Wieringen (CE2), the 'Gulf House' (e.g. Wangerland (CE30); Harlingerland (CE24); Fiesische Wehde (CE31) Wurstenland CE37), the "Kübbing"-houses of Krummhorn (CE20) the Niederdeutsche Hallenhaus (lower German hall house) or Niedersachsenhaus (Lower Saxony house).of Wurstenland (CE37), and the four post halls of Wurdenland (CE36).

Whilst the traditional economy of most of the Wadden Sea region was farming, the economic importance of the sea itself cannot be overestimated, and in the islands fishing, whaling and other maritime activities were economically dominant. In the Dutch Frisian islands, the supply of ships with provisions and water as they waited in sheltered anchorages in the lee of the islands was a significant part of the economy. The importance of seafaring to the Wadden Sea and the treacherous nature of the sandflats and navigable channels means that structures relating to navigation are widespread (e.g. Land Kehdingen CE39). Lighthouses are a particular feature of the Frisian islands. Terschelling (CE7) has the oldest surviving lighthouse in the Netherlands and the island has played a significant role in nautical history. As late as 1874 most of the mariners in the Dutch merchant navy came from Terschelling (CE7), a major naval college was established there in 1875 and institutions based on the island still have a significant role in ensuring safe navigation of the Wadden Sea.

Sea born trade was important from at least the middle of the 1st millennium AD, (and may well have been so from later prehistory). Such was the importance of water born trade and transport that harbours and wharfs were widespread. Many of the dwelling mounds had such facilities and harbours developed around sluices in sea dikes. In the Viking period Ribe, the oldest town in Denmark, was one of the foremost trading centres in southern Scandinavia. During the medieval period many towns including Tønder, Husum, and Meldorf were active trading ports. The Wadden Sea was a stronghold of the Hanseatic League with the Weser and the Elbe, providing access to the great trading towns of Bremen and Hamburg. The importance of ports in the region was not only linked to trade but also military activity. The city of Den Helder lies at the southern most point of the Wadden Sea region, the town was a major naval base from the late 18th century and has a series of historic defences from the Napoleonic period onward. Ports were developed at a number of coastal locations in the 19th century including Glückstadt, and Ekeborg, and a major naval base was created at Wilhelmshaven, now somewhat in decline and seeking opportunities for regeneration.

The mouths of the Weser and Elbe have been much altered particularly during the 19<sup>th</sup> and 20<sup>th</sup> centuries to facilitate their role as major transport routes. By contrast the Varde Stream Estuary in Denmark is the best example in the entire Wadden Sea region of a non-embanked river mouth where the marsh processes are still ongoing. Numerous watercourses both natural and manmade were for centuries the main means of transportation. Although water transport is now largely superseded by road transport, the road and rail network is not well developed by modern standards and the area is not

particularly well served by major roads. Den Helder is served by two major roads and a main railway line make this area one of the better connected parts of the Dutch Wadden Sea area. The construction of the Kiel Canal at the end of the 19<sup>th</sup> century had a significant impact on the southern part of Schleswig-Holstein. In the 21<sup>st</sup> century it is likely that major infrastructure projects in some parts of the Wadden Sea may have similar effects. Historically windpower has been of significance throughout the Wadden Sea and historic windmills are features of many parts of the region. However, during the last 20 years or so large industrial scale wind power generators have become common in many parts of the area, and have had and will continue to have a significant impact.

Tourism began to develop in the late 18<sup>th</sup> and early 19<sup>th</sup> centuries as part of a wider European fashion for sea bathing. The development of spa and bathing facilities particularly affected the Wadden Sea islands. Later in the 19<sup>th</sup> century and in the early 20<sup>th</sup> century mass tourism developed. For instance Nordeney grew to become the most prominent seaside resort in the new German Empire, whilst on Sylt the foundation of a spa in the village of Westerland in 1855, triggered a rapid and massive landscape change which has lasted until today. In the Danish part of the Wadden Sea, the Ribe tourist association was founded in 1899, aiming, through its work of preservation of the old houses, to promote the town as an important tourist attraction. Many recreational cottages are located north and west of Esbjerg and in the 1900s the dunes and beaches by Blåvand began to attract townspeople and tourists. During the 20<sup>th</sup> century tourism became a major activity in the Wadden Sea region and now, in the Dutch Frisian islands, more than 40% of employment is related to tourism. Tourism has historically been concentrated on the coast and particularly on the islands, and despite the development, particularly in the second half of the 20<sup>th</sup> century, of a broader interest in the marshland landscapes and towns of the mainland this remains the case. Sylt is probably still the place with the highest number of tourists in the Wadden Sea, however the immense impact and importance of tourism in the region may be judged by the fact that Neuwerk, with a permanent population, of about 30 caters for around 120,000 visitors per year.

### **3. Potentials and Vulnerabilities**

The variety and diversity of the cultural heritage reflects the historical interaction of human activity and a changing natural environment. The cultural heritage is a central resource for modern life. It has a powerful influence on peoples' sense of identity and civic pride. Its enduring physical presence contributes significantly to the character and 'sense of place' of rural and urban environments. In the Wadden Sea this resource is rich, complex and irreplaceable; it has great potential both with regard to its intrinsic worth and its role in economic development. As a critical aspect of the region's environmental infrastructure the cultural heritage has a major role to play in the future of the Wadden Sea.

The individual potentials of each cultural entity are summarised in table 1. The fundamental and most valuable potential is the variety of cultural landscapes and heritage. The individual monuments, sites and other cultural elements are each intrinsically significant, but added value is provided by their interrelationships and context in space and time. This creates cultural ensembles or cultural environments of greater value than a number of unrelated or poorly integrated individual sites or elements.

Conservation of biodiversity provides significant cultural and social benefits for the Wadden Sea Region. The maintenance of high biodiversity value will often require the

maintenance of a rich diversity in the cultural landscape. Conservation and enhancement of the natural and cultural landscape can thus be a symbiotic process which can be used to enhance people's appreciation of the region as a place to live and work in or to visit. However, in order to achieve the full benefits of this potential and minimise conflicts of interest, it is necessary to have an integrated approach to the natural and cultural heritage.

A sound awareness among the local people, stakeholders and politicians about cultural heritage values in the region is vital for the preservation, development and sustainable use of the heritage. Awareness and understanding is a precondition for managing development in a sustainable fashion, which values the heritage, and which will create a strong sense of place for local people and visitors. Closely linked to this are access and cultural tourism. Easy and appropriate accessibility is a precondition for further development of cultural tourism, which is an important economic factor in the rural area of the Wadden Sea Region. Good accessibility to cultural environments and ensembles through foot paths or cycling routes, especially if these are historic route ways, can in itself enhance awareness. This could be further developed through education and training programs. Furthermore, accessibility which is sustainable maintains the cultural heritage and landscape, enhancing people's sense of place and making the area a desirable place to live. Cultural tourism, developed in respect to the assets and treasures of our cultural heritage, can and should be a major contribution to the conservation of the cultural heritage and the economic wellbeing of the region. The openness of the landscape, the significance of historic settlements and trade, characteristic agricultural features, the remains of the different ways people have coped with and defended themselves from the threat of flooding, together with other sites and activities traditional to the region, are all attractive to visitors.

However, the cultural heritage is sensitive to change, and in the Wadden Sea Region it is under pressure from structural changes, often driven by issues at national, European or even global level, leading to rapid transformation. The particular vulnerabilities affecting the individual entities are summarised in table 2. The pressures are mainly caused by economic development across all relevant sectors but also by changes in the natural environment, notably sea-level rise and global warming. Careful consideration is required as change is planned in order to ensure that the cultural heritage can be part of a sustainable future for the Wadden Sea Region.

Farming in the EU has evolved into a high-tech industry employing less than 5% of the population. When the common agricultural policy (CAP) was introduced, the aim was to increase food production, and support schemes were established to achieve this. The aims of the CAP together with the resulting industrialisation of agriculture could threaten the diversity of cultural landscapes, the accessibility to valuable landscapes and the conservation of unique heritage elements. Whilst this is still a matter of concern, a recent trend to move from payments subsidising production to payment for environmental stewardship offers an opportunity to develop enhanced conservation of, and access, to cultural heritage and landscapes.

In order to maintain the area as a place that people wish to live in with a viable economy, modern facilities including housing and adequate transport infrastructure are necessary. This inevitably requires development in and around towns and villages leading to potentially adverse impacts on the cultural landscape and heritage. Impacts may affect particular sites and locations, but there may also be a cumulative affect, on valuable ensembles and cultural environments. Only well informed and carefully considered

spatial and physical planning can secure the cultural heritage values while meeting the needs of new settlement and industrial areas as well as of the related infrastructure. Accordingly spatial planning has a central role in balancing these competing claims and delivering necessary change in a sustainable manner.

Population change, although less obvious than physical change, is nonetheless important in its effects on the cultural heritage. Demography and other social parameters such as unemployment rates, housing markets and mobility and patterns of commuting have effects on the cultural heritage and its maintenance. Living conditions change due to migration to and from rural areas like the Wadden Sea Region and influence the need for infrastructure. A declining population level in the region could threaten the local quality of life (liveability), sense of belonging, awareness of, and care for, the cultural values.

Energy development plays an important role in the Wadden Sea Region. The strategy of developing the region as a hub for renewable energy production such as wind and solar generated energy in particular will tremendously effect the cultural landscape and its perception. Energy production parks are large scale constructions with effects on space, landscape structures, openness and the cultural heritage. As such, here again careful planning will be particularly important.

In many ways spatial planning is the most important instrument to conserve and enhance cultural heritage and landscape values. Planning is also a central instrument for a sustainable use of the heritage integrated with the various economic requirements for regional development. A vulnerability in this respect is that the valuable cultural issues are not deeply integrated on the legal and management level; a comprehensive consideration of the cultural landscape heritage in physical planning is not guaranteed. The cultural entities may prove particularly valuable in addressing this issue as a means of engagement with planners and others, and as a means of moving from a site based to a character based approach in strategic planning for the cultural heritage.

#### **4. Future Directions**

The cultural entities have been created and described primarily to serve as a tool to enhance understanding, conservation and management of the cultural heritage in general and landscapes in particular. They reveal the scale, diversity and value of the cultural heritage of the Wadden Sea region.

The characterisation provided by the cultural entities can provide the starting point for more effective incorporation of cultural heritage within spatial planning and for better integration of nature conservation and heritage conservation. The cultural entities will allow planners, with appropriate support and advice from specialists, to integrate the protection, promotion and management of the cultural heritage into spatial plans. In this regard their greatest advantage is that they enable a move away from a site based approach to the cultural heritage. Given the complexity of the cultural heritage and the importance of cultural ensembles, a more holistic, character based approach, can be more effective, particularly in highlighting the need for communication and co-ordination between appropriate services. In addition to use by professionals, the cultural entities may provide a means of engaging the wider public with understanding and conserving the cultural heritage.

As a matter of principle it may be suggested that, environmental protection and enhancement – provides the environmental basis for all development – valuing natural and historic assets and ensuring change is sustainable. The cultural entities can play a role in putting that principle into effect as they provide a strategic overview of the cultural heritage of the Wadden Sea region. Set out below are suggested general ways in which they could be used and developed.

Some specific points which could be developed from the cultural entities including:

- *Developing Cultural Heritage Guidance Notes:* The existing descriptions could be developed to provide simple guidance for each entity to inform conservation, regeneration, new development and public access and understanding
- *Cultural Heritage Significance Sensitivity:* consideration should be given to developing a simple method of indicating the significance of the cultural heritage in each of the entities and its sensitivity to different types of change
- *Raising awareness and promoting the cultural heritage of the Wadden Sea* The cultural entities can be used to effectively engage with professionals or specialists.

To ensure a sustainable future for the cultural heritage it will be necessary to engage a wider audience, and the cultural entities can also be part of the means to achieve this.

The defined entities are very large scale and particularly useful with regard to spatial planning at a strategic scale. They are perhaps too large to inform planning and other issues at a more detailed, community focused level. Therefore consideration should be given to creating subdivisions of the defined entities, a process which in itself could provide a means of involving planners and other key stakeholders. This would allow the development of a tiered approach, enabling the cultural heritage of the Wadden Sea to be interrogated at different levels, from large areas such as the cultural entities as already defined, through smaller sub-divisions which may be created, perhaps down to villages, or individual archaeological sites or monuments. A GIS environment would facilitate this and allow the incorporation of other datasets relating, for example, to the natural environment. More localised characterisation would help manage and determine the location scale, character, of new development, and landscape change, and might provide the context in which cultural heritage significance and sensitivity could be considered.

Perhaps the most important point is that to deliver their full benefits in engaging with the historic environment, the cultural entities should not be regarded as an end in themselves. They need to be used and refined, becoming a live and dynamic part of the process of planning and managing change in the Wadden Sea, a critical tool in managing the landscape of a candidate World Heritage Site.

**Table 1: POTENTIALS**

Cultural Entity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
<b>POTENTIALS</b>																				
<b>Settlement</b>																				
• Promotion and protection of the existing historic built environment	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
• Ensure local community understand the HE																				
• Use of historic settlement pattern to influence new development	X				X				X	X						X			X	
<b>Agriculture</b>																				
• Protection and enhancement of cultural landmarks		X			X	X	X	X		X		X	X	X			X	X	X	X
• Protection of buried archaeology																				
• Protection and enhancement of historic landscape features	X	X	X		X		X	X	X	X				X		X		X	X	
• Recreation maintenance and enhancement of historic land use		X							X		X	X					X			X
• Traditional farming methods and livestock			X				X					X								
<b>Forestry</b>																				
• Recreation of historic woodland																				
<b>Infrastructure</b>																				
• Use of historic settlement pattern to influence new development					X	X		X	X		X				X	X				X
• Existing transport network/historic patterns to influence new infrastructure																				
• Exploitation of infrastructure to enhance and manage the cultural heritage.		X						X												
<b>Tourism / Recreation</b>																				
• Promotion of the cultural heritage to and via the tourist industry	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
• Use of tourism to encourage management of cultural heritage	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
<b>Industry</b>																				
• Careful restoration of quarry sites to recreate Historic landscape																				
<b>Nature Management</b>																				
• Consistent and inter disciplinary co-operation between HE and nature conservation bodies					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
• Protection and enhancement of cultural landmarks										X								X		
• Protection and enhancement of historic landscape features							X			X				X				X		
• Traditional farming methods and livestock			X																	
<b>Natural Erosion</b>																				
• Potential for archaeological recording																				
<b>Monument Management</b>																				
• Visible features within the landscape provide nodes of interest	X	X	X	X	X	X	X	X	X	X	X					X			X	X
• Ties in with tourism	X	X	X	X		X		X		X	X						X		X	X









