Folkestone & Hythe District Heritage Strategy

Appendix 1: Theme 1c

Landscape – Dungeness

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1(c) Dungeness

1. Summary

The historic landscape at Dungeness is a particularly distinctive part of Folkestone & Hythe District, and indeed of the entire country. It has a unique range of biological and geological features that are of national as well as international importance. These include extensive buried and exposed shingle ridges, the eroding and accreting coastline of the cuspate foreland and a range of rare fauna and flora that are supported by habitats created by the diverse landscapes here. Its landscape is also uniquely sparse and remains relatively undisturbed by development and human occupation or activity. As a result, Dungeness is an area that is particularly attractive for its tranquillity, peacefulness and wildness with only a few buildings and dwellings which themselves are distinctive and reflect a strong local heritage. Overall it is a singularly special place that has a rich historic landscape and uniquely strong local character.

2. Introduction

Dungeness lies in the southwestern part of the Romney Marsh between New Romney, Lydd and Camber in the area south of the Rhee Wall known as the Walland and Denge Marsh. The Marsh has a long and complex history of formation which has resulted in variable geological deposits across its area. Its evolution began approximately 6000 years ago when environmental changes triggered the start of the formation of the Marsh. Under the influence of longshore drift sand bars and shingle spits began growing across the Rye Bay and as a barrier from Dungeness to as far northwards as Dymchurch. This build up resulted in the creation of a lagoon behind the shingle barrier that was open to the sea at Hythe. The River Rother and its Sussex tributaries fed into the lagoon which gradually became mudflats with swamps and vegetation.

The Marsh continued to grow but a faster rise in sea levels meant that most of the Walland and Romney Marsh remained intertidal for some centuries. During the Iron Age, Roman and Early Anglo-Saxon periods (approximately 800 BC to 600 AD) the Denge Marsh and parts of the Romney Marsh were underwater. Lympne was a coastal town and Romney (now Old Romney) was an island off the coast. Evidence of early occupation on parts of the Marsh indicates that efforts to reclaim land and defend against coastal inundation began some time during the Saxon period. The earliest defence to protect the occupied Marsh, the Rumensea Wall, was probably eighth-century by which time the coastline had also begun to change dramatically.

The island where Romney (later Old Romney) stood was reclaimed and embankments were extended southwards as far as New Romney where an accumulation of shingle took place and formed a natural barrier. The old town of Lydd had also originally stood on another island, as did Ivychurch, but the area was gradually reclaimed to form a complete land mass. New Romney was established as a harbour and would later be named as a Cinque Port by Royal Charter in 1155. By 1086 the whole of the Romney Marsh Proper was occupied and people began to move southwards towards the Walland Marsh looking for new land. Denge Marsh had emerged as an island by the twelfth and thirteenth centuries and Lydd became its main settlement.

Land reclamation of the Romney Marsh continued, and ongoing systems of drainage were kept to ensure the reclaimed fertile land was protected from the sea. This included the Rhee Wall watercourse that was built during the thirteenth century to keep the port at New Romney from silting up. The Dymchurch Wall was also built during in the late thirteenth century following the great storms of 1236, 1250-2 and 1287-8 that had breached the coastal barriers. By the fourteenth century much of the Walland and Denge Marshes had been reclaimed using a system of embankments and drainage ditches. This continued over the next few centuries until the Marshes were similar to that of today.

The Dungeness Peninsula has continued to evolve over time and is now the largest cuspate foreland in Britain. It represents around 5000 years of coastal evolution and environmental change, and forms part of a system of barrier beaches that stretches for 40 km from Fairlight to Hythe. The development of Dungeness has been well documented through geological study as well as historical records and continues to be monitored today.

The Geology and Topography of Dungeness

Formation of the Dungeness Cuspate Foreland (ness)

A cuspate foreland, also known as a ness or cuspate barrier, is a geological feature that is found on coastlines and lakeshores. It is primarily formed as a result of longshore drift; a geological process that transports sediment along a coast by waves that approach at an angle but recede directly away from it. An extension to the shoreline which extends outwards in a triangular shape is produced as a result of the accretion and progradation of sand and shingle. Some cuspate forelands are then stabilised by the growth of vegetation and are able to establish important habitats which subsequently support rare flora and faunal species. The cuspate foreland at Dungeness and Rye Harbour is such an important example and now supports wildlife and habitats that are of national as well as international significance. It is the largest in Britain and is frequently recognised as a primary example among cuspate forelands. Other examples of cuspate forelands include Point Pelee (Ontario, Canada), Cape Kennedy (Florida, United States) and Cape Hatteras (North Carolina, United States).

Whilst the Dungeness cuspate foreland is not the largest in the world, it nonetheless has features that make it a rare example of this type of coastal geomorphology. The Dungeness peninsula is almost entirely flint shingle which makes it unusual and has resulted in extensive surface and buried shingle ridges that record some 5000 years of coastal and environmental change. The ridges can be directly related to the development of the barrier beach system which has extended and evolved through a series of beach recurves as well as the redistribution of shingle from these barrier beaches. The exposed shingle ridges provide a valuable insight into the ongoing evolution of the foreland at Dungeness and the factors that are now affecting its progression. In recent years the growth of the foreland has slowed due to factors such as new coastal defence works, sediment supply for example to protect the EDF Power Station, recycling for beach management and climate change. It will be important to continue monitoring the evolution of the Dungeness peninsula and compare historical changes to the influences by human activity that have the potential to become more pronounced in the near future.

The buried ridges cover around 1150 ha and are very important as they allow for the mapping of the foreland's evolution going back thousands of years. Sediments and finer grained materials which occur between barrier beaches provide palaeo-environmental information allowing for the detailed interpretation of environmental conditions at the time of deposition. A chronology of coastal evolution can also be established from dating these deposits and an interpretation of coastal and environmental changes relies heavily on the association between the between the shingle ridges and associated deposits.

The cuspate foreland at Dungeness is also a relatively advanced form of cuspate due to much of the shingle having been redistributed from barrier beaches to form a ness that has a particularly acute angle. The ongoing protection of Dungeness and its shingle ridges through a number of designations is essential to ensuring the continued evolution of the site as well as its preservation as a valuable source of coastal and environmental information. It is also particularly important to continue protecting the unique habitats and wildlife that its special landscape supports, especially as some of the species found here are incredibly rare in this country and require careful management.

Physical Landscape and Landscape Features

The physical landscape of Dungeness is diverse and warrants national as well as international conservation importance. The plant and animal communities that it is able to support are also considered to be highly significant and come under the protection of a number of designations. Today Dungeness is a private estate and is closely managed by a number of bodies. The Dungeness Estate is owned by EDF Energy and covers around 468 acres primarily following the Dungeness Road and Power Station Access Road. This is located within the wider Dungeness National Nature Reserve (NNR) that is jointly managed by Natural England and the RSPB with the Romney Marsh Countryside Partnership also undertaking some management on behalf of Natural England. The RSPB Nature Reserve is located within the Dungeness NNR and covers around 4 square miles south east of Lydd.

The Dungeness NNR further forms part of the Dungeness, Romney Marsh and Rye Bay Site of Special Scientific Interest (SSSI). It is also part of the Natura 2000 Networking Programme which is a series of sites across the European Union that has been designated as a Special Area of Conservation (SAC) under the Habitats Directive and as a Special Protection Area (SPA) under the Birds Directive. SPAs are classified to help to protect and manage areas that are important for rare and vulnerable birds because they are used for breeding, feeding, wintering and migration. SACs are classified to protect and manage rare and vulnerable animals as well as habitats.

The diverse coastal landscape at Dungeness comprises a number of habitats that have formed over time because coastal processes continue to develop the barrier beach here and its resulting shingle ridges and sand dunes. Human activities have further modified the site creating extensive areas of wetland and flooded pits due to gravel extraction. Dungeness now represents the most diverse and extensive example of a stable vegetated shingle landscape in the country with 600 species of plant, which is a third of all plants found in the United Kingdom, being found here. It

is also home to several rare and important animal species, some of which in Britain can only be found at Dungeness.

The shingle ridges at Dungeness support a range of vegetated shingle communities. The transitions between them are also clearly demonstrated and they continue to reflect the geomorphological patterns of the shingle structure. Just inland of the pioneering drift line and false oat-grass grassland communities is an unusual species of plant; the Prostrate Broom which is an important component of vegetation. This is replaced on older shingle ridges by more common plants such as Wood Sage, Sweet Vernal-Grass and Common Sorrel. There are also important communities of Blackthorn that occur in low-lying areas of shingle. The older Blackthorn shrubs have a rich epiphytic lichen flora that is dominated by species that are unique to shingle and has its best representation at Dungeness. Other plant species supported by the shingle landscape include the endemic Leafhopper and rare Nottingham Catchfly. The latter is of particular importance as the food plant of several rare moth species, most notably the Sussex Emerald Moth.

Dungeness's vast shingle beach also contains a number of natural wetlands as well as man-made flooded pits that are referred to as Open and Fossil Pits. The RSPB Nature Reserve contains over 90 flooded pits that were first produced during gravel extraction. The wetlands and pits have been colonised by vegetation and display various stages of classic hydroseral succession ranging from open water and marginal red-swamp through to a form of marsh or fen. These have now become important habitats that continue to offer refuge for wintering wildfowl including the Black-Necked Grebe, Goosander and Smew. They also support breeding colonies of gulls and cormorants. The RSPB manages these habitats for their biodiversity and is hoping to increase the numbers of seabirds that breed here, including Mediterranean Gulls and Common Terns. Recently major landscaping work has created 20 ha of reedbed that links to the existing reedbed at Hooker's Pit. This will further provide important habitats for birds such as Bitterns, Bearded Tits and Marsh Harriers.

The fen vegetation that has colonised a number of the freshwater pits supports a number of rare plant and animal species. Great fen sedge is regionally scarce but can be found here at Dungeness. This vegetation also provides important habitats for the Great-Crested Newt and Medicinal Leech. The Great-Crested Newt is the rarest and largest of the three species of newt found in this country. Many of the flooded pits at Dungeness support healthy communities of these amphibians and provide exceptional breeding, foraging and hibernation conditions. The Medicinal Leech is also the largest of the leeches in Britain and is the only in this country able to suck blood from humans. Historically it was believed that these leeches could remove bad blood leaving only good blood behind in humans which led to over collecting across Europe. This resulted in a severe decline in the population and Dungeness is now one of the best places in Europe to find them.

Also included as part of the Dungeness NNR and SSSI are the Greatstone Sand Dunes. These are a narrow bay dune system that consists largely of a successional sequence of foredune to mobile dune and dune scrub habitats. Significantly, these dunes also demonstrate the transitions between vegetated shingle beach and foredune communities. An important ecosystem of plant life, small animals and insects are supported here that includes a breeding area for the Brown Tail Moth

Caterpillar and Sea Buckthorn which is an excellent sand stabiliser. Unfortunately the Buckthorn has now spread over most of the dunes and is threatening the rare native populations of plants that are found here. Work is being done to remove appropriate amounts of the Sea Buckthorn led by the Romney Marsh Countryside Partnership.

History and Archaeology

As has already been mentioned, Dungeness is a private estate that is jointly managed by a number of bodies. Its landscape has remained relatively untouched and has only been sparsely occupied by human settlement. Significantly, occupation of Dungeness has only occurred fairly recently and the character of the area has therefore remained largely unchanged. Dungeness has also attracted the gravel extraction industry for many years which has left a legacy of several gravel pits. Ultimately human interaction with the landscape here has been relatively small and the built landscape that has been established at Dungeness is distinctive and reflects the local heritage.

Prior to the First World War the only dwellings at Dungeness would have been the lighthouses, Lifeboat Stations and Coastguard cottages. Since the seventeenth century there have been seven lighthouses at Dungeness, five high and two low. The first high lighthouse was built around 1615 in response to the growing shingle foreland that was becoming a hazard for shipping and had already caused a number of shipwrecks with loss of life and cargo. This early lighthouse was a wooden tower that was around 35 feet high and had a coal brazier at the top. However, due to the progression of the shingle foreland and the receding sea, the lighthouse quickly became redundant. By 1635 it had been replaced by a more substantial brick tower that was 110 feet taller. This second high lighthouse lasted over 100 years before it also fell victim to the same problem as its predecessor with the added issues of poor illumination provided by coal fires. In 1792 a third high lighthouse was constructed that was 115 feet high and used oil lamps rather than coal.

In 1862 the Dungeness lighthouse became one of the first to use electric lighting; however this was soon superseded by more efficient means of using large oil lamps surrounded by glass prisms which provided a much stronger illumination. Quarters for the lighthouse keepers were built in a circular form at the base of this lighthouse and although the tower was demolished in 1904, these quarters are still present today. The first low lighthouse was built in 1884 as it was decided that it was necessary to support the high lighthouse due to the continued growth of the shingle foreland which meant that the high lighthouses would eventually find themselves some distance away from the sea. It was later replaced by a second low lighthouse in 1932 which lasted until 1959 when it was demolished to make way for the present high lighthouse.

The fourth high lighthouse was completed in 1904 and was a circular brick structure around 150 feet tall. It was originally known as the *High Light Tower* but is now known as *The Old Lighthouse* which is open to the public as a museum and venue for private hire. Whilst in use its external walls were painted in black and white bands to act as a recognisable beacon though it has now been painted black to avoid confusion with the current lighthouse. When the EDF Power Station was built in the early 1960s the lighthouse became obscured and so in 1961 the fifth high lighthouse

was completed and remains operational today. In 1991 the lighthouse was converted to automatic operation and is monitored and controlled remotely.

There is a long history of fishing at Dungeness and some of the first beach residences to have been built here are believed to have belonged to the Tart and Oiler fishing families. Leading up to the 1960s, fishing from Dungeness was widely practiced and several fishing boats would have been spaced out along the beach opposite dwellings that follow what is now Dungeness Road. Bait digging, shrimping and fishing with nets for herring, mackerel and sprats were all practiced and for some time prior to the World Wars miniature gauge rail tracks were installed on the beach to meet each boat and joined a common track that ran along the present-day Dungeness Road. These have now been removed upon the completion of the road in 1938, but some remains of the old tracks can still be seen across parts of the beach and reflect the local fishing heritage.

Tanning Coppers have also survived at Dungeness and offer strong connections to the fishing heritage and activity that has long been practiced here. They were used by fishermen to help preserve and dye fishing nets as well as their clothing. Tanning the nets and clothing often became a social occasion and brought many local fishermen together. One of these Tanning Coppers, which is larger than most at Dungeness, was built with brick in 1910 and is still owned by the Tart family. It has been designated as a Grade II Listed Building.

Fishing continues at Dungeness today and is a popular activity for local Angling Associations as well as visitors. There are many professional and leisure fishing agreements for the estate which provide individuals with the right to fish from a designated plot along the shores of the Denge beach. It has also been recognised as an excellent location for cod fishing during the winter months. Houses near the Lifeboat Station are mainly occupied by local fisherman and the fishing heritage at Dungeness continues to play an important role in the local character.

The “Watering House” was another early residence relating to the maritime heritage of Dungeness that was built in the late nineteenth century to provide accommodation for the family who provided fresh water to passing ships. This building still survives today and continues to be used as a residential property. Other early buildings included Lifeboat Stations and Coastguard cottages. The *Old Lifeboat Station* located less than a mile south of the present station was probably the first Lifeboat Station at Dungeness (1854) and survives as a private residential property.

The railway has also played an important role in shaping the built landscape of Dungeness. In 1881 a line that ran between Appledore and Lydd via Brookland was opened with a branch line to Dungeness opening a few years later in 1883. The line to Dungeness continued to provide passenger and goods traffic for around 50 years but was eventually closed to passengers in 1937 and later to goods in 1953. Sections of the line have remained open to transport nuclear waste from the power station but much of the railway line and old station buildings have since been removed. During the 1920s, redundant railway workers were allowed to purchase railway carriages that they then used as residences. There are now around 30 such properties at Dungeness that have been renovated and extended following a revival of interest in the area that was encouraged by the arrival of Derek Jarman, a famous

English director, artist and author, and his renowned Prospect Cottage and shingle garden. The shape of the original carriages can still be seen in these dwellings and they continue to make a significant contribution to the local character and heritage offering.

The Romney, Hythe & Dymchurch Railway (RHDR) reached Dungeness in 1928 and has remained as an iconic feature in the landscape as well as being an important heritage asset to this day. The RHDR was the culmination of two men's ambitions; Captain J. E. P. Howey and Count Zborowski. It was initially completed in 1927 and ran for 8 miles between Hythe and New Romney before being extended to Dungeness. The line is a 15in gauge and one third full size fully working steam railway and quickly became famous as the "smallest public railway in the world". During the Second World War it was requisitioned by the War Department and following the fall of France in 1940 found itself on the frontline. A miniature armoured train ran along its line and became the only one to have been created in the world. It was also extensively used during the building of PLUTO (Pipe Line Under The Ocean).

The RHDR sustained significant damage during wartime resulting in expensive repairs. The section between Hythe and New Romney was reopened in 1946 with the section to Dungeness reopening the following year but now being reduced to a single track. This was possible because of the terminal loop at Dungeness station. Today it continues as a popular tourist attraction and is also an iconic feature in the landscape of Dungeness and the Romney Marsh.

Dungeness, like many other coastal towns in Kent, has also been shaped by a number of defensive structures that were built in response to the French threat during the Napoleonic Wars of the early nineteenth century. Given its proximity to the continent and easily accessible beaches, Dungeness and the wider Romney Marsh had always been vulnerable to a foreign attack and so systems of coastal defence were put in place. At Dungeness, this included a Redoubt and four Batteries. All were built in 1798 with the earthwork Redoubt being located at Dungeness Point and two Batteries at either side. Today the raised earthwork Redoubt is still visible with a row of cottages that are located inside. No. 1 Battery partially survives though No. 3 and No. 4 Batteries, which were located to the west of Dungeness Point, were both destroyed by the sea between 1818 and 1823. No. 2 Battery, also known as Lade Fort, survives well and has been designated as a Scheduled Monument.

Between the First and Second World Wars large concrete structures known as Sound Mirrors were being designed as an early warning system to detect enemy aircraft during wartime. They worked by focusing the sound from enemy aircraft engines so that they could be heard by personnel stationed at the Sound Mirrors before the aircraft were visible. Experiments had started during the First World War and began life as horizontal Listening Wells. By 1922 standing structures had replaced this design, three of which are known and all are represented at Greatstone. The 20 foot, 30 foot and 200 foot sound mirrors were constructed between 1928 and 1930; the 30 foot mirror followed the 20 foot mirror and was built at a greater angle so as to detect aircraft higher in the sky. The final mirror, which is 200 feet long and 26 feet high, was also built in 1930 and on a clear day was able to detect enemy aircraft up to 24 miles away. These are now imposing structures within

the built landscape at Dungeness and make an important contribution to the local character.

There are also buildings from the Second World War that again highlight the role that Dungeness played during wartime. Pluto Cottage in Dungeness was a pumping station that was part of Operation PLUTO (Pipe-Line Under The Ocean or Pipe-Line Underwater Transport of Oil). This was an operation by British engineers and oil companies during the Second World War to transport fuel under the English Channel into France in support of Operation Overlord, the Allied invasion of Normandy in June 1944. Terminals and pumping stations were disguised as bungalows, gravel pits and garages and are referred to today as “PLUTO bungalows”. Pluto Cottage was built to look like a small house to avoid detection. It is now a private residence as are other PLUTO bungalows in neighbouring Greatstone.

One of the more recent developments at Dungeness has been the Power station located on the Dungeness headland. Owned by EDF Energy, two power stations have been built here though only one remains operational today. The first was Dungeness A that was a legacy Magnox power station and was connected to the National Grid in 1965. It continued to generate power until the end of 2006 when defueling began and was then completed in 2012. The demolition of the turbine hall was carried out by 2015 and it is now expected to enter the “care and maintenance” stage of decommissioning in 2027.

Construction of Dungeness B began in 1965 and it became the first Advanced Gas cooled reactor (AGR) in the United Kingdom. It started generating power in 1983 and is still currently operational. The station has received an extension to its life of 10 years taking the closure date to 2028. It is currently the largest employer in the Romney Marsh and also offers a visitor centre and guided tours of the station. In 2009 Dungeness had been included on a list of 11 potential sites for a new nuclear power station, Dungeness C, but this was later ruled out.

Overall the built landscape at Dungeness is not extensive but consists of buildings and dwellings that reflect a strong local character and heritage. This heritage is primarily that of lighthouses, fishing, the railway, wartime and the more recent power station. The landscape remains to this day sparse and wild which is largely why this is such an attractive and unique part of the District.

3. Description of the Heritage Assets

Below follows a table identifying the main built heritage assets at Dungeness. The natural assets of Dungeness’s historic landscape have already been discussed and so will not be included here. The below are the result of human interaction with the landscape at Dungeness that has produced a unique built environment and a strong local character.

Key Components

Name	*Description*	*Survival*
The Old Lighthouse	The Old Lighthouse, previously known as the *High Light Tower*, was built between 1901 and 1904 by Messrs. Patrick &	The Old Lighthouse, as it is now known, still remains at Dungeness. It has now been painted in black so as to avoid

	Co. to replace its predecessor 50 yards away that had been erected by William Coke of Holkham in 1792. It is a tapered structure comprising of 6 storeys built of glazed brick with iron handrails at the top and a glass lookout. The tower was painted externally in black and white bands so that it appeared as a recognisable beacon for mariners. It was the fourth high lighthouse to be erected at Dungeness and operated until the Power Station was built at the beginning of the 1960s which obscured the view of the lighthouse from the south west. It was then replaced by the current lighthouse in 1961.	confusion with the current lighthouse which is painted in black and white bands and is designate as a Grade II Listed Building. It is open to the public as a museum and can also be hired for private functions such as weddings, fashions shoots and musical performances.
Dungeness Lighthouse	The current Dungeness Lighthouse was built between 1959 and 1960 to replace the Old Lighthouse that was now obscured by the Power Station on the Dungeness headland. It was designed by Ronald Ward and Partners in association with Trinity House. The construction comprises 21 concrete drums that are each 5 feet high surrounded by a white concrete spiral ramp enclosing the machine room. Each piece was lifted into position by a specialised crane and high tensile wires run through the walls of its entire length to strengthen it against high winds of up to 80 mph. The tower is 130 feet high and 12 feet in diameter with the walls being only 6 inches thick. It has been painted in black and white bands to signify that it is an active Aid of Navigation. The Dungeness Lighthouse was converted to automatic operation in 1991	The Dungeness Lighthouse is the current working lighthouse at Dungeness and continues to be operated remotely from Trinity House operations and Planning Centre at Harwich. Is has been designated as a Grade II* Listed Building.

	and is controlled remotely.	
Dungeness Lighthousemen's Dwellings	The Dungeness Lighthousemen's Dwellings are formed from the remains of the third high lighthouse to have been erected at Dungeness in 1792 by William Coke of Holkham. When the fourth high lighthouse (now *The Old Lighthouse*) was completed in 1904, the upper parts of the older lighthouse were demolished leaving the lowest 2 storeys to be converted into dwellings for the lighthouse keepers. The remains of the original structure form a circular building with a hollow centre creating a small circular courtyard. In the early nineteenth century 2 separate dwellings were added to the south east and south west side of the original building.	The original circular building and additional dwellings either side survive today and are designated as a Grade II Listed Building. On the outer side of each building the coat of arms of Trinity House (previous owners) can still be seen.
The Watering House	This dwelling was built during the late nineteenth century and is located on the right from the entrance to the estate via Dungeness Road. It was built to provide accommodation for the family who supplied fresh water from a natural well to the passing ships. When it was first built it was much closer to the sea where ships would have moored and taken on supplies.	The Watering House survives in its original form today and is now used as a residential property.
Tanning Coppers	Dungeness has a long and rich fishing heritage that continues to a lesser extent today. Numerous fishing boats would have been spaced out across the beach running parallel to what is now Dungeness Road with miniature gauge railway tracks connecting the boats to the common track that followed the current main road. These tracks were later removed prior to the Second World War	There are a couple of surviving Tanning Coppers that can be found at Dungeness today. One, which is located on Battery Road, is larger than most examples and has been designated as a Grade II Listed Building due to it being a rare survival of its type. It is a square structure made of tarred brick about 4 by 5 feet wide and 2.5 feet high with a brick chimney in one corner.

	though some remains can still be seen. Tanning was largely a pre-war activity and the Tanning Coppers that were used can still be seen at Dungeness. Tanning Coppers were used by fishermen to help preserve and dye nets as well as their clothing such as overalls and aprons. Fishing nets when new were white and were boiled in the circular copper tubs which were filled with water and kutch, a plant resin that stained the water a dark brown colour. This resin would help to preserve nets and clothing against the sea and they would normally need to be regularly re-soaked. Most copper owners would boil their resin and nets on the same day turning it into a special occasion.	The circular metal tanning copper sits in the centre.
Old Lifeboat Station	Some of the earliest buildings at Dungeness were Lifeboat Stations and Coastguard Cottages. The first Lifeboat Station at Dungeness was established in 1854 and was located by the No. 1 Battery. This was not a particularly good location and so it was moved in 1861 northwards towards Littlestone. Following the Northfleet Disaster in 1873 in which 293 people dies off the coast of Dungeness, a Lifeboat Station was again reopened in 1874 here. The Station is now located off the Dungeness Road and guards the Channel from Folkestone to Rye Bay.	The building known as the *Old Lifeboat Station* located less than a mile south of the present Station is believed to have been the first Lifeboat Station at Dungeness. It is now a private residential property with the original building still intact with a flat roof extension that was added later.
Dungeness Redoubt	Dungeness, like many other places along the southern Kentish coast, would become home to a series of defensive structures in response to the French threat during the	Today the Dungeness Redoubt survives as a raised earthwork that is still visible and now has a row of cottages located inside. The now flattened counterscarp of Dungeness

	Napoleonic Wars (1803-1815). Given its proximity to the continent, the easily accessible beaches of the Romney Marsh and Dungeness were always vulnerable to a foreign attack and so a number of defences were constructed. At Dungeness this included 4 Batteries and a Redoubt. Dungeness Redoubt was an earthwork structure that was built at Dungeness Point in 1798 as an octagonal strongpoint. It was 215 meters in diameter and was originally armed with eight 24-pounder guns that were mounted around the top of the ramparts. Two Batteries were positioned either side.	Redoubt can still be viewed from the top of the *Old Lighthouse*.
No. 2 Battery (also known as Lade Fort)	Four Batteries were constructed at Dungeness; two placed either side of Dungeness Point where Dungeness Redoubt was located. No. 2 Battery, also known as Lade Fort, was built in 1798 as were the other Batteries. It was located 1.5 miles north of the No. 1 Battery and was built as a self-contained triangular fort that accommodated four or five 24-pounder guns. It was later reused during the Second World War as a site for anti-aircraft guns. By the nineteenth century it had been converted for use as a Coastguard Station and had a block of Coastguard houses and offices built in one corner.	Of the four Batteries that were constructed at Dungeness, only No. 1 and No. 2 survive in any form. No. 2 Battery has been designated as a Scheduled Monument being a good example of this type of eighteenth-century coastal battery that survives well. Is it also the only battery to have survived from a series of eleven such batteries that were built between Deal and Eastbourne. The walls are largely intact, and the layout is well preserved. Remains of the gun emplacements can also be seen quite clearly.
Greatstone Sound Mirrors	Sound Mirrors, also known as *Acoustic Mirrors* or *Listening Ears*, are large concrete structures that were designed as an early warning system to detect enemy aircraft during wartime. They worked by	The Greatstone Sound Mirrors survive in good condition and are designated as a Scheduled Monument. They are all situated on an island within the Greatstone Lakes which is part of the Dungeness National

	focusing the sound from enemy aircraft engines so that they could be heard by personnel stationed at the Sound Mirrors before the aircraft were visible. Their curved designs focused the sound waves into a central point which could then be picked up by a sound collector and later by microphone. Experiments on sound detectors had started at the beginning of World War I in 1914 and began life as horizontal *Listening Wells*. By 1922 standing concrete structures had replaced this design. An experimental 20 foot (diameter) sound mirror was built at Hythe in 1922, and then in 1928 the first of the three sound mirrors at Greatstone was built. Between 1928 and 1930 three Sound Mirrors were built at Greatstone as part of Britain's National Defence Strategy. The Greatstone Sound Mirrors are a significant collection of this type of structure as they exhibit all three designs; 20 feet, 30 feet and 200 feet sound mirrors. The 30 feet mirror followed the 20 feet mirror and was set at a different angle so as to detect aircraft that were higher in the sky as well as providing greater accuracy. The final mirror, which is 200 feet long and 26 feet high, was also built in 1930 and on a clear day was able to detect enemy aircraft up to 24 miles away.	Nature Reserve and RSPB Dungeness Nature Reserve. They are managed by the RSPB and access is provided via a swing bridge which is opened on specified occasions and open days throughout the year. There are issues around the degradation of the reinforced metal within the concrete due the coastal location. These structures were built as trials and so were not meant to last very long. Future conservation work will be needed to preserve these structures.
Pluto Cottage	Dungeness played an important role during Operation PLUTO (Pipe-Line Under The Ocean or Pipe-Line Underwater Transport of Oil)	Pluto Cottage survives today and is now a private residential property. Other PLUTO bungalows also survive at Greatstone and are also now

	which was an operation by British engineers and oil companies during the Second World War to transport fuel under the English Channel into France in support of Operation Overlord, the Allied invasion of Normandy in June 1944. Terminals and pumping stations at Dungeness and neighbouring Greatstone were disguised as bungalows, gravel pits and garages and are referred to today as "PLUTO bungalows". *Pluto Cottage* at Dungeness was a pumping station that had been built to look like a small house. It was a dangerous operation that was ultimately successful and remained undetected by the German forces.	used as private residences.
"Railway Cottages"	A railway line ran between Appledore and Lydd via Brookland from 1881 with a branch line to Dungeness that was opened in 1883. This line continued to provide passenger and good traffic for around 50 years but was closed to passengers in 1937 and later to goods traffic in1953. During the 1920s railway workers were allowed to purchase redundant railway carriages from the line which they then hauled onto the shingle at Dungeness and used as residences.	There are around 30 properties at Dungeness that were originally railway carriages. Many had fallen into various states of disrepair but a revival in interest at Dungeness was encouraged by the arrival of Derek Jarman and his renowned Prospect Cottage in 1986. A number of old railway carriages were subsequently renovated and restored as permanent residential properties or holiday homes. The shape of the original carriages is still clear in many of these dwellings despite many being extended.
Romney, Hythe & Dymchurch Railway	The Romney, Hythe & Dymchurch Railway (RHDR) was the culmination of two men's ambitions; Captain J. E. P. Howey and Count Zborowski. The latter was killed before the completion of the miniature railway which was officially opened on the 16th July 1927. Initially it ran	The RHDR continues as a popular tourist attraction today and operates throughout the year. A number of events and activities are held for the public and a heritage group has also been formed to curate materials relating to the history of the RHDR.

	from Hythe to New Romney covering 8 miles. The locomotive *Hercules* hauled the inaugural train out of the station at Hythe to main terminus at New Romney. The line was a 15in gauge and one third full size fully working steam railway. In 1928 the double tracked railway was extended to Dungeness though this stretch would later be reduced to a single track. During its early years the railway quickly became famous as the “smallest public railway in the world” and grew in popularity. The RHDR played an important role during the Second World War when it was requisitioned by the War Department. Following the fall of France in 1940 the railway found itself on the frontline and a miniature armoured train that ran along the RHDR became the only one to have been created in the world. The RHDR was also used extensively during the building of PLUTO (Pipe Line Under The Ocean) which allowed fuel to be transported to the Allied invasion forces across the channel. The RHDR had sustained considerable damage during World War II and extensive repairs were needed. The section between Hythe and New Romney was reopened in 1946 with the section to Dungeness reopening the following year but now being reduced to a single track. This was however possible due to a terminal loop at Dungeness station. Famously the opening ceremony for the Dungeness section was attended by film	

	stars Laurel and Hardy. In the following years the RHDR has successfully navigated peaks and troughs in passenger numbers and continues as a popular tourist attraction.	
Coastguard Lookout Tower	The Coastguard Lookout Tower is a former 1950s radar monitoring station that was originally built in 1905. It covered shipping in the Channel but was decommissioned around 2000 following the arrival of GPS.	The building survives and has now been converted for use as a holiday let.
Prospect Cottage	Prospect Cottage was famously the home of Derek Jarman between 1986 and 1994. Derek Jarman was a well-known English film director, stage designer, diarist, artist, gardener and author. Whilst he lived at Dungeness he created a special shingle cottage-garden during his later years. The cottage itself is built in a vernacular style in timber with tar-based weatherproofing similar to other residences at Dungeness. The cottage is distinct for its yellow windows and raised wooden text on one side which is the first stanza and last five lines of the last stanza of John Donne's poem *The Rising Sun*. The cottage garden was made by arranging flotsam washed up at Dungeness interspersed with endemic beach plants both set against bright shingle. The garden design style is post-modern and highly context-sensitive which reflects Jarman's rejection of modernist design theory.	Prospect Cottage and the associated garden survive today and is a private residence. Visitors are permitted to the garden with prior permission.
Dungeness B Power Station	The construction of a nuclear power station (Dungeness A) began at Dungeness during the early 1960s. Dungeness A	Dungeness B is still currently operational. In 2005 the stations closure date was set for 2018 but in 2015 the plant

	was the first and was a legacy Magnox power station that was connected to the National Grid in 1965 and continued to generate power until the end of 2006. Defueling was completed in 2012 and the demolition of the turbine hall later in 2015. It is now expected to enter the "care and maintenance" stage of decommissioning in 2027. Construction of Dungeness B began in 1965 and it became the first Advanced Gas cooled reactor (AGR) in the United Kingdom. It started generating power in 1983.	was given an extension of ten years taking the closure date to 2028. It is currently the largest employer in the Romney Marsh and also offers a visitor centre and guided tours of the station.

4. Statement of Significance

The historic and built landscape at Dungeness is a uniquely special place that has a very strong local character and is highly valued by its residents and visitors. Its physical landscape and landscape features are unique in this country and are of national as well as international conservation importance. They are also important in the ongoing research and recording of coastal and environmental change and represent detailed insights into 5000 years of coastal evolution and climate change. Although human occupation of Dungeness has been relatively limited, the built features that have resulted from human interaction with the landscape here also make a significant contribution to the distinctive and strong local character. Together the natural and built assets form a rare and unique collection and it is for these reasons that the assets highlighted in this theme are considered to have **outstanding significance**.

Evidential Value

There are important opportunities at Dungeness to continue revealing evidence of coastal evolution and environmental change. The surface and buried shingle ridges provide a detailed record going back approximately 5000 years and can also continue to record the ongoing evolution of the cuspate foreland. Extensive studies have been made of the buried ridges that has allowed for the mapping of the foreland's evolution. The presence of palaeo-environmental information from deposits has further built a detailed picture of historic environmental conditions and can be used as an essential comparison for modern day conditions. The surface ridges provide a record of the ongoing development of the foreland at Dungeness and will be important in understanding this type of coastal geomorphology as well as the environmental and climatic changes as influenced by modern factors such as humans. In recent years it is evident that the progression of the foreland has slowed due to external factors that include coastal defence works, sediment supply, recycling for beach management and climate change. It will be important to continue studying the foreland and its unique landscape in order to obtain a better

understanding of coastal and environmental change as well as the human impact on these processes.

There are also opportunities to reveal further information regarding past human activity at some of the built sites around Dungeness, in particular the Napoleonic structures. Only two of the Batteries and the earthwork Redoubt survive where the remaining two Batteries have been completely lost to the sea. The potential for archaeological remains at these surviving sites could reveal further information about these types of structures and the activity at this time to build them. No. 2 Battery, also known as Lade Fort, is designated as a Scheduled Monument and has retained much of its original layout and structure. It is a valuable example of this type of Napoleonic defence structure and may reveal further information that can enhance what is already understood and recorded about them.

Historical Value

The history of Dungeness has largely been one of coastal evolution and environmental change until recently. Human occupation of Dungeness did not occur until the seventeenth century when the first high lighthouse was built, and since then it has never been on a large scale. Dungeness to this day remains sparsely occupied which is an important part of its unique charm. It does however have a distinctive collection of built assets that relate to a rich local heritage and provide powerful connections to the past. This may also be the case because little change has been made to the local character and it is hoped that minimal change will occur in the future. This results in original and authentic heritage assets that are able to transport people back to the past of the place.

The heritage assets at Dungeness primarily represent its maritime, railway, wartime and industrial heritage and they create strong links between these past events and people. Many of these assets have survived either in their original form or have been modified for residential purposes and yet still illustrate their unique heritage. The railway carriage dwellings across Dungeness not only create a link to the railway heritage of Dungeness despite many having been modified in more recent years, but they also make significant contributions to the local character. The Dungeness landscape is dominated by assets such as the lighthouses and power station and they have become synonymous with the identity of Dungeness whilst also providing experiences of the heritage here. The Batteries, earthwork Redoubt, Greatstone Sound Mirrors and Pluto Cottage are further able to demonstrate significant historical value as they create strong connections to major historical events, in these cases to the Napoleonic and World Wars. Many of these sites are also accessible to the public and so people can engage with these assets and their heritage directly.

Aesthetic Value

The aesthetic value of the landscape both physical and built at Dungeness is particularly significant, especially given the uniqueness of this distinct character area. For residents and visitors, it is an iconic and dramatic landscape that is still wild and relatively untouched by development or human activity which makes it special and uniquely attractive. The vast shingle ridges and extensive cuspate foreland is a distinctive feature of Dungeness as well as being a uniquely important area for natural conservation. The diverse habitats and wildlife that are supported here further adds to the significant aesthetic value of Dungeness and its landscape. The

few buildings and dwellings that have been established here also have a distinctive aesthetic appeal, for example the railway carriage dwellings, lighthouses and imposing power station on the Dungeness headland. Each represents an aspect of a distinctive local heritage whilst also being architecturally appealing and unique; perhaps with the exception of the power station which highlights industrial engineering and architecture that isn't necessarily attractive but is impressive.

Communal Value
The sense of place and local character at Dungeness is especially strong. Its physical and built landscape is highly valued by its residents as well as visitors who are attracted to the area largely because of its uniqueness and tranquillity. There is also a strong sense of ownership of the historic landscape by the local community who work together to preserve and protect it.

5. Vulnerabilities

There are many vulnerabilities that are putting the physical and built landscape of Dungeness at risk. Many of these relate to human activity though some are also natural. Coastal landscapes such as the Dungeness peninsula are vulnerable to the same processes that resulted in their formation and evolution, namely sea level rise and coastal erosion. The cuspate foreland has built up over thousands of years and has been stabilised by vegetation and the ongoing redistribution of single from the barrier beach. However, if sea levels were to change dramatically or other environmental factors began affecting the supply of shingle and deposits to the foreland, this may have a negative impact on the continued evolution of the peninsula. In recent years it has been recorded that the development of the foreland has slowed and some of the factors causing this are climate change, sediment supply and beach defence works. Continued study of the coastal evolution here may shed light on any negative influences.

Climate change could also impact on the wildlife and habitats that are currently supported at Dungeness. There are several species that are rare and even represent the only communities existing within this country. Again, natural factors may play a role in putting these assets at risk.

Natural degradation is a factor for some of the heritage assets at Dungeness, namely the Greatstone Sound Mirrors. Due to the coastal setting, the metal reinforcements within these structures are degrading and will ultimately need restoration work in order to preserve these structures. They were only ever built as a trial and so were not intended to last long-term. However, they are an important collection of this type of asset and it is important to continue preserving them.

The majority of the vulnerabilities faced by Dungeness are due to human activity. Perhaps the biggest challenge at the moment is achieving an effective and positive balance between continued tourism to Dungeness whilst also being able to preserve and protect the natural environment and wildlife found here. Dungeness can be its own worst enemy in that its wild and diverse landscape is often what attracts people here in the first place. Each year there are around 1 million visitors to Dungeness and this places unique pressures on the landscape and its wildlife.

Issues resulting from large visitor numbers include problems with littering, trespassing onto private properties and illegal or criminal activity. The estate is private and has a number of covenants to ensure that the environment here and the wildlife that it supports are protected and preserved. For example, permission must be sought to arrange photography or filming activity within the NNR. When groups or individuals do not seek permission, they may ultimately cause damage to the landscape here without realising. There have also been cases of vandalism and criminal damage being done to some of the old fishing boats and shacks that can still be found on the Denge beach. Whilst they may not appear to be important and may already look rundown, they do in fact make valuable contributions to the local character and are strong reminders of the fishing heritage at Dungeness. Wherever possible criminal damage should be stopped and avoided.

Residential properties across Dungeness and their boundaries are often not marked and so issues with trespassing onto private property arises. Some properties have marked their boundaries as a result of trespassing with plants or signage, but this may actually take away from the local character and so more awareness and care should be taken to respect local residents and their property.

There may also be issues with visitors deviating from boardwalk pathways which may result in unintentional damage to wildlife and the shingle ridges. There is designated parking within the estate but again if this is not adhered to then unintentional damage can be caused. A number of visitors to Dungeness are walkers and may have dogs with them. Whilst dogs are allowed in the NNR (with the exception of the RSPB Nature Reserve) uncontrolled dogs and dog mess can again cause unintentional damage to the exceptionally sensitive landscapes and wildlife.

Interpretation boards are provided around the estate that highlights the exceptionally delicate nature of the landscape and wildlife at Dungeness. However, there is a risk that visitors will not read these boards and their impact will begin to diminish with local residents. Actions may be needed to provide alternative ways of highlighting and raising awareness for the sensitivities associated with Dungeness.

Development remains a vulnerability that could damage the local character and delicate landscape here. Instances where old cottages that are original dwellings at Dungeness have been put forward for demolition and redevelopment have occurred and these have been strongly opposed on the basis of maintaining the strong local character and causing minimal change to the sense of place here. There are some examples of contemporary buildings at Dungeness that have been converted primarily as holiday lets. However, due to the unique local character at Dungeness efforts should be made to preserve the special setting here and its distinctive built heritage. A number of designations largely protect Dungeness from this; nonetheless attention should still be paid to preserving existing buildings.

6. Opportunities

There are significant opportunities through the existing groups and facilities at Dungeness to improve the understanding and awareness of its exceptionally sensitive landscapes and wildlife. There is a visitor centre at the RSPB Nature Reserve that offers detailed information as well as activities that will further reinforce and encourage learning about Dungeness. There are also a number of online

resources by the RSPB, the Romney Marsh Countryside Partnership and Natural England that again provide information about Dungeness. A number of interpretation boards around the estate make it clear that this is a protected area with sensitive landscapes and wildlife. This will lead to the better protection and preservation of Dungeness.

There are also opportunities to continue recording the evolution of the cuspate foreland which will further understandings of this type of coastal geomorphology. Whilst there are factors that have already been identified that are slowing this development, it will also be important to measure these in order to monitor the influence of factors such as climate change and human activity as compared to historic coastal evolution.

7. Current Activities

There are several public events, activities and workshops that are held throughout the year across Dungeness that attract large numbers of visitors as well as raising awareness and understanding about the sensitive landscapes and wildlife here. The RSPB Nature Reserve has a visitor centre and runs activities throughout the year such as “Wild Family” days which look at wildlife species and bush craft skills and “Binocular and Telescope” evets that again look at the unique wildlife at Dungeness. The reserve also has a number of bird hides and trails that take visitors around the diverse habitats and highlight their significance. The RSPB are also the custodians for the Greatstone Sound Mirrors which are accessed by a swing bridge. Open days, normally in July, are hosted by the RSPB and allow visitors to get up close to these structures.

The Dungeness B power station also runs a visitor centre and regular guided tours of the station. This raises awareness and understanding around nuclear power stations as well as EDF’s responsibilities as owners of the Dungeness Estate.

8. Sources Used & Additional Information

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