Landscape Character Type 15:

Mudflats & Saltmarsh
LANDSCAPE TYPE 15: MUDFLATS AND SALTMARSH
The inter-tidal zone of the Dee and Mersey estuaries

MFSM1: Ince Banks
MFSM2: Dee Estuary

Key Characteristics

- Large tracts of inter-tidal mud flats and salt marsh
- Extremely flat, low-lying topography
- Open, expansive views of the surrounding landscape
- Internationally important populations of waders and wild fowl
- Scarce plant species

General Description

This character type refers to the large tracts of intertidal mud flats and salt marsh within the Dee and Mersey Estuaries. Both are bird habitats of international importance. Estuary marsh within Cheshire is used for wildfowling and stock grazing. It has a very open aspect and due to spring tide flooding, trees are totally absent. These are flat, open areas which afford views of the estuarine landscape and beyond e.g. to the Clwydian Hills and Liverpool.

Visual Character
This is a dramatic, large scale landscape with long distance panoramic views extending across the vast expanse of both the Dee Estuary and River Mersey towards the far shores. At low tides the full extent of the mud flats and channels is visible from a few locations but most vantage points provide views over a green expanse of salt marsh with open water a considerable distance beyond. Urban development and massive industrial structures are visible on the shores of both character areas. Monolithic structures and chimneys serve as distinctive landmarks when viewed across an empty expanse of water and mudflats.

Physical Influences

Chester Pebble Beds and Kinnerton Sandstone provide the underlying solid geology. This is overlain by marine and alluvial deposition influenced by tidal and estuarine activity, which has led to the formation of saltmarsh and mudflats. Soils are calcareous sandy and alluvial gley soils which include finely divided marine shell fragments. It occurs at an average elevation of approximately 5m AOD.

Both estuaries provide habitats for internationally and nationally important numbers of waders and wildfowl as well as providing a staging post for migrating birds and are designated as SSSIs and also Special Areas for Conservation. There is a rich diversity of waders and wildfowl found in the estuaries such as the teal, shelduck, oyster catcher and redshank.

Flora is generally restricted to cord grass (*Spartina anglica*) and other, native saltmarsh plants confined to a narrow strip along the shore in The Mersey Estuary but the Dee Estuary has a large expanse of saltmarsh.

Cultural Influences

This is a character type that has grown and developed its form over time. For example, the sea wall at Parkgate delineates the former coast line before the rapid silting of the Dee Estuary following the canalisation of the River Dee in the 18th century.

This is a peripheral, marginal landscape character type that has been utilised in the past because of those very reasons - a Cistercian monastery and monastic grange were founded in the medieval period on Stanlow Point. This isolated location suited the needs of the Cistercians who sought to remove themselves from the rest of society and to subsist on sheep rearing. It is also no coincidence that the Burton Marsh in the Dee Estuary was the site of a WWII bomb decoy, the purpose of which was to imitate settlement and cause attacking aircraft to mistake them as their targets. The southern end of the Dee Estuary across the border in Wales is still used by the military as a rifle range.
Issues affecting the Mudflats and Salt marsh landscape character type:

1. **Hydrodynamic changes in the estuaries** will inevitably lead to changes in the pattern of erosion and deposition.

2. **Climate change may result in sea level rise and increased storm frequency**, leading to significant change in visual character and value of the habitat. If the low water mark moves landward, whilst the coastal defences prevent a compensatory landward migration of the high water mark, this will lead to a phenomenon known as “coastal squeeze”.

3. **Susceptible to artificial enrichment by sewage pollution**: Pollution discharges from agriculture, industry and urban areas can lead to formation of abiotic areas and algal mats which may have a serious impact on invertebrate communities.

4. **Alien species**: introduction of non-native species e.g. cord grass-spartina anglica can have a major impact on the appearance and habitat of the inter-tidal flats, e.g. leading to development of salt marsh at the expense of mudflats.

5. **Threat of encroachment from adjacent development**. The perception of the margin of this type as low value, marginal land may lead to encroachment due to expansion of industrial areas.
MFSM1: Ince Banks Character Area

This character area is part of The Mersey Estuary SSSI and is also partially designated as a SAC (Special Area of Conservation). It is an internationally important site for wildfowl and consists of large areas of intertidal sand and mudflats. The birds feed on the rich invertebrate fauna of the intertidal sediments as well as plants and seeds from the salt marsh and adjacent agricultural land. The estuary is also a valuable stopping point for migrating birds in spring and autumn.

Several areas of salt-marsh are present. These form important feeding and roosting sites for birds. Glasswort is widespread on the outer margins whilst Sea Poa grass is dominant over the rest. Unlike the other salt-marshes in the estuary, Stanlow Banks has not been grazed by sheep or cattle, and consequently has a more diverse flora. Sea aster and hastate orache are widespread throughout this area. Together with occasional sea plantain, annual seablite and scurvy-grass also occur. Cattle are grazed further east upon the salt marsh grassland at Frodsham Score, being transported by raft across the Ship Canal. In a number of areas the salt marsh grades into brackish marsh dominated by common reed with sea arrow grass and great reedmace.

The Manchester Ship Canal (opened in 1894), which made possible the large scale transport of raw cotton directly to Manchester from the Americas, provides the southern boundary of the character area. Its construction encouraged the reclamation and agricultural improvement of Frodsham, Helsby and Ince Marshes to the south, although birds still use these areas at high tide. The canal is a major barrier to public access into the character area.

Utilising what would have been an isolated location suited to sheep rearing is the Scheduled Monument of Stanlow Abbey, a Cistercian monastery and monastic grange, at Stanlow Point. Adjacent to the character area is the massive industrial complex at Stanlow, which stands on reclaimed marshland and very much dominates the views from this character area. Across the Mersey, views of Liverpool and the John Lennon Airport are prominent.

In 1980–81 the estuary had the highest monthly count of wildfowl of any British site; 57,700 birds. The most important species over the period 1978–83 were pintail, teal, shelduck and wigeon. In 1982–83 the estuary had the 16th highest monthly count of waders of any British site: 26,593 birds. The most important species over the period 1978–83 was dunlin. However, nationally important numbers of curlew, redshank and golden plover were also recorded.
MFSM2:  Dee Estuary

The Dee Estuary is a large funnel shaped estuary which lies between the Wirral Peninsula, England and Flintshire, Wales. Its intertidal range was formerly much more extensive but large scale reclamation has occurred, following the canalisation of the River Dee in the 18th century when attempts were made to secure Chester's future as a port. Nowadays only one or two tides a year are able to inundate the upper marsh. This character area covers the part of the Estuary that falls within the boundaries of Cheshire. It is designated as both a SSSI and Special Protection Area.

Fabulous views along the estuary are possible in particular of the North Wales coast and the Clwydian Hills directly across the open estuary. Views to the south extend to the heavily industrialised zone around Shotton, immediately beyond the county boundary. The new Dee Bridge is very conspicuous, as is the power station at Connah’s Quay.

The Estuary supports extensive areas of salt marsh vegetation and exhibits a succession from early pioneer vegetation colonising intertidal flats through lower, middle and upper salt marsh types to brackish and freshwater transitions at the top of the shore. Much of the marsh is dominated by cord grass which was introduced in 1928 and rapidly colonised areas of bare sand. The popular beach at Parkgate was lost to this encroachment.

The Dee Estuary is one of the most important estuaries in Britain and amongst the most important in Europe for its populations of waders and wildfowl. Internationally important numbers of waders include the black-tailed godwit, grey plover, oystercatcher, curlew and redshank. It is also an important staging post for migrating birds in the spring and autumn - ringed plover are regularly seen. Wildfowl present in internationally important numbers are pintail, teal, shelduck, while wigeon occur in nationally important numbers. Other birds found in the area are cormorant, common tern, great crested grebe and redshank and predators such as peregrine falcon and short-eared owl.

A quay was first built to the south of Neston as the result of a petition in 1540 to the King by merchants of Chester to help protect Chester's seaborne trade which was under threat because of the silting up of the port. This acted as a transhipment point up to the early 18th century. Its stone was reputedly used to build the seawall at Parkgate c 1810. Here vessels anchored in the estuary and goods and passengers were rowed ashore. Parkgate developed as a ferry port and following the fashion for sea bathing, it became one of the best known resorts in the country. The old harbour wall and seaside promenade are reminders of how far the sea once extended before the estuary silted up. A World War II bombing decoy site was located on Burton Marsh.