

## **PG , 2<sup>ND</sup> SEMESTER, PAPER 201: Settlement & Urban Geography**

**Unit: 13: \_\_Settlement Geography, (Topic\_ 4. Site and situation of settlements – dependence on terrain characteristics and water availability )**

### **Site:**

The "site" is the actual location of a settlement on the Earth, and the term includes the physical characteristics of the landscape specific to the area. Site factors include landforms, climate, vegetation, availability of water, soil quality, minerals, and wildlife. Examples of site factors include whether an area is protected by mountains or if there is a natural harbour present.

Historically, such factors led to the development of major cities worldwide. New York City, for example, is located where it is because of several site factors. As people arrived in North America from Europe, they began to settle in this area because it had a coastal location with a natural harbour. There was also an abundance of fresh water in the nearby Hudson River and small creeks, as well as raw materials for building supplies.

The site of an area can also create challenges for its population. The small Himalayan nation of Bhutan is a good example of this. Located within the world's highest mountain range, the terrain of the country is extremely rugged, making transportation within the country very difficult. This, combined with the incredibly harsh climate in many areas of the country, has made much of the population settle along rivers in the highlands just south of the Himalayas. Only 2% of the land in the nation is arable, with much of it located in the highlands, and so making a living in this nation is highly challenging. For instance the site of Sydney, in Australia, initially took advantage of the excellent natural harbour and surrounding fertile farmland. Paris was established at a point where an island allowed an easier passage across the river Seine as well as providing defence, fishing, transport, and drinking water (Source: <https://www.s-cool.co.uk/gcse/geography/settlements/revise-it/site-and-situation>).

### **Situation :**

The "situation" is defined as the location of a place relative to its surroundings and other places. Factors included in an area's situation include the accessibility of the location, the extent of a place's connections with another, and how close an area may be to raw materials if they are not located specifically on the site.

Though its site has made living in the nation challenging, Bhutan's situation has allowed it to maintain its policies of isolation as well as its own highly separated and traditionally religious culture.

Because of its remote location in the Himalayas, entering the country is challenging and, historically, this has been beneficial because the mountains have been a form of protection. The heartland of the nation has never been invaded. Bhutan now controls many of the most strategic mountain passes in the Himalayas, including the only ones into and out of its territory, leading to its title as the "Mountain Fortress of the Gods."

Like an area's site, however, its situation can also cause problems. For example, Canada's eastern provinces of New Brunswick, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island are some of that country's most economically downtrodden areas, due in large part to their situations. These areas are isolated from the rest of Canada, which makes manufacturing and the little agriculture possible too expensive. There are very few natural resources in proximity to these provinces. Many are off the coast; due to maritime laws, the government of Canada itself controls the resources. Moreover, the traditional fishing economies of the region are today crashing along with the fish populations (Source: <https://www.thoughtco.com/site-and-situation-1435797>).

## Site and Situation in respect to location of settlements:

The site and situation of a point (rural or urban) actually present a milieu – a base, which is more reliable to answer geographically the question “where is human settlement?” In a strict sense of the word, ‘site’ means the actual ground where a town or village stands. The word ‘situation’ carries a wider plane and it includes the place of a settlement within its surrounding environs.

It was Ratzel who could recognize first the distinction between the site and the situation of a town. In a study of Berlin he noted that the city had a site negative to its active expansion, but that its situation on the North German Plain was an important factor in its growth.

In case of London, Paris and Istanbul, site and situation are both favourable resulting in their long famous history. Population growth and the function of towns are the product of their situation; whereas site determines urban morphology. (Source: <http://www.yourarticlelibrary.com/geography/study-of-suitable-location-sites-and-situation-for-towns/39940>)

### Factors:

The study of settlement patterns is one of the most important aspects of settlement geography. Settlements can range in size from a small village with a few hundred residents to a metropolitan city of over one million people. Geographers often study the reasons behind why such cities develop where they do and what factors lead to their becoming a large city over time or remaining as a small village. Some of the reasons behind these patterns are thought of in terms of the area's site and its situation - two of the most important concepts in the study of rural and urban geography.

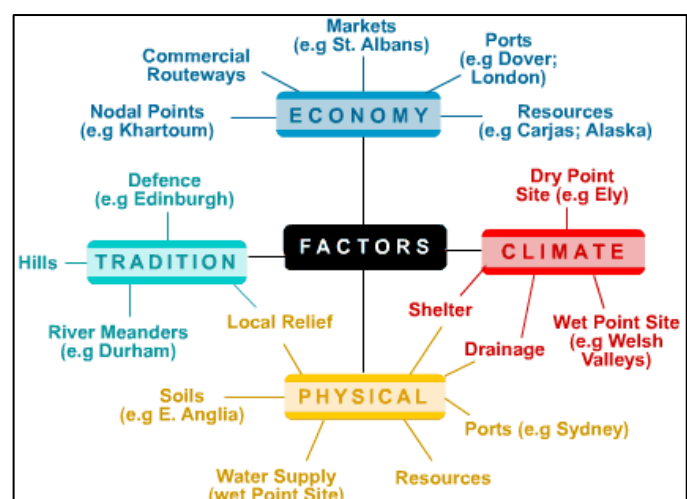
#### Site Factors:

- reliable water supply
- away from flood risks
- defence
- building materials (stone or wood)
- fertile land
- sheltered from winds
- fuel supply (wood)
- south-facing slope (aspect)
- flat land, easy to build on
- natural harbour

#### Situation Factors

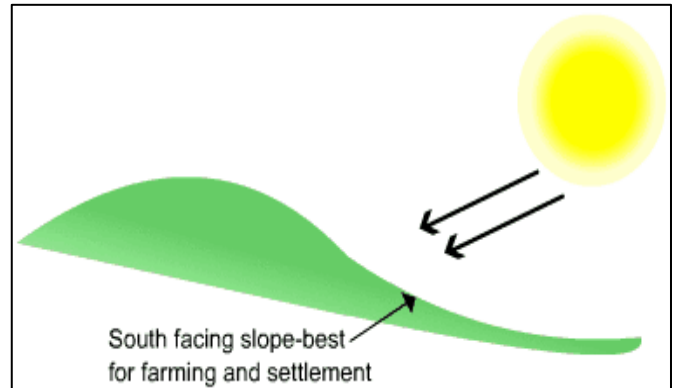
- route centre
- gap town
- lowest bridging point on a river
- port
- minerals for export

There are a huge number of factors that have to be considered when trying to locate a new settlement. These can be grouped into four broad headings: climatic, economic, physical and traditional. The diagram should give us an idea of how each one plays a part in the location of a settlement .



## Aspect

**Aspect** and **shelter** are two of the most important factors that were used when deciding where to locate a settlement. Aspect relates to the direction in which the land faces. In the Northern Hemisphere the best slopes to locate on are those that face south, as they will receive the most sunshine, and therefore be best for agriculture. This can be seen clearly in many of the valleys of the Alps, where settlements have located on the south-facing slopes.



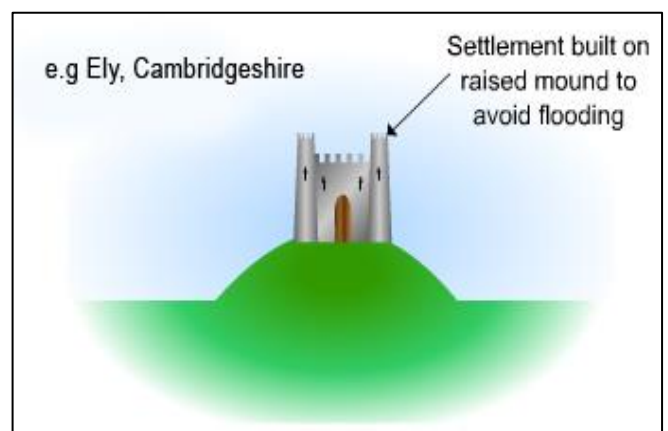
Shelter is also very important, particularly from the cold northerly winds and prevailing south westerly winds in the UK. A good example of settlements being sheltered by their natural surroundings are the many spring-line settlements found along the base of the chalk escarpments of the North and South Downs. These settlements would also have benefited from the good water source and fertile farmland nearby.

## Water supply:

A **supply of water** was probably the single most important factor in deciding where a settlement might be located. Not only do rivers provide a source of clean drinking water, they also provided a food source through fishing, and a transport route. Most of the world's largest cities are located on rivers, especially the point at which they reach the sea, as this was often the first point that explorers landed.

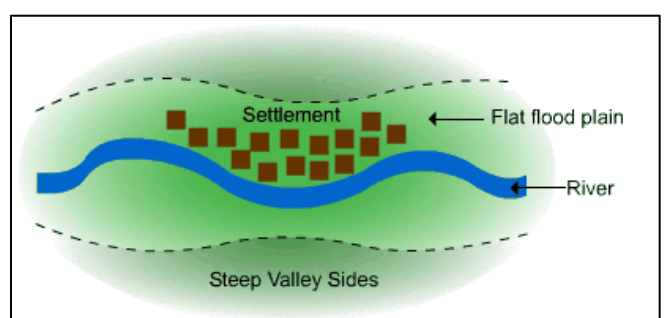
## Dry point sites:

**Water** is vital to a settlement and is the most common factor behind their location. A dry point site is one that is slightly raised from the surrounding area, meaning that it is less likely to flood. Ely in Cambridgeshire is a good example of this.



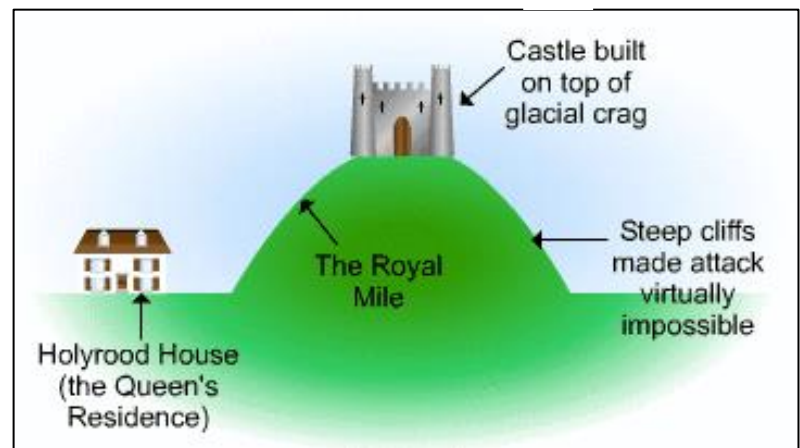
## Wet point sites:

This refers to any site that has access to water, usually through being beside a river. Towns would either grow up along the river or clustered near the point at which the river enters the sea. Examples of wet point sites include the towns and villages of the Welsh valleys, which tend to extend along the flat valley floor, rather than up the steep valley sides. Spring line settlements in the North and South Downs are also good examples of wet point sites.



## Defence:

In medieval times **defence** was one of the most important factors influencing the site of a settlement. The relief (shape) of the land often proved to be the best form of defence. Edinburgh castle sits on the top of a glacial crag, in an almost perfect position to defend itself, with very little chance for the attackers. In Italy, there are many walled hill-top villages, whilst the Maoris in New Zealand built their settlements (called Pa's) on the top of steep hills to prevent being attacked.



The other common natural feature used for defence is water, and in particular rivers. Both Shrewsbury and Durham are very good examples of where a **meander** of the river has formed an area of land bounded by water on three sides. This provided both cities with excellent defences, as they only had a thin neck of land to defend.

## Resources:

The idea of resources covers a huge number of different things. For early settlers the most important resources were **fuel**, **building materials** and **food**. Settlements grew in areas where wood was plentiful, stone easily accessible and good soil allowed agriculture to be developed.

Since those early days of settlement many different resources have become the focal points for the growth of urban areas. **Some of these are listed below:**

**Mining:** The coal mines of South Wales, Tin mines of Cornwall and large mining projects as seen at Caracas in Northern Brazil, have all encouraged the rapid growth of settlements aimed at housing the workers and providing them with all that they require.

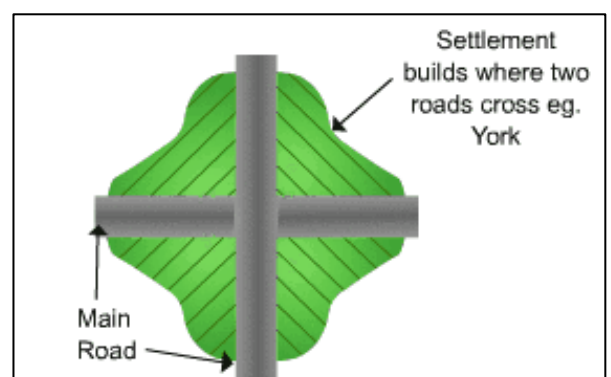
**Food:** The farming area of East Anglia is one example of how small settlements will locate in areas conducive to good agriculture.

**Oil:** Settlements in Alaska and the Middle East have grown rapidly on the back of the oil industry.

**Precious metals:** Settlements in South Africa have grown after the discovery of large deposits of precious metals such as gold. The most famous settlement to grow due to finding gold is San Francisco, after the gold rush to California in 1849.

## Route centres:

Route centres are often called **Nodal Points**. Anywhere where two routes meet has great potential for settlement. Often these are formed by the meeting of two valleys, but settlement nowadays will grow where two main roads meet. In the UK, York is a good example of a route centre. Birmingham also enjoys a very good location, where many routes join up, and this is one of the reasons for its growth to become one of the largest cities in the UK.

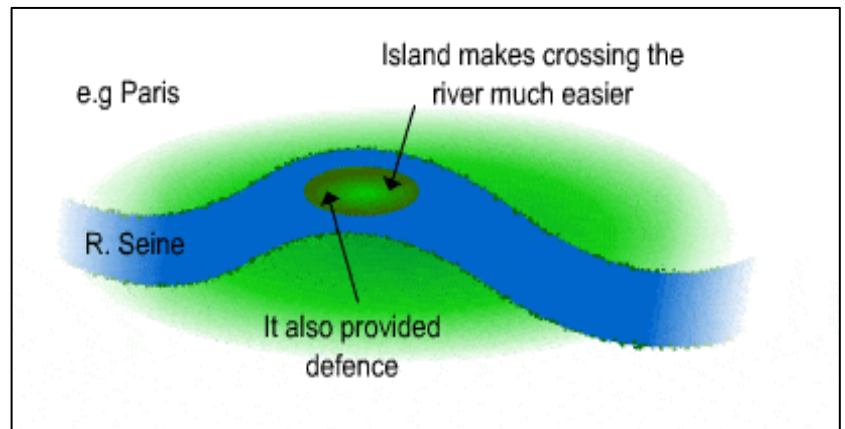


## Bridging points:

Just as water is very important for drinking, fishing, irrigation and navigation, so the ability to cross the rivers is also very important.

Many towns and cities have built up at points where it was easiest to cross a large river. Exeter is one such example, crossing the river Exe.

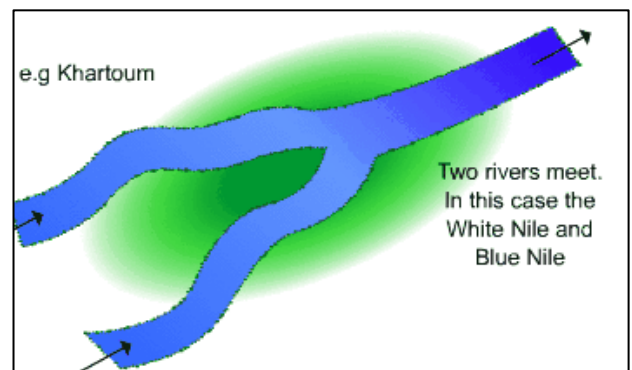
However one of the best examples is Paris in France. The original town was based on the tiny Ile delta site, which is an island in the middle of the River Seine. This island meant they could build two small bridges across the river rather than one large one.



The new settlement also benefited from all the other advantages associated with being beside a river, as well as becoming a route centre due it being one of the only places to cross the river. Nowadays the island has been engulfed by the huge city that Paris has become, however it does still have many bridges going to it and is the point where the huge Notre Dame Cathedral is built.

## The confluence of two rivers:

Just as two valleys, or roads, make a nodal point for settlement growth, so do two rivers join. One such example is found in Khartoum in Sudan, where the Blue and the White Nile meet.



(Source: <https://www.s-cool.co.uk/gcse/geography/settlements/revise-it/site-and-situation>)

## Sites of rural settlements :

The location and site of rural settlements are always determined by various factors. Several physical, cultural and economic factors are important in settling process. The locational sites of villages in the study area have been identified after a careful study of village's sites from 1:50,000 topographical maps and wherever possible by personal observation.

## **Sites related to Water availability:**

### **1. Tank or Lake Site Settlement**

Tanks have played an important role in determining rural settlements since ancient time. In hilly areas tanks are constructed by putting mud or stone embankment on small river. Several tank or lake site settlements are found.

### **2. Spring Site Settlement**

At the source of Man river, there are several flat top hills in this region there are several perennial springs. This flow of natural water has given rise to several settlements.

### **3. Stream Site Settlement:**

Stream site serves as good settlement site, as it provides fertile alluvial soils and water for agriculture.

### **4. River Site Settlement:**

River site attracts big human nucleation. Hence several settlements in village region are located on the river bank. These rivers side settlements are generally compact settlements.

### **5. Confluence Site Settlement:**

River confluence sites are also important sites for settlements. These confluence sites have been attracting people since historical times.

### **6. Canal Site Settlement:**

Canal site settlements are the modern time development and attract people due to water and transportation facilities.

## **Sites related to relief characteristics:**

After discussing the various rural settlements sites related to water bodies, it is appropriate to understand the definitive role of physical factors in siting the settlements. Among the physical factors determining or controlling the sites of rural settlements are suitability of available land for occupancy and cultivation, slope of the hilly area, elevated site and easy accessibility. In the hilly and mountainous areas following are the important sites for location of rural settlements.

### **1. Mesa Site:**

In hilly and mountainous land, sometime rural settlements attracted by mesa site for defence purpose. During the time period the need for defence has been reduced but same site has been maintained later on by settlers. These mesa site settlements are also called the hill top settlements.

## **2. Gap Site Settlements:**

In hilly area, some rural settlements occupy a gap site or Saddle between two hills. Such site presenting a defensive site and useful for transport and communication.

## **3. Valley Bottom Site or Narrow Valleys of Small Rivers:**

Narrow valleys of small rivers with fertile soil for agriculture attract the settlers and settlements.

## **4. Fort Site Settlements:**

In the past forts were constructed for defence and administrative purpose in hilly, plateau and plain area too.

## **5. Foot Hill and Hill Slope Site Settlement:**

In hilly and mountainous area sometime settlements spread on hilly slopes. The siting distributional pattern present a few disadvantages i.e. limited land for cultivation, scarcity of water supply, remoteness from main transport and trade lines.

Sometime people are avoiding the settlement site on hill slopes and settle at the foot hill site.

(Source:

[https://shodhganga.inflibnet.ac.in/bitstream/10603/140660/16/16\\_chapter%207.pdf](https://shodhganga.inflibnet.ac.in/bitstream/10603/140660/16/16_chapter%207.pdf))

## **Sites of Urban Settlements/Towns:**

**Site is the actual space occupied by the town including its immediate environment. In plateau and mountainous regions the rocky structure of the site, the underlying rock formations, their resistance to erosion and suitability for foundation should be carefully studied. In a plain land of alluvial formation the mellow sediments lying horizontally consist of clay, loam and sand do not provide a stable siting. In case the ground is full of grit or pebbles the site is especially considered suitable for the growth and development of towns. Varanasi, Jaipur and Delhi are examples of such a siting of towns. Delhi is sited on Delhi ridge, especially in the fringe area of Peninsular India or on the northern flank of Aravalli range. The drainage lines of a town is wholly guided by the topography of the land. It is, therefore, said that site guides the morphology of a town whereas its situation guides its importance. Before site selection the planner should see the water table, besides the**

location of lakes, rivers, and the height of the ground from mean sea level. The character of soil and any dominant feature of the land should be carefully noted.

The first task of the geographer in an urban study is to determine exactly the characteristic of the site and situation of the settlement. The site embraces the precise features of the terrain on which the settlement began and over which it has spread. It includes such matters as relief, geology, water supply, the nature of the river that traverse the settlement, the areas liable to flood before embanking etc. It is usually taken to mean the physical conditions over a much wider area around the settlement. Nodality of the town should also be measured in this aspect on the basis of the functions of the settlements as a nodal centre. We need a measure of such centralized or nodal function in terms of relations of the settlement with the countryside settlements around it.

The development of towns in the early middle ages (before A.D. 1200) was favoured on valley and lowland sites. In the later middle ages the great majority of towns grew as local centres of trade and administration and nodality. Their sites indicate the need of defence rather than trade, and serve as castle town on strongly defensible natural sites<sup>5</sup> such as hill tops, river, spurs, etc.

The event of the railway in the middle of the nineteenth century added an entirely new element to the nodality factor and radically transformed the structure of the growing urban centres. The original conditions of the site were displaced by new means of communication, industry and commerce. But the great majority of towns are still small and have changed in population size many times within last five decades. The modern city has spread from its original nucleus along roads and in residential colonies to adjust with new demands of growing urban population with the study of physical conditions of site and situation which affected the beginning of the urban settlements, the geographer examines how, with the passage of time, the settlement utilizes, adapts itself to, and transforms these conditions in the process of its formation and expansion. Many urban studies especially in Britain, have traced the historical character of the adjustment of the settlement of the physical conditions of its site and situation and for that reason they do not give a clear picture of the present physiognomic and functional structure of the urban centre as an entity in space. The broad historical events decisive as the history of urbanism are common to western Europe. Towns in general grew little but changed much in aspect by the erection of new permanent and domestic buildings, gardens and avenues. New towns



and extension of old ones were laid out on the geometric designs in accordance with the spirit of age as the same has been portrayed by Lewis Mumford.

(Source: Mandal,R.B.(2000).*Urban Geography:ATextbook*.Concept Publishing Company. New Delhi-110059,62-64)