

MODULE: INDSA401PERFORMING SITE ANALYSIS

COMPETENCE: INDSA401 PERFORM SITE ANALYSIS

LEARNING HOURS:30HRS

Purpose statement

This core module, which describes the performance outcomes, skills and knowledge required to perform site analysis. At the end of this module the learner will be able to collect site information, analyze the research data and also document all the findings.

By the end of the module, the trainee will be able to:

LEARNING UNITS	LEARNING OUTCOMES
1. Conduct Site Inventory	1.1 identification of physical attributes according to the site analysis requirements 1.2 identification of environmental attributes according to the site analysis requirements 1.3 identification of cultural attributes according to the site analysis requirements
2. Analyze Research Data	2.1 study of the space requirements according to their function and present attributes 2.2 Systematic categorization of the attributes according to the site analysis objectives 2.3 Relevant reviewing of information received from the client according to the site analysis objectives
3. Organize data into a written program	3.1selection of the format of the site analysis according to the project data 3.2 selection of the computer program according to site analysis format. 3.3 preparation of the final program document according to the program requirement

INTRODUCTION

What do you understand by SITE ANALYSIS in interior design?

Site analysis is a preliminary phase of architectural and urban design processes dedicated to the study of the climatic, geographical, historical, legal, and infrastructural context of a specific site.

Good site analysis allows the designer to improve the project, ensuring that the building makes the best use of the resources, such as light, access, views, on the site as possible. It should also allow the designer to anticipate any potential issues which may cause problems to the project.

The importance of site analysis

The Site Analysis Plan forms the basis for good site planning, retention of desirable landscape elements, determining building orientation, and protecting heritage fabric. The Site Analysis Plan allows a comprehensive view of the constraints and opportunities of the development site.

What should be included in site analysis?

Numerous elements go into a given site analysis. These elements include location, neighborhood context, site and zoning, legal elements, natural physical features, man-made features, circulation, utilities, human and cultural, and climate components.

LEARNING UNIT 1 CONDUCT SITE INVENTORY

A site inventory is simply a list of elements that currently exist on the property. Elements that exist on adjacent properties should also be considered if they impact the future design. The location of inventoried elements can be recorded on a base map or simple plot plan.

LEARNING OUTCOME 1.1: IDENTIFY PHYSICAL ATTRIBUTES ACCORDING TO THE SITE ANALYSIS REQUIREMENTS

PHYSICAL ATTRIBUTES: are the physical characteristics of the space itself.

Physical Attributes that affect a given

space:

1. Size and Shape of the space
2. Topography
3. Geology
4. Hydrology
5. Climate

1. SIZE AND SHAPE OF THE SPACE

shape is the appearance, the figure or what form it has. Is it a triangle (3 sides), a square (4 equal sides), a rectangle (4 sides), etc... Size is the measurement (or the dimensions). Size and shape can help in site analysis and inventory for more information.

2. TOPOGRAPHY

Topography is the description or the study of the shape and features of land surfaces. The topography of an area could refer to the surface shapes and features themselves. topographic maps exist to represent the land surface and are tools used in geologic studies because they show the configuration of the earth's surface.

3. GEOLOGY

Geology is the study of the earth, energy, water, and mineral resources; the environment; climate change; and natural hazards like landslides, volcanoes, earthquakes, and floods.

4. HYDROLOGY

Hydrology is the scientific study of the movement, distribution and management of water on Earth and other planets, including the water cycle, water resources and environmental watershed sustainability.

5. CLIMATE

Defined as the composite or generally prevailing weather conditions of a region, as temperature, air pressure, humidity, precipitation, cloudiness, and winds, throughout the year, averaged over a series of years.

Factors that affect users in a given space.

1. Aeration: is the process by which air is circulated through, mixed with or dissolved in a liquid or substance.

2. Lighting: illumination is the deliberate use of light to achieve practical or aesthetic effects. Lighting includes the use of both artificial light sources like lamps and light fixtures, as well as natural illumination by capturing daylight

3. Space management: is defined as the management, control and supervision of the physical spaces a business occupies. This could refer to a single floor, multiple floors or multiple floors in multiple buildings.

4. Movement: Is defined as change in position and other related circulation.

5. Ergonomics: Is the science of designing the workplace, keeping in mind the capabilities and limitations of the worker. A systematic ergonomics improvement process removes risk factors that lead to musculoskeletal injuries and allows for improved human performance and productivity.

LEARNING OUTCOME 1.2: IDENTIFY ENVIRONMENTAL ATTRIBUTES ACCORDING TO THE SITE ANALYSIS REQUIREMENTS

Environmental Attributes means any and all claims, credits, benefits, emissions reductions, offsets, and allowances, howsoever entitled, resulting from the avoidance of the emission of any gas, chemical, or other substance to the air, soil or water.

Environmental attributes that affect a space:

1. Topography: is the description or the study of the shape and features of land surfaces. The topography of an area could refer to the surface shapes and features themselves. topographic maps exist to represent the land surface and are tools used in geologic studies because they show the configuration of the earth's surface.

2.Natural features: Are part of the land, and many were in a place before people lived there. Plants, rocks, sand, soil, sea and streams are all natural. They are not made by people.

3.Sun Orientation: refers to the alignment of a building or structure with respect to the transit of the Sun across the sky. The orientation determines which walls or windows receive light during the day. This is an important factor in passive solar building design.

4.Wind Direction: refers to the alignment of a building or structure with respect to the transit of the wind across the sky. The orientation determines which walls or windows receive the winds. Wind direction is reported by the direction of winds from which it originates.

5.Climate: Defined as the composite or generally prevailing weather conditions of a region, as temperature, air pressure, humidity, precipitation, cloudiness, and winds, throughout the year, averaged over a series of years.

ENVIRONMENTAL LAWS THAT RELATE TO DIFFERENT SPACES

, also known as environmental and natural resources law, is a collective address environmental pollution. A related but distinct set of regulatory regimes, now strongly influenced by environmental legal principles, focus on the management of specific natural resources, such as forests, minerals, or fisheries. Other areas, such as environmental impact assessment, may not fit neatly into either category, but are nonetheless important components of environmental law.

or

Environmental law is the collection of laws, regulations, agreements and common law that governs how humans interact with their environment. ... Laws may regulate pollution, the use of natural resources, forest protection, mineral harvesting and animal and fish populations.

Environmental Law is a developing field of law and practice. As increasing pressures are placed on the environment at a local level, communities need additional tools to ensure progress while upholding values of environmental preservation and conservation.

THE MAJOR ENVIRONMENTAL LAWS

The following is a summary of the major federal environmental laws.

- 1.The Clean Air Act.
- 2.The Clean Water Act.
- 3.The Comprehensive Environmental Response, Compensation and Liability Act
- 4.The Endangered Species Act
- 5.The Pollution Prevention Act
- 6.The Resource Conservation and Recovery Act

THE PURPOSE OF ENVIRONMENTAL LAW

Know The Purpose of Environmental Law. **The purpose of environmental law is to protect and preserve the environment.** There are two main subjects of

environmental laws, control of pollution, and the conservation and management of land. Both sections of environmental law protect land, air, water, and soil.

LEARNING OUTCOME 1.3: IDENTIFY CULTURAL ATTRIBUTES ACCORDING TO THE SITE ANALYSIS REQUIREMENTS

Cultural Attributes that affect a space:

1. Land Use and Tenure
2. Property value
3. Public Infrastructure
4. Historic Resources
5. Land use regulation

1. Land Use and Tenure

- **Land use** involves the management and modification of natural environment or wilderness into built environment such as settlements and Land by respecting rules and regulations of public or government.
- **Land Tenure:** Defined as the terms and conditions on which land is held, used and transacted. Rules of tenure define how property rights to land are to be allocated within societies.

2. Property value

property valuation or land valuation is the process of developing an opinion of value, for real property. Real estate transactions often require appraisals because they occur infrequently and every property is unique.

3. Public Infrastructure

Public infrastructure is infrastructure owned or available for use by the public. It is distinguishable from generic or private infrastructure in terms of policy, financing, purpose and control by competent leaders.

Or

Public infrastructures are facilities, structures, equipment, services and institutions to the economy and quality of life of a nation, region or city

EXAMPLES OF PUBLIC INFRASTRUCTURES

- transport infrastructures: bridges, road, sidewalks and rail services.....
- wet infrastructures: water supply, water treatment plant,,,,,
- information infrastructures: network services....
- institutions: schools, markets.....
- Public spaces: parks.....

4. Historic Resources

historic resource is documented with photographs, maps, and a written description on a form. Historic resources are districts, sites, buildings, structures and objects that are significant in American history, architecture, archeology, engineering and culture.

5. Land use regulation

regulate land use in two ways: (1) The owner may become liable for certain activities carried out on the real estate that affect others beyond the real estate. (2) The owner may be liable to persons who, upon entering the real estate, are injured.

Land use regulation falls into three broad categories:

- (1) restriction on the use of land through tort law,
- (2) private regulation by agreement, and
- (3) public ownership or regulation through the powers of eminent domain and zoning.

EXERCISES FOR LEARNING UNIT 1

1. What do you understand by SITE INVENTORY?
2. What are the important of site analysis?
3. What do you understand by LAND USE AND LAND TENURE?

- 4.Explain briefly 5(five) physical Attributes that affect a given according to the site analysis requirements?
- 5.Explain 5 factors that affect users in a given space according to the site analysis requirements?
- 6.Explain Cleary how sun orientation and wind direction can affect the business?
- 7.Defferenciate public infrastructures from private infrastructures?
- 8.Explain three broad categories falls into Land use regulation in RWANDA?

LEARNING UNIT 2: ANALYZE RESEARCH DATA

LEARNING OUTCOME 2.1: STUDY SPACE REQUIREMENTS ACCORDING TO THEIR FUNCTION AND PRESENT

ATTRIBUTES

Spaces and their functions:

1.Public:

- **Hotels:** function of a hotel is to provide lodging accommodations. A hotel is comprised of several business or revenue centers. Hotels exist to provide service and to generate a profit for the owners.
- **Banks:** functions of a commercial bank are accepting deposits and also lending funds. Deposits are savings, current, or time deposits. Also, a commercial bank lends funds to its customers in the form of loans and advances, cash credit, overdraft and discounting of bills, etc.
- **Malls:** Are used for entertainment, community, and ecology. Through this strengthening, MALL intends to create shopping malls that are not only the most competitive in their respective regions, but that are considered a hub of the local community
- **Restaurants:** is a business that prepares, provide and serves food and drinks to customers
- **Offices:** The basic functions are essential to the existence of the office. These include collecting, processing, recording, storing and furnishing information. The administrative functions are organisation of office

activities, control of stationery, purchase of equipment, safe guarding of assets, management of personnel etc

- **Museums:** is to collect objects and materials of cultural, religious and historical importance, preserve them, research into them and present them to the public for the purpose of education and enjoyment.
- **Hospitals:** The main function of a hospital is to provide the population with complete health care; it also functions as the centre for the training of health workers. A hospital is generally a vital part of a social and medical organization

2.Private

- **Residential houses:** Functions of residential House as environment for family living, fulfills various functions like effective use of resources, protection, social and emotional bondage among family members, cultural influence in way of living, religious mindset and social status.
- **Private lounges:** is the private place which has comfortable seating and is mainly used for relaxation.

DIFFERENT SPACE REQUIREMENT:

- Acoustic panels for sound insulation
- Air conditioning
- Lighting
- Wheel chair ramps

LEARNING OUTCOME 2.2: CATEGORIZE ATTRIBUTES ACCORDING TO THE SITE

ANALYSIS OBJECTIVES

IDENTIFY SITE ANALYSIS OBJECTIVES

Main goal of site analysis is used to develop an understanding of the site and its context, and the resulting constraints and opportunities for development the site.

When you are starting your project, it may seem obvious where and how the building should be situated. However, after taking some time to research local regulations, and document the natural properties of your site and adjacent

properties, you might be surprised by your findings. Your objectives in doing a site analysis are:

- Decide which piece of property to purchase (if applicable).
- Decide where to build, and where not to build on the property.
- Determine building footprint, orientation, desirable views, parking location, and other site amenities.
- Determine access to the site.
- Determine the character you want.
- Determine how large of a building the site will support (expansion possibilities)

LEARNING OUTCOME 2.3: REVIEW INFORMATION RECEIVED FROM THE CLIENT ACCORDING TO THE SITE ANALYSIS OBJECTIVES

Tips on how to conduct Client/user analysis

Step 1 – Review the notes, transcripts, and data for any relevant phrases, statements, and concepts that align to the research goals and questions.

Step 2 – Tag and code any remaining data that represents key activities, actions, concepts, statements, ideas and needs or desires from the customers who participated in the research.

Step 3 – Review those tags and codes to find relationships between them. A useful tip for this is to pay close attention to tags that have notes with multiple other tags. This often indicates a relationship between themes.

FUNDAMENTAL PRECEPTS OF RESPONSIVE SITE ANALYSIS:

- o Design with nature
- o Design with culture
- o Design places for people

INFORMATION THAT MAY BE RECEIVED FROM THE CLIENT:

- o Intended use of the site
- o Preferences in color, shapes, styles and patterns
- o Target market/users

EXERCISES FOR LEARNING UNIT 2

1. Describe briefly seven (7) public spaces and their functions?
2. Explain 4(four) factors affecting different space requirement?
3. Describe briefly five (5) goal of site analysis objectives based on client's issues?
4. Explain five (5) site analysis objectives?
5. As technician in Interior Design enumerate all tips on how to conduct Client according to the site analysis objectives?
6. Explain briefly fundamental precepts of responsive site analysis?
7. Relationship between site analysis attributes and how they interact.
8. Tips on how to match site analysis attributes to their respective objectives.

LEARNING UNIT 3: ORGANIZE DATA INTO A WRITTEN PROGRAM

Learning Outcome 3.1: Select the format of the site analysis according to the project data

Site analysis formats that can be used to achieve the task.

1. graphic format with size
2. microsoft excel
3. microsoft power point
4. microsoft word.....

Site analysis format to use to best present the project data

1. slides
2. layouts

3.essay

Learning Outcome 3.2: Select the computer program according to site analysis format

Microsoft PowerPoint

Microsoft word

PDF layout (AutoCAD, archiCAD, chief architect, ...)

Guidelines on how to navigate and operate the different computer programs

1. Give an overview of the site and the information you have found.
2. Show some of the key photographs of the site.
3. Give more detail about the elements of your site analysis that you feel will be important in your design process.
4. Make sure you include images

Learning Outcome 3.3: Prepare the final program document according to the program requirements

Introduction to the different outputs of the final document in regards to the program requirement

1. A1= 594 x 841 mm

2. A2= 420 x 594 mm

3. PDF: is a file format that has captured all the elements of a printed document as an electronic image that you can view, navigate, print, or forward to someone else. To view and use the files, you need the free Acrobat Reader, which you can easily download.

Tips on how to best present the final program document.

1. Show your Passion and Connect with your Audience

2. Focus on your Audience's Needs

3. Keep it Simple: Concentrate on your Core Message

When planning your presentation, you should always keep in mind the question

4. Make Eye Contact with your Audience

5. Start Strongly, the beginning of your presentation is crucial. You need to grab your audience's attention and hold it.

EXERCISES FOR LEARNING UNIT 3

1. Discuss briefly all tips on how to use different format to ensure that no project data is lost or misinterpreted?

2. Explain 4(four) different computer programs that are compatible with the selected site analysis format?

3. Enumerate all guidelines on how to navigate and operate the different computer programs?

4. Demonstrate all tips on how to achieve the best results with the computer program?