POULTRY PRODUCTION

Level - III

Learning Guide -21

Unit of Competence: - Site Selection and Design Poultry House

Module Title: - Selecting Site and Designing Poultry House

LG Code: AGR PLP3 M06 LO1-LG-21

TTLM Code: AGR PLP3 TTLM 1219v1

LO 01: Select and establish poultry house site

Instruction Sheet	Learning Guide #-21

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- ☞ Describing a site selecting criteria.
- ☞ Identifying Suitable locality for poultry site.
- ☞ Selecting and checking suitable Personal Protective Equipment (PPE)
- ☞ Selecting and checking tools and equipment required to select and establish poultry house
- ☞ Identifying Occupational Health and Safety (OHS) with selecting and establishing poultry house site

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- ☞ Describe a site selecting criteria.
- ☞ Identify Suitable locality for poultry site.
- ☞ Select and checking suitable Personal Protective Equipment (PPE)
- ☞ Select and check tools and equipment required to select and establish poultry house
- ☞ Identify Occupational Health and Safety (OHS) with selecting and establishing poultry house site.

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described in number 3 to 7.
3. Read the information written in the “Information Sheets 1”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
4. Accomplish the “Self-check 1” in page **-.**
5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You have to get the key answer only after you finished answering the Self-check 1).
6. If you earned a satisfactory evaluation proceed to “Information Sheet 2”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity #1.
7. Submit your accomplished Self-check. This will form part of your training portfolio.

Information Sheet-1	Describing a site selecting criteria.

The first factor to consider in selecting a site for poultry operation is state and local permitting requirements and ordinances. Consult local health and regulatory authorities and have all plans approved before constructing any manure handling system. Consider seeking professional assistance for selection of a site for poultry production is very crucial.

In Selecting a Site for Livestock and Poultry Operations consider the following:

- Distance to neighboring residences.
- Direction of prevailing winds in relation to neighbors.
- An adequate source of water.
- Access to land for manure application.
- Topography.
- Soil type.
- Proximity to surface water bodies, sinkholes and flood plains.
- Depth to groundwater.

Proximity of neighbors

Likelihood of odor complaints by neighbors may be a major deterrent to siting large livestock operations in many locations.

Determine the attitude of neighbors toward a new or expanded livestock operation at the site you are considering. Documenting that adequate consideration has been given to siting the livestock operation in an environmentally responsible manner may help if litigation occurs.

Odors are inherent in livestock operations, especially when manure is being applied to the land. The larger the livestock operation, the more important it is to plan, design, construct and operate the facility in a manner that will minimize off-site (and on-site) odors. It is important to control sufficient land to provide an adequate buffer between neighbors and the more odoriferous locations at the livestock facility.

Avoid placing livestock facilities near existing (or future) "non-owned residences" (residences not owned by the owners of the animal feeding operation), especially clusters of homes,

built-up areas and parks. Preferably, livestock facilities should be out of your neighbors' sight. Consider having a tree windbreak or other visual barrier to shield the operation. Depending on the size of the facility, the minimum distance from non-owned residences should be from 1,000 to 3,000 feet, although this is no guarantee of immunity from complaints. A separation of at least a mile may be needed between large livestock operations and non-owned residences, depending on such considerations as topography and prevailing wind direction.

Winds and odor complaints

Desirable separation distance from odor sources such as production buildings, feedlots, manure storage structures, lagoons and land application areas is influenced by topography and prevailing wind. Because the timing of land application is somewhat flexible, manure can usually be applied when climatic conditions (wind direction, humidity) are most favorable. Fields in which manure is surface applied need greater separation than fields in which manure is injected. Fewer odor complaints about land application usually occur if the manure is treated in a lagoon, injected into the soil, or immediately incorporated into the soil by tillage. However, be sure any tillage operations are compatible with residue requirements of conservation plans.

Prevailing wind direction in relationship to non-owned residences is important, especially during seasons when neighbors will be outside.

Air drainage and odor complaints

During calm, humid periods, topography can funnel odors down drainage ways to distant locations, especially to residences located in valleys. Odors traveling in this way can remain intense over long distances. Topographical maps can show potential paths of air drainage. Remember, odors following drainage patterns may be more offensive than odors carried by prevailing winds.

Drainage

Good surface and subsurface drainage around livestock facilities is important, but polluted water must not leave the premises or enter the groundwater. Avoid building in a poorly drained site, on a flood plain or on sites with seeps, springs or a high water table.

Slopes of 2 to 5 percent will usually provide surface drainage without erosion, depending on the soil type. A 5 percent minimum slope away from building foundations is recommended, and south slopes are preferred for livestock feeding areas. Buildings built on high ground can take advantage of natural slopes for drainage and to obtain a 2 percent minimum slope on conduits to lagoons. On slopes it may be necessary to divert surface runoff from facilities. It is advisable to build roads along ridges to take advantage of drainage and reduce snow drifts.

Accessibility to markets

A livestock operation should have good access to markets, preferably by means of state-maintained, hard-surfaced highways with bridges permitting large trucks. Prompt snow removal is important. Avoid sites where the cost of constructing and maintaining the road from the livestock operation to the public road will be excessive because of distance, required bridges, snow drifting or other topographical or soils problems. This cost may be balanced against the need to provide setback or separation distance between the operation and potential odor receptors.

Water

A year-round supply of water is essential for the animals, sanitation, workers and residences and fire protection. Water may be needed for animal manure dilution and flush-cleaning facilities. Public water supplies are expensive for watering livestock. Water consumption varies greatly from winter to summer.

Electricity

Electrical demand may be high for large animal feeding operations, especially for pumping, grinding and materials handling. Unless a three-phase line is nearby, the cost of providing such a line for the large motors that require three-phase power can be costly.

Livestock operations subject to frequent power outages may feel compelled to install a standby power source. Outages are more likely if the site is far removed from the electrical substation.

Soil/plant filter

Harvested crops or forage that use large amounts of nutrients are best suited for sustainability of the soil/plant filter. Because soil nutrients on pasture land tend to be recycled rather than removed, nutrient applications to pasture land are less efficient than applications to forage or crops that will be harvested.

Slope

To reduce the possibility of runoff, select fairly level sites. If a sloping site is unavoidable, it may be necessary to apply the manure by injection. Application sites with slopes greater than 6 percent should be in grass vegetation or must use soil conservation practices that meet the standards. Manure should not be used on fields or sites having a slope greater than 12 percent unless prior approval is obtained from the National Department of Natural Resources. The maximum allowable slope of the application area is 20 percent. Slopes of 10 to 20 percent may require provisions, such as reduced rates of effluent application and water runoff protection measures, to prevent potential discharge of nutrients and pathogens.

Self-Check -1	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Write the criteria's used In Selecting a Site for Livestock and Poultry Operations(10pts)

Note: **Satisfactory rating - 10 points** **Unsatisfactory - below 10 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

1. _____

_____

_____

_____

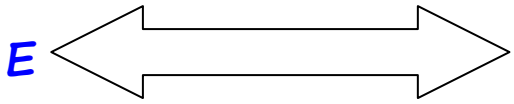
Information Sheet-2	Identifying Suitable locality for poultry site.

Once the site has been selected, the chicken house can be constructed in different type and quality. The house to be constructed should fulfil the following points.

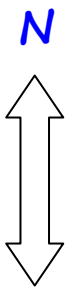
Comfortable for the chicken: it should provide for the chicken enough space, well ventilated, allow entrance of light and should not be wet. These make the chicken productive and free from diseases.

Protect the chicken from unfavourable weather conditions and predators: It should protect the chicken from predators such as rat, wild predator birds etc.; parasites; theft and from unfavourable weather conditions such as rain, wind, etc.

House Orientation (Direction)



In hot climate



In Cold climate

Self-Check -2	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What should be fulfilled in the construction of poultry house?(10pts)

Note: **Satisfactory rating – 10 points** **Unsatisfactory - below 10 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

1. _____
   _____
   _____

Information Sheet-3	Selecting, using and maintaining suitable personal protective equipment

3.1. Selecting and Checking Suitable Personal Protective Equipment

There are different types of materials, tools and equipments and supplies to perform different activities in poultry raising activity. Therefore, identifying, selecting, using and preparing facilities, supplies according to the working activity are very important aspect in poultry work. Some of Personal protective equipment include:

Overalls Glove goggles

Knee pads Ear protection Boots/shoes Helmet

Figure: 1 Personnel protective equipments

Protective clothing should be selected to prevent skin contact with contaminated materials or environments. Consideration should be given to the type of work being performed by the worker when selecting personal protective clothing.

Self-Check -3	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. List at least 5 Personal Protective Equipments (5%)
2. Write main purpose of Personal Protective Equipments (15%)
3. What is the main purpose of Personal Protective Equipments (5%)

Note: **Satisfactory rating – 20 points** **Unsatisfactory - below 20 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

1. _____
   _____
2. _____
   _____
3. _____
   _____

Information Sheet-4	Selecting and checking tools and equipment required to select and establish poultry house

Some of the essential tools/equipment required to select and establish poultry house are shortly described below:

Hand tools, such as; screwdrivers, brushes, trowels, wrenches, knives, crimpers, clamps, and so on.

Power tools, which may be powered by electricity, compressed air, liquid fuel, hydraulic power, or powder-actuated and might include; mixers, saws, cutters, drills, grinders, guns, breakers, and so on.

Brick Hammer

Concrete Mixer

Crowbar

Drill Machine

Float

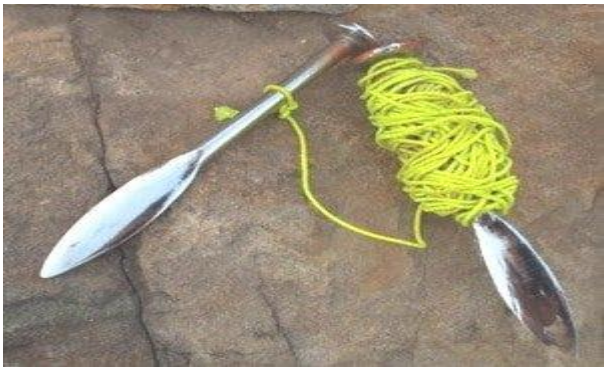
Gloves

Hand Saw

Hoe

Jackplane

Ladder



Line and Pins

Mason's Square

Measuring Box

Measuring Tape

Pick Axe

Plumb Bob

Rubber Boots

Safety Glasses

Safety Helmet

Sledge Hammer

Spade

Spirit Level

Straight Edge Brushes

Trowel

Vibrator

Wheel Barrow

Figure 2: tools and equipments

Self-Check -4	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What are some of the construction tools for poultry house construction(10pts)

Note: **Satisfactory rating – 10 points** **Unsatisfactory - below 10 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

1. _____
   _____
   _____

Information Sheet-5	Identifying Occupational Health and Safety (OHS) with selecting and establishing poultry house site.

Accident can be defined as an unforeseen circumstance or event which happens abruptly to cause damages to property and injury to the person(s) involved. Any of such occurrences that may interrupt or interfere with the orderly progress of activities in a construction site can therefore be termed as an accident.

The following safety measures will therefore serve to reduce the accident rate in mixing and placing of concrete used in the casting of footings, foundation walls, floor slabs, beams, columns, retaining walls, sidewalks, driveways, and patios in a building project.

- ☞ Wear sturdy work gloves, long sleeves, and full length trousers to protect your hands, arms, and legs. Indirect contact through clothing can be as serious as direct contact, so promptly rinse out wet concrete or mortar from clothing.
- ☞ Wear rubber boots when placing and handling concrete for slabs and flatwork, because you may sometimes have to stand in the wet mix to spread and screed the concrete.
- ☞ Make sure the boots are high enough to prevent concrete from getting inside them.
- ☞ To protect your eyes from cement dust and from splattered mortar or concrete, wear safety glasses or goggles.
- ☞ Since masonry involves heavy lifting, be careful to avoid back strain and injury—always bend your knees, keep your back straight, and lift with your legs.
- ☞ Small, shallow concrete footings can sometimes be formed by earth trenches if the soil is stable, but most concrete work requires building forms to shape and hold the mix until it hardens. Forms for concrete must be strong, tightly fitted, and rigidly constructed.
- ☞ The deeper the concrete, the greater the pressure it will exert on the formwork, so don't be afraid to use an extra stake or two to help ensure that forms will not bulge or bow out of shape during the pour. Drive supporting stakes slightly below the height of the string so they won't interfere with leveling or finishing the concrete surface.

- On residential projects, it is more common to use wheelbarrows or buggies to move the concrete from the mixer to the forms. You can build ramps and runways over the forms to keep them from bumping the boards or displacing the reinforcing steel out of place.

Any construction site is a dangerous occupation for all personnel, especially for labours working on site and so one must be prepared every day for safety. For this purpose, various safety measures have to be taken.

Safety Procedures at Construction Site

Personal protective equipment (PPE) are supplied to all the personnel's working on site and even for the personal who are temporary visiting to the site

Personal protective equipment (PPE) can be classified as:

- Minimum Personal protective equipment (PPE)
- Additional Personal protective equipment (PPE)

Minimum PPE Requirements for Safety at Construction Site

Hard Hat or Helmet

Hard hat or helmet is issued to each and every personnel working on site. It has to be worn all times at job site.

Figure 3: Safety helmet

Safety Glasses

Safety glasses are required at construction site every time debris is filled in air due to activities on site.

Hand Protection Gloves

Hand gloves are supplied to all personals to protect against cuts when handling material or equipment's, during cleaning operations, cutting metal studs or similar works. gloves

Safety Vests

Safety vests also called as high visibility shirts. Purpose of safety vest is to keep the person always clear in view, even in the dark and he should be visible to everyone.

Safety vests are of different bright colors like red, green, yellow so it's easy for workers to see and locate each other

Proper Clothing

Shirts, long pants and hard soul shoes, a 6-inch-high boot is recommended.

Overalls

Self-Check -5	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Write the Minimum PPE Requirements for Safety at Construction Site (10pts)

Note: **Satisfactory rating - 10 points** **Unsatisfactory - below 10 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

1. _____
   _____
   _____

References

- https://www.google.com/search?q=site+selecting+criteria&rlz=1C1AVFC_enET881ET881&oq=site+selecting+criteria&aqs=chrome..69i57.712j0j7&sourceid=chrome&ie=UTF-8
- https://www.google.com/search?q=PPE+Requirements+for+Safety+at+Construction+Site&rlz=1C1AVFC_enET881ET881&oq=PPE+Requirements+for+Safety+at+Construction+Site&aqs=chrome..69i57.1475j0j7&sourceid=chrome&ie=UTF-8
- https://www.google.com/search?q=tools+and+equipment+required+to+select+and+establish+poultry+house&rlz=1C1AVFC_enET881ET881&oq=tools+and+equipment+required+to+select+and+establish+poultry+house&aqs=chrome..69i57.1718j0j7&sourceid=chrome&ie=UTF-8

POULTRY PRODUCTION

Level - III

Learning Guide -22

Unit of Competence: - Site Selection and Design Poultry House

Module Title: - Selecting Site and Designing Poultry House

LG Code: AGR PLP3 M06 LO2-LG-22

TTLM Code: AGR PLP3 TTLM 1219v1

LO 02: Set Poultry house Selection criteria

Instruction Sheet	Learning Guide #-22

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- ☞ Determining and specifying surveys to be undertaken according to *enterprise requirements*.
- ☞ Assessing and determining site preparation according to enterprise policies
- ☞ Designing proper road facilities and the basic amenities according to standard.

This guide will also assist you to attain the learning outcome stated in the cover page.
Specifically, upon completion of this Learning Guide, you will be able to –

- ☞ Determine and specify surveys to be undertaken according to *enterprise requirements*.
- ☞ Assess and determine site preparation according to enterprise policies
- ☞ Design proper road facilities and the basic amenities according to standard

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described in number 3 to 7.
3. Read the information written in the “Information Sheets 1”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
4. Accomplish the “Self-check 1” in page -.
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6. If you earned a satisfactory evaluation proceed to “Information Sheet 2”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity #1.
7. Submit your accomplished Self-check. This will form part of your training portfolio.

Information Sheet-1	**Determining and specifying surveys to be undertaken according to enterprise requirements**.

There is a significant difference between a questionnaire and a survey. A survey is defined as the evaluation of experiences or opinions of a group of people via questions as opposed to a questionnaire which is defined as a collection of written or printed questions with an answer choice made to conduct a survey.

Surveys are used to increase knowledge in fields such as social research and demography. Survey research is often used to assess thoughts, opinions, and feelings. Surveys can be specific and limited, or they can have more global, widespread goals.

Therefore in designing and selecting poultry house poultry operator need to undertake a specific surveying of the area.

Self-Check -1	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What is the difference between a questionnaire and a survey? (10pts)

Note: **Satisfactory rating - 10 points** **Unsatisfactory - below 10 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

1. _____

_____

_____

__

Information Sheet-2	Assessing and determining site preparation

Site assessment may involve determining the present and installation of underground services, specify suitable foundation depend on recommendation of geotechnical report, anticipate the level of ground water, grading amount needed for proper drainage to push water away from the structure, whether the site is difficult to excavate or not, frost penetration depth.

To build the structure as per the design, estimate the excavation volume accurately, and provide suitable drainage, structural elevations and layout must be carried out with substantial precision.

Steps in Preparing Site for Construction

- ☞ Geotechnical report related to site soil properties
- ☞ Construction site clearing and excavation
- ☞ Grading of project site
- ☞ Project site compaction

Site preparation involves the demolition or wrecking of buildings and other structures, clearing of building sites and sale of materials from demolished structures. Site preparation also entails blasting, test drilling, landfill, levelling, earth-moving, excavating, land drainage and other land preparation

Features of Selection of location

- ☞ Poultry house should be located away from residential and industrial area.
- ☞ It should have proper road facilities.
- ☞ It should have the basic amenities like water and electricity.
- ☞ Availability of farm laborers at relatively cheaper wages.

Self-Check -2	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What are the basic features of Selection of location**?(10pts)**

Note: **Satisfactory rating - 10 points** **Unsatisfactory - below 10 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

1. _____
   _____
   _____

Information Sheet-3	Designing proper road facilities and the basic amenities

Definition of terms

Infrastructure is the basic facilities and installations that help a government or community run, including roads, schools, phone lines, sewage treatment plants and power generation. An example of infrastructure is the basic roads and power lines for a new housing development.

Basic amenities.

Things considered to be essential to make life easier and more pleasant the government intends to provide the isolated town with basic amenities, such as roads, running water, and electricity.

Poultry house should be located away from residential and industrial area. It should have proper road facilities. It should have the basic amenities like water and electricity. Availability of farm labourers at relatively cheaper wages.

Roads – The condition of public roads must be adequate to allow feed trucks, chick- delivery vehicles and live-haul trucks access to the buildings during all times of the year. Are there any weight limits or bridges that would restrict access to the farm? How much will it cost to construct an access road from the public road to the buildings? Can the heavily loaded trucks travel easily on the access road in all types of weather?

Self-Check -3	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What are the basic amenities?

Note: **Satisfactory rating - 10 points** **Unsatisfactory - below 10 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

1. _____

_____

References

- https://www.google.com/search?q=site+preparation+in+poutry+house+construction&rlz=1C1AVFC_enET881ET881&oq=site+preparation+in+poutry+house+construction&aqs=chrome..69i57j33.35731j0j7&sourceid=chrome&ie=UTF-8
- https://www.google.com/search?q=road+facilities+and+the+basic+amenities+in+poultry+farm+in+ethiopia&rlz=1C1AVFC_enET881ET881&oq=road+facilities+and+the+basic+amenities&aqs=chrome.1.69i57j69i59l3.4359j0j7&sourceid=chrome&ie=UTF-8

POULTRY PRODUCTION

Level - III

Learning Guide -23

Unit of Competence: - Selecting Site and Design Poultry House

Module Title: - Site Selection and Designing Poultry House

LG Code: AGR PLP3 M06 LO3-LG-23

TTLM Code: AGR PLP3 TTLM 1219v1

LO 03: Prepare brief design

Instruction Sheet	Learning Guide #-23

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- ☞ Modifying appropriate plans to the individual site and reflect enterprise objectives.
- ☞ Assessing options to modify existing facilities.
- ☞ Identifying OHS codes, enterprise quality assurance and incorporated into the plan.
- ☞ Identifying legal requirements and constraints on development processes.
- ☞ Preparing brief design and consultation is undertaken to establish agreement

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- ☞ Modify appropriate plans to the individual site and reflect enterprise objectives.
- ☞ Assess options to modify existing facilities.
- ☞ Identify OHS codes, enterprise quality assurance and incorporated into the plan.
- ☞ Identify legal requirements and constraints on development processes.
- ☞ Prepare brief design and consultation is undertaken to establish agreement

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7. Submit your accomplished Self-check. This will form part of your training portfolio.

Information Sheet-1	Modifying appropriate plans to the individual site and reflect enterprise objectives

The economical growing of chickens starts from the correct and adequate design of the building for the appropriate breed and the environment of the location. The designs of the poultry house for hens or broilers in some countries does not always based on engineering and scientific foundation, but on some incorrect information, and practices or lack of accurate information. For these reasons and others there is a high mortality rate. In absence of scientific and engineering aspects and rules in poultry housing design that led to different sizes and many non-standard types of sheds. In many situations it is not adequate for large production, or using standard mechanization (feeding, drinking systems) for poultry production.

Selecting the correct dimensions for the poultry house helps in use of standard mechanization and adequate design of the ventilation system. Not using scientific rules in poultry building design could create production problems, high production cost, lower returns, and wastage of different types of energy.

There are three types of House.

1. Open-side Poultry house
2. Front and back sides
3. Controlled Environment house

Most of the poultry houses in the world are conventional or open-sided; that is, they rely on the free flow of air through the house for ventilation. Certain requirements must be met if such a ventilated house is to provide an adequate environment. Care in following these rules during the course of construction will avoid pitfalls later. Width of house. The width of the open-sided poultry house should be about 30 feet (9.8 m) and no more than 40 feet (12.2 m) wide. Houses that are wider will not provide ample ventilation during hot weather. Wide houses also require additional interior supports that may interfere with equipment or manure removal. This width recommendation is basic for growing birds, broilers, and laying hens.

Self-Check -1	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What are the three types of House (5pts)
2. What is the recommended width of the open-sided poultry house (5pts)

Note: **Satisfactory rating - 10 points** **Unsatisfactory - below 10 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

1. _____

_____

2. _____

_____

Information Sheet-2	Assessing options to modify existing facilities.

2.1. Housing improvement

Poor housing is associated with poor health. This suggests that improving housing conditions might lead to improved health for residents.

There are four basic requirements for housing: satisfying physiological needs, protection against infections, protection against accidents, and satisfying psychological and social needs. The implementation of all housing requirements is challenging.

Here are the characteristics and features of an ideal house:

It must be equipped with: A kitchen to cook food and a dining room to eat and enjoy meals or even snacks. Bedroom where the each member can able to rest, sleep and unwind, and have a sense of privacy. A bathroom to meet the personal necessities of the family.

There are three basic principles:

- Housing should meet the needs of its users
- Understand and respond to its context
- Enhance its neighborhood

Self-Check -2	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What are the basic principles of house improvements(10pts)

Note: **Satisfactory rating - 10 points** **Unsatisfactory - below 10 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

1. _____
   _____
   _____

Information Sheet-3	Identifying OHS codes, enterprise quality assurance and incorporated into the plan

The purpose of the Health and Safety policies and procedures is to guide and direct all employees to work safely and prevent injury, to themselves and others. All employees are encouraged to participate in developing, implementing, and enforcing Health and Safety policies and procedures.

An OHS Policy is simply a method of stating how you, your employees, contractors and visitors are expected to behave when they are on Company property or performing Company related activities. As an employer or responsible contractor, you are required by law to provide a 'safe system of work'.

Types of hazards in the work places

There are six main categories of hazards that can be occur during work place

- **Biological**. Biological hazards include viruses, bacteria, insects, animals, etc., that can cause adverse health impacts.
- **Chemical.** Chemical hazards are hazardous substances that can cause harm.
- **Physical**
- **Safety**
- **Ergonomic**
- **Psychosocial**.

Self-Check -3	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What are the main categories of hazards that can be occur during work place (10 pts)

Note: **Satisfactory rating - 10 points** **Unsatisfactory - below 10 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

1. _____

_____

Information Sheet-4	Identifying legal requirements and constraints on development processes.

Requirements generally fall into two types: functional and non-functional. The difference between them is fairly straight forward, nevertheless, in this article we'll define the two types of requirements and provide examples of each to point out more concretely the fundamental difference between them.

Legal constraints refer to the many regulations that the activities and practices on a construction project must comply with. These most commonly relate to employment law, safety requirements, planning and building regulations requirements, environmental requirements, and so on.

Any constraints that are deemed legal constraints are simply restrictions and constraints that are enforced by the law. These will often be enforced by Laws or Acts that state the regulations that must be followed.

Requirements and Constraints.

A constraint is a statement of restriction that modifies a requirement or set of requirements by limiting the range of acceptable solutions. Constraints appear across all levels of the requirements hierarchy (business, functional, system, and user)

The definition of a constraint is something that imposes a limit or restriction or that prevents something from occurring. An example of a constraint is the fact that there are only so many hours in a day to accomplish things. Your Dictionary definition and usage example.

The three basic constraints, which are the synchronizing support effect disappearance constraint, the minimum oscillation frequency constraint of low frequency oscillations and the frequency stability constraint, consist of a triangle criterion to determine the reasonable size of the synchronous grids.

Self-Check -4	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What is constraints?(5pts)
2. What is the difference between requirements and constraints? (5pts)

Note: **Satisfactory rating - 10 points** **Unsatisfactory - below 10 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

1. _____

_____

2. _____

_____

Information Sheet-5	Preparing brief design and consultation is undertaken to establish agreement

Design brief is a document for a design project developed by a person or team (the designer or design team) in consultation with the client. They outline the deliverables and scope of the project including any products or works (function and aesthetics), timing and budget.

To give you a sense of what to include, here are the core sections of an effective design brief.

- Company profile. You should always ensure your briefs include an overview of your client's business.
- Project overview.
- Goals and objectives.
- Target audience.
- Design requirements.
- Budget and schedule

A Product design specification is a detailed document providing information about a designed product or process. For example, the design specification must include all necessary drawings, dimensions, environmental factors, ergonomic factors, aesthetic factors, maintenance that will be needed, etc.

A thorough and articulate design brief is a critical part of the design process. It helps develop trust and understanding between the client and designer - and serves as an essential point of reference for both parties. This article outlines some of the most important factors to consider when writing your design brief.

What is the Purpose of a Brief?

In a legal matter, a brief is a written statement of facts and the legal issues which form the basis of the lawsuit or other action. In the brief, the party, or attorney representing that party, submitting the document, attempts to convince the court to rule in its favor.

Here are the essential elements of a good design brief:

- ☞ Objectives and goals of the new design.
- ☞ Budget and schedule.
- ☞ Target audience.
- ☞ Scope of the project.
- ☞ Available materials/required materials.
- ☞ Overall style/look.

5.1. Design farm lay out and chickens' houses

Farm lay out and chickens' houses are designed according to farm objectives and standards Design of poultry housing must consider production and environmental aspects such as wind, heat and cold, predator risk and also their impact on production.

The construction materials that are used should be:

- Durable (long lasting)
- Easy to handle and easy to repair if damaged
- Readily available and as cheap as possible.

The width of the house if only natural ventilation is used should not generally exceed 9m. The length depends on the number of chickens that are going to be kept and availability of building space.

The height should not be less than 2 m anywhere in order to make the house easily accessible everywhere. Moreover, it provides more volume to the house resulting in a better air quality.

The floor should be made of concrete for easy cleaning or be filled with 50cm sand. Wire netting should be placed under and around a floor made of sand in order to keep rats and other predators out.

In hot climates at least 3 sides should be open (wire netting) in order to have enough fresh air (ventilation). By means of boards or mats the sides may be temporarily and partially closed when there are young chickens in side.

The roof should protect the birds against direct sun light and rain for that reason it should extend the walls for about 50cm beyond the wall. Poultry house should have elevated ceiling to keep heat away from birds. The roof may be ridged or slope to one side. If the roof is ridged this ridge should be open to permit heat to escape.

- **Technical specifications to be considered during construction of broilers house**
  - ✓ Maximum width = 8-9m
  - ✓ Maximum length = up to 30m(it depends on the number of flock)
  - ✓ Centre height = 2.5-3m at *eaves* and 4-5m at *ridge* roof is preferable in tropics.
  - ✓ Over hang = 2.5-3 feet
  - ✓ Width sides built /solid walls
  - ✓ Length sides built wall up to 0.5m from floor and remaining covered with ¾-1inch wire nets
  - ✓ Raised platform of 2.5-3feet from surrounding lands

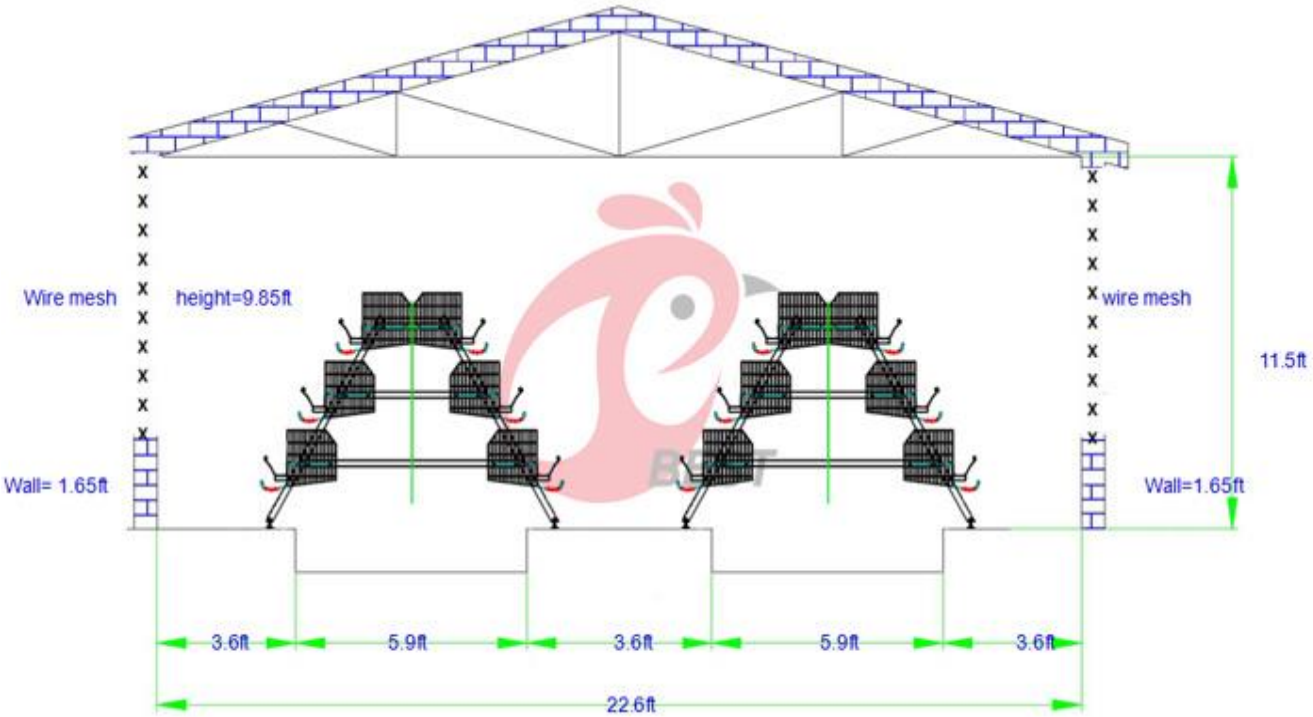

Figure: Poultry house design

Self-Check -5	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What is the Purpose of a design Brief?5pts)
2. What are the essential elements of a good design brief**?**(5pts)
3. What materials should be used for construction of poultry house? (5pts)

Note: **Satisfactory rating - 15 points** **Unsatisfactory - below 15 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

1. _____
   _____
2. _____
   _____.

Reference

- https://www.google.com/search?q=brief+design+and+consultation&rlz=1C1AVFC_enET881ET881&oq=brief+design+and+consultation&aqs=chrome..69i57j0.1300j0j7&sourceid=chrome&ie=UTF-8
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- https://www.google.com/search?q=Types+of+hazards+in+the+work+places&rlz=1C1AVFC_enET881ET881&oq=Types+of+hazards+in+the+work+places&aqs=chrome..69i57j33.1513j0j7&sourceid=chrome&ie=UTF-8

POULTRY PRODUCTION

Level - III

Learning Guide -24

Unit of Competence: - Site Selection and Design Poultry House

Module Title: - Selecting Site and Designing Poultry House

LG Code: AGR PLP3 M06 LO4-LG-24

TTLM Code: AGR PLP3 TTLM 1219v1

LO 04: Develop a final plan

Instruction Sheet	Learning Guide #-24

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- ☞ Preparing recommendations based on the analysis of data and enterprise instructions.
- ☞ Obtaining authorizations and approvals required for implementation of the plan.
- ☞ Producing detailed *plan* with consideration for safety, environmental implications and meeting enterprise objectives.

This guide will also assist you to attain the learning outcome stated in the cover page.
Specifically, upon completion of this Learning Guide, you will be able to **–**

- ☞ Prepare recommendations based on the analysis of data and enterprise instructions.
- ☞ Obtain authorizations and approvals required for implementation of the plan.
- ☞ Produce detailed *plan* with consideration for safety, environmental implications and meeting enterprise objectives

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described in number 3 to 7.
3. Read the information written in the “Information Sheets 1”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
4. Accomplish the “Self-check 1” in page -
5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You have to get the key answer only after you finished answering the Self-check 1).
6. If you earned a satisfactory evaluation proceed to “Information Sheet 2”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity #1.
7. Submit your accomplished Self-check. This will form part of your training portfolio.

Information Sheet-1	Preparing recommendations based on the analysis of data and enterprise instructions

These guidelines cover the preparation of performance evaluation reports for recommendations that will be useful for future operations. Based on a balanced evaluation as described in the project administration instructions are assumed in the base case analysis, if electricity system losses rose, or any other facilities lack.

The Five Construction Principles have been established so that the five elements: environmental protection, safety, speed, economy, and aesthetics, conform with a balanced regular pentagon.

Principles of Building Planning.

The main objective of planning a building is to ensure that the different components of a building are so arranged that the occupants can perform desired function with ease and comfort.

Construction Documents means the plans; specifications and drawings prepared by the Design Professional after correcting for permit review requirements and incorporating addenda and approved change orders.

Construction Documents means the detailed working drawings that define the work to be constructed.

Specification for **construction**.

Specifications describe the materials and workmanship required for a development. They do not include cost, quantity or drawn information, and so need to be read alongside other information such as quantities, schedules and drawings

Specifications vary considerably depending on the stage to which the design has been developed, ranging from performance specifications (open specifications) that require further design work to be carried out, to prescriptive specifications (closed specifications) where the design is already complete.

Specifications should be developed alongside the design, increasing in level of detail as the design progresses. They should not be left until the preparation of production information.

Self-Check -1	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What is specification?(5 pts)
2. What is Principles of Building Planning**?(5 pts)**

Note: **Satisfactory rating - 10 points** **Unsatisfactory - below 10 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

1. _____

_____

2. _____

_____

Information Sheet-2	Obtaining authorizations and approvals required for implementation of the plan.

2.1. Understanding Approval Authorizations

You can identify the approval authorization by role or user in conjunction with a dynamic step. To accomplish this, the Approval Framework selects the appropriate supervisory approver from the user list and verifies that the approver meets the criteria for authorization.

You establish approval authorizations for each transaction. The authorization can accommodate approvals by role or user ID.

You can set authorization across Definition IDs, which are defined on the Setup Process Definition page.

For each authorization, the system checks the specific user ID to see if that individual can authorize the transaction. If found, it checks the authorization criteria. If criteria are met, the user has authorization.

If no authorization is found for a specific user ID, then the system looks for role-based authorizations using the approval hierarchy.

For approval hierarchy, the system first looks for authorization by Definition ID. If no authorization is found, the system then seeks authorization for rows without a Definition ID. If no authorization approval criteria is matched, the system process is deemed Not Authorized.

You can establish dynamic authorizations for either the header or line level, but not both.

When workflow is initiated for a change order or requisition, the system compares the approval authorization data to the user list to verify the approval process. To verify the approval, the system:

1. Checks the user list and assigns the first approver to the first user that is returned.
2. Looks at the roles that are established for the user ID.
3. Identifies the approval limits that are set for that user ID.

4. Routes the requisition status to the first approver if the amount is satisfied for the requisition and the approver list is complete.

5. Continues to look for additional approvers until all conditions are met.

6. Routes the approval to the administrator if the approver criteria is never met.

Self-Check -2	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. How you can identify the approval authorization ?(10 pts)

Note: **Satisfactory rating - 10 points** **Unsatisfactory - below 10 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

1. _____

_____

_____

Information Sheet-3	Producing detailed plan with consideration for safety, environmental implications and meeting enterprise objectives.

Environmental considerations factors may include but are not limited to, environmental compliance, pollution prevention, conservation, protection of historical and cultural sites, and protection of flora and fauna.

How does construction affect environment?

Construction firm's biggest negative impact on the environment is caused by the burning of fossil fuels, like gas and diesel. Every construction project results in these gas emissions of carbon dioxide, methane and other waste products that pollute the air and are believed to contribute to global warming.

First of all, many of the materials used in the construction of buildings are produced in a non-sustainable way. The factories that make the materials produce damaging CO2 emissions. There is a huge environmental impact associated with the extraction and consumption of raw materials for the use of building materials

Climate is an important environmental influence on ecosystems. Changing climate affects ecosystems in a variety of ways. For instance, warming may force species to migrate to higher latitudes or higher elevations where temperatures are more conducive to their survival.

Humans and wild animals face new challenges for survival because of climate change. More frequent and intense drought, storms, heat waves, rising sea levels, melting glaciers and warming oceans can directly harm animals, destroy the places they live, and wreak havoc on people's livelihoods and communities

Self-Check -3	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. How does construction affect environment?10pts)

Note: **Satisfactory rating - 10 points** **Unsatisfactory - below 10 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

1. _____

_____

_____

Reference

- https://www.designingbuildings.co.uk/wiki/Design
- https://www.google.com/search?q=How+does+construction+affect+environment%3F&rlz=1C1AVFC_enET881ET881&oq=How+does+construction+affect+environment%3F&aqs=chrome..69i57.1071j0j7&sourceid=chrome&ie=UTF-8
- https://www.google.com/search?q=Understanding+Approval+Authorizations&rlz=1C1AVFC_enET881ET881&oq=Understanding+Approval+Authorizations&aqs=chrome..69i57j69i60.8769j0j7&sourceid=chrome&ie=UTF-8

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