
Design and Access Statement

Erection of a free range egg
production unit including silos
and all associated works

Prepared for D S Humphreys & Co

Land at Nant Yr Esgair, Talerddig,
Llabrynmair, SY19 7AJ



land & property
professionals

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Contents

1.0 BACKGROUND	1
2.0 PROPOSAL.....	1
3.0 SITE.....	3
4.0 LANDSCAPING	3
5.0 BUILDING DESIGN	3
6.0 VEHICLE MOVEMENTS.....	3
7.0 VEHICLE ROUTING	4
8.0 DRAINAGE.....	4
9.0 MANURE STORAGE & DISPOSAL.....	4
10.0 CLEANING OUT	4
11.0 EMISSIONS.....	5
12.0 NOISE / ODOUR MANAGEMENT.....	5
13.0 QUALITY STANDARDS	6
14.0 DEAD BIRD MANAGEMENT & PEST CONTROL	7
15.0 POLICY CONTEXT	7
16.0 ACCESS STATEMENT.....	7
18.0 COMMUNITY SAFETY	9
19.0 ENVIRONMENTAL DESIGN STATEMENT	9
20.0 PHYSICAL CONTEXT OF THE DEVELOPMENT	11
21.0 SOCIAL CONTEXT OF THE DEVELOPMENT	11
22.0 ECONOMIC CONTEXT OF THE DEVELOPMENT	11
23.0 CONCLUSION	12

1.0 Background

D S Humphreys & Co is a farming business that runs beef and sheep enterprises. The farm business extends in total to 350 acres of owner occupied land. Land at Nant Yr Esgair is located within the rural settlement of Talerddig and approximately 3.3 miles from Llanbrynmair.

The farm business is run by 2 partners within the business trading as D S Humphreys & Co, who run a successful beef and sheep business. The farm business is proposing to diversify into a free range egg production unit, this enterprise has been researched fully and they are confident that the business can be a success and supplement the current marginal farm profits.

As a family, D S Humphreys & Co are eager to diversify the business to make the land more profitable and take advantage of a growing market and need locally. The business' intention is to build a strong business to pass on to the next generation in the future. There are concerns about the future of the sheep and beef farming industry as well as government subsidies. The diversification into free range egg production will help to ensure that the farm remain a viable family unit.

2.0 Proposal

The proposal is for a new free range bird egg laying unit to provide a 32,000 free range bird egg laying production unit. The building will be approximately 140m x 20m, which will house 32,000 birds, together with a service area, office and egg store on the West gable end. The proposed building will be accessed using an improved access off the unnamed road. The eggs would be conveyed into the packaging and storage area where they would be packed and stored ready for collection.

The birds will have direct access from pop holes on the north elevation of the building to dedicated pasture which will be fenced to keep out predators. The birds are brought in as young laying stock and remain in the egg production unit for some 14 months. After this time the flock is removed and the whole building fully cleaned down internally and the new flock introduced to restart the egg production cycle.

The birds have a laying cycle of 56-58 weeks. The birds are farmed to a free range system. The system utilises a series of perches and feeders at different levels. The maximum stocking density is 9 birds per square metre and there must be at least 250cm squared of litter area/bird. Perches for the birds must be installed to allow 15cm of perch per hen. There must be at least 10cm of feeder/bird and at least one drinker/10 birds.

There must be one nest for every 7 birds or 1 square metre of nest space for every 120 birds. Water and feeding troughs are raised so that the food is not scattered. The birds must have continuous daytime access to open runs which are mainly covered with vegetation and with a maximum stocking density of 2,000 birds per hectare. Within the system the birds must be inspected at least once a day. At the end of each laying period the respective houses are completely cleared and disinfected.

In free range laying system, good pasture management is essential if the ground is to remain in good condition and the problems of poaching and the build-up of parasitic intestinal worms and coccidian oocysts are to be avoided. The land surrounding the laying house will be divided into a series of paddocks which the birds are allowed to use for periods of up to 6-8 weeks each.

The length of time that the birds are allowed to use individual paddocks will vary depending on soil type, drainage, grass cover and weather conditions. The area immediately outside the poultry house tends to suffer the greatest amount of damage, so we propose that the ground adjacent to the pop holes should be covered with stones/pebbles. As well as providing health and welfare benefits, the birds' feet will be cleaned as they enter the building providing cleaner eggs. Free range layers are attractive to predators.

Foxes are the most frequent cause of problems and can cause damage and often kill or maim large numbers of birds – far more than they are able to consume. We propose to use a 1.2 m semi permanent electric fence with netting

The building proposed operates a multi tier system which allows a smaller shed as opposed to a flat deck system, by having two tier perching decks for the laying hens within the building. These perching areas are floored with plastic slats which allow manure to drop through the flooring system. The manure from each of the tiers then falls onto an internal conveyor belt.

The conveyor belt system is operated every 5-7 days and removes approximately 16 tonnes from the internal conveyor belt systems via an external conveyor belt into a parked trailer outside the building. After 14 months the flock is removed and the whole building fully cleaned down internally and a new flock introduced to restart the egg production cycle.

Feed for the birds is stored in the seven external juniper green coloured, or a similar dark colour to be agreed with the local planning authority, steel hoppers and conveyed automatically to the building.

Adjoining the building will be a hard stoned area approximately 5m wide to allow for access for delivery and removal of the birds.

The building has a proposed roof pitch of 15° and an eaves height of 3.00m and a ridge height of 5.40m. The building is of a low profile which helps to minimize its visual impact. The proposed building would utilise 12 mechanical extractor fans which thermostatically control the building. The building roof and sides will be clad with steel box profile sheeting coloured juniper green set above a low concrete base wall. The West and East gable ends will have two sheeted steel doors for vehicle access and two passenger doors.

3.0 Site

The site is situated approximately 160m off the council maintained road. Please see appendix 1 for location plan.

The location of the building has been carefully considered on the flattest land available in ownership of the applicant that is not within a flood zone.

There are no public footpaths affecting the proposed site.

The feed hoppers would be located adjacent to the building and will be located on the south and north elevation of the building.

The building will be approximately 140m x 20m wide, which will house 32,000 birds, together with a service area and office on the west gable end. The building has a proposed roof pitch of 15° and an eaves height of 3.00m.

4.0 Landscaping

The site is located with the benefit of land rising gradually to the north and east.

The area is predominately rural with agriculture being the primary industry. The proposed building will be screened from all sides by existing woodland, mature hedgerow and natural topography hiding the building from virtually all vantage points. The location of the building has been carefully considered to give good access and be unobtrusive.

There are no public footpaths within the immediate locality of the development site.

5.0 Building Design

The building is located in a screened location, with existing mature tree belts and woodland hiding the building from virtually all vantage points. The design will be low profile and the materials of the roof and sides will be clad with steel box profile sheeting coloured juniper green (or a colour to approved by the LPA) set above a low concrete base wall.

6.0 Vehicle Movements

The proposed free-range egg production unit will require one feed delivery lorry of 18 tonne capacity or thereabouts 2-3 times a month. The collection of eggs is twice a week in a rigid body commercial lorry. Once in every production cycle i.e. 14 month intervals, lorries bringing fresh laying birds and a lorry for removing the old flock will need to access the site.

The main labour force to be used in conjunction with the proposed development will be Mr and Mrs Humphreys who own and work at Land at Nant Yr Esgair and therefore have no need to leave the holding to access the proposed development.

7.0 Vehicle Routing

The existing farm access is currently off an unclassified road, which provides a suitable visibility line to access and egress the site safely and easily. The entrance allows all vehicles to pull fully off the main highway.

8.0 Drainage

Clean surface water from the roof of the building will be collected in an underground storage tank and used for washing down purposes. The underground tank will be constructed of concrete to comply with SSAFO (Regulations (Wales) 2010 Standards. Surplus clean water from the roof will be run by pipe and discharged in existing ditches.

Construction of the floor will incorporate a damp proof membrane preventing any dirty water percolating into the ground below the building. A slump in the floor will drain to a further below ground sealed tank, which will allow for collection of any dirty water primarily arising from the washing down process at the end of the production cycle. This dirty water will then be spread by vacuum tanker over the farms 350 acres of owner occupied grassland as per the farm manure management plan.

9.0 Manure Storage & Disposal

The unit will produce an estimated 500 tonnes of poultry manure each 14 month cycle. The manure will be removed via conveyors every 5-7 days set below the nesting and perching areas. Due to the manure being moved every 5-7 days there will be minimal manure stored within the building which will result in reduced pest activity especially flies. Manure produced will be a relatively dry product of a friable nature which can be readily dumped for storage, however all of the muck will be taken off the farm and utilised on family owned farmland. Dependant on the time of year the manure is removed from the building; it would be spread directly on the grassland in accordance with good agricultural practice for soil and water and in accordance with the control of pollution, slurry and agricultural fuel regulations in line with the farm's manure management plan.

Other local close family farmers have also indicated that they would be interested in taking some of the manure.

10.0 Cleaning Out

The building operates a multi tier system having two tier perching decks for the laying hens within the building. These perching areas are floored with plastic slats which allow the manure to drop through the flooring system. The manure from each of the

tiers then falls onto an internal conveyor belt. The conveyor belt system is operated every 5-7 days and removes approximately 15 tonnes from the internal conveyor belt system via an external conveyor belt into a parked trailer outside the building. The manure will be removed from the site using a sheeted tractor and trailer.

11.0 Emissions

The building design incorporates the use of 12 mechanical ventilator extractor fans which will thermostatically control building. Therefore they tend to operate more frequently during hot weather. Efficient design of ventilation fans has minimised the number needed for this building. Fans will be maintained and inspected in accordance with the manufacturers or suppliers instructions this will minimise mechanical noise from the unit and also dust escape. Automated feeding by internal conveyor with augers direct from the sealed external feed hoppers will minimise dust creation. The insulated construction of the walls and roof also reduce sound transmission.

Please see the ammonia screening document for detailed analysis of the Ammonia and Nitrogen Deposition from the proposal.

12.0 Noise / Odour Management

The proposed building design incorporates the use of 12 ridge mounted high velocity mechanical ventilator extractor fans which will thermostatically control the building. They are used during periods of hot weather only. The proposed poultry unit will use natural ventilation from the pop holes of the poultry unit for the majority of the year. It is paramount that mechanical fans are provided within the building as they are used to control the temperature, it is vitally important to bird welfare during periods of hot weather. The table below details the environmental sound levels dB (A) for HER710/6/1 following numerous manufacturing trials:

Distance from Fan to Receptor - metres	Number of Fans				
	1	3	10	16	20
3	61	66	70	72	74
6	57	61	65	68	70
10	51	55	59	52	64
20	45	49	53	56	58
100	31	35	39	40	43
200	21	27	31	33	35
400	18	23	27	29	31

The above data has been compiled in line with BS848 Part Two (1985) and using the Technical Specification of the Mechanical Fan which confirms the fan selected will operate at a level of 61 dB (A) at 3 metres. When all 12 fans are in operation, the cumulative sound level will be in the range of 27 and 29 dB (A) at 400 metres from the unit.

The nearest receptor to the proposed unit is Nant Yr Esgairwen at approximately 247 metres from the poultry unit. At this distance, the noise impact on the sensitive receptor based on 12 fans would be between 27 and 33 dB (A).

In considering an operational farm unit, it is recognised that a working farm unit would have a background noise level of 42 dB (A), the development proposed therefore is not excessive and would not result in complaints or disturbance to sensitive receptors.

Mitigation:

The applicant is proposing the following mitigation as part of the proposal:

- 1) Movement of feed, birds and eggs to the site will be done so with full care and attention to all neighbours. All movements shall be restricted to daytime hours to respect neighbours thus meaning that movements shall only occur between 07:00 and 18:00.
- 2) Feed when transmitted to the feed bins is a normal occurrence on farm, however the applicant shall ensure that delivery is between 07:00 and 18:00.
- 3) All fans will be maintained by local electricians to ensure they are working properly and reducing any unplanned excessive noise.
- 4) All electrics within the poultry unit will be maintained so that they are fully operational and at no risk of failure within the unit – this is vital for Animal Welfare reasons and by law.
- 5) The birds within the unit are all female and therefore very quiet resulting in no noise impact upon local neighbours especially during the egg production period. Whilst the birds are placed in the unit and taken, we will ensure the operation is smoothly undertaken to prevent stress to the birds and no noise to the neighbours.

The fans shall be in a treated chamber which will have an insulated roof and walls which will exhaust into an insulated baffle area thus limiting the noise emanating from the poultry unit proposed. The cumulative impact of the poultry unit will not exceed World Health Organisation Guidelines.

The design of the unit incorporates a slatted floor and conveyor belt mechanism for waste removal. The waste is removed every 5-7 days, so there will be minimal manure stored within the building which will result in reduced pest activity especially flies. Manure produced will be a relatively dry product of a friable nature which can be readily dumped for storage either on external ground or within covered storage. The potential build-up of manure is mitigated by the free range hen's freedom to access the adjoining fields. The surrounding paddocks are rotated and only occupied by birds for a short period of time.

13.0 Quality Standards

The eggs are produced and the chickens are managed to comply with the stringent conditions that are imposed by the RSPCA Freedom Food specification, which sets out the standards of welfare at all stages of the chickens life.

The unit will produce in line with Defra 'Code of Good Agricultural Practice' for the protection of water Appendix V approximately 500 tonnes of bedding/manure per batch (each 14 months). This can then be spread onto the farm land in accordance with the Control of Pollution of Slurry and Agricultural Fuel Regulations and the farms manure management plan. If the time of year is not appropriate for the spreading of the manure, an agreement has been reached with local family member farmers to take the manure and they have the hard standing areas and existing buildings to store the manure until required.

Again guidance is found within Defra 'Code of Good Agricultural Practice' for the prevention of water Appendix III, which provides information on the land area required for spreading manure, which is 2.6 ha per 1000 laying hens. The majority of the manure will be spread on the remaining land on the farm especially the arable fields, agreements are in place for a local farmer to take the remainder of the manure.

14.0 Dead Bird Management & Pest Control

There are several reasons why the careful disposal of dead birds is an important part of the health management of systems:

-  Reduces the risk of disease spreading back to the flock and other species.
-  Reduces the likelihood of carcasses being removed by scavengers, which can transmit disease.
-  Reduces the risk of blow flies (*Caliphora sp.*), which can also transmit disease.
-  NFS company registered firm Pointins are utilised

The dead birds will be collected by an approved contractor of the National Fallen Stock Disposal Scheme. Prior to this they will be stored in a secure container in line with the animal by-products Regulations 2003. Pest control for rats will be carried out by an approved agency. Preventative measures will be used to control flies to include fly screens and fly controls replaced periodically to prevent the flies entering the building from the outside.

15.0 Policy Context

Powys Local Development Plan 2011 - 2026

The Plan does include various references to agriculture and the agricultural economy of Powys. The section quoted at SP6 and its RJ in para 3.3.35 links to national policy, whilst para 4.1.5 confirms that no specific policy is included for agricultural development. Agricultural buildings will be just one type of new development and will be assessed against all the relevant plan policies (design and resources, landscape, environment, etc.) alongside national planning policy guidance.

16.0 Access Statement

Explain the adopted policy or approach to inclusive design and how policies relating to inclusive design in development plans and relevant local design guidance have been taken into account

Access by Disabled Persons

Applications will be permitted for the development of new buildings, public amenities, recreational spaces and, where practicable and reasonable, the changes of use or alterations to existing buildings, where suitable access is made to and within the building or amenity and adequate facilities are provided for people with disabilities.

The Disability Discrimination Act 1995 (DDA) seeks to avoid discrimination against people with impairments and disabilities and for instance ensures that work premises do not disadvantage someone with a disability.

The access arrangements have adopted an inclusive approach and aims to ensure that all users will have equal and convenient access to the site and buildings.

Explain how any specific issues, which might affect people's access to the development have been addressed

The design of the application will have full consideration for ease of access for disabled pedestrian use. Our full application submitted incorporates the following points:-

1. The car parking area will be located near to the principal entrance and is at the same level as the principal entrance.
2. Access from the car parking area to the principal entrance is by way hard landscaping, which is suitable for a disabled wheel chair.
3. The principal entrance is at a level threshold.
4. Easy access is obtained around the circumference of the building by way of hard landscaping.
5. All construction work to comply (where relevant) to Part M of the Building Regulations Act 2000, and also subsequent amendments.
6. All doors to be of disabled criteria.
7. All external doors to be 930mm minimum width.
8. All sockets and light switches to be in compliance with Part M with regard to the height from floor level.
9. All washing facilities are located on the same level (ground level).

The car parking facilities and access ways to and from the poultry building will be flat and even and unobstructed allowing the building to be accessed by all people including disabled people or people with impairments.

Detail how features, which ensure people's access to the development, will be maintained

The car parking facilities and access ways to and from the building will be maintained in such a way as to allow all people access to the building

All of the measures detailed above will be maintained in such a way that will allow all people access to / from and around the building. Also the facilities within the building will also be constructed and maintained in such a way to ensure people's access within the development.

18.0 Community Safety

Site Security

Site security is critical throughout day and night to prevent the theft of equipment and livestock, which may injure or adversely affect the welfare of animals. This is critical in this case given the secluded location and its proximity to the public highway.

19.0 Environmental Design Statement

A design statement shall accompany all detailed applications and will describe the actions taken to design and adapt the development to fit its location. Wherever practicable, developments shall be designed to reduce energy consumption and maximise energy conservation and maximise energy conservation through the use of appropriate materials, design, layout and orientation.

The Powys LDP sets out the policy considerations for new development and changes of use in the County and has undergone both a Sustainability Appraisal and the Strategic Environmental Assessment process in its preparation.

The strategic aims supporting sustainable development in the UDP are as follows:-

- To promote energy conservation and efficiency
- To encourage appropriate energy generation from renewable energy sources
- To strengthen design standards and promote good design across the County.

The prominent policies within the UDP are:-

- UDP Policy E7 – Solar Technologies
- UDP Policy GP3 – Design and Energy Conservation
- HP14 Sustainable Housing

Normally, because this building is over 1000m² the development would need to meet BREEAM ' Very Good' standard and achieve the mandatory credits for 'Excellent' under Ene 1 – reduction of CO₂ Emissions.

The proposed use is for a free range egg production unit, the building is a very specialist agricultural building and is designed to meet the substantial welfare needs of the chickens we feel that given the nature of the use of the building this won't be applicable.

Our planning application has taken into consideration the following energy efficiency measures and technologies that can be incorporated alongside wider energy efficient design principles to ensure high energy performance.

The proposed building has been positioned and orientated (as far as possible) in order to maximise the use of natural daylight and solar energy. This is achieved where possible by orientating the building in such a way to maximise the potential for solar gain and reducing the need for energy consumption.

The building will be insulated (roof, walls and floors) according to the most recent building regulation standards in order to reduce heat loss in winter and excess solar gains in summer.

Wherever possible materials will be sourced and produced locally and will come from a source that can be renewed without harm to the environment. High quality reclaimed materials can save resources and may also provide a better match with the surrounding development. The scheme will avoid the use of tropical hardwood and look for timber which is certified as coming from sustainable sources. The materials used in this development to include the steel, box profile sheeting and fibre cement roof sheets, will come from a local source, using local steel fabricators and all from sources that can be renewed without harm to the environment.

It is intended that the building will include a high efficiency condensing boiler (more than 90% efficient) which will reduce CO² emissions and also reduce energy consumption

The site is serviced by private water & mains electricity.

Surface water drainage will discharge into soak-away system.

Sustainable Urban Drainage Solutions (SUDS) will also be used within the development, by incorporating permeable materials for parking and other hard surfaced areas within the curtilage of the building and soakaways would be used for surface water drainage.

The use of rainwater harvesting will be investigated as part of the accommodation within the roof space.

The development of this land will contribute to the aim of sustainability through the productive use of the above mentioned features.

The above points will ensure that the properties are 'sustainable' in terms of its building design and the supply and use of energy in accordance with the Council's recommendations.

Other complimentary measures:-

We have considered that energy efficient design principles are also key to the success of schemes including if electricity is required to be supplied to the building that energy efficient light bulbs are used.

We also aim to:-

- Design out waste from the outset
- Minimise the energy used during the construction phase of the development through careful project planning
- Use reusable and recycled materials

We have also considered waste management control during the construction phase, and as far as possible all waste will be utilised on site, including all the topsoil excavated from the building site.

20.0 Physical Context of the Development

The location of the building has been carefully considered. The site is located with the benefit of land rising gradually to the north and east, forming a natural screen.

The proposed building would be located on the owner-occupied land.

The proposed site is surrounded by agricultural land; agricultural land to the north, south and east of the site is within the control of the Applicant.

21.0 Social Context of the Development

The proposal is for a new free range egg production building to provide a 32,000 free range egg production unit. The new building will be located on land currently used as permanent pasture. The building will be approximately 140m x 20m wide, which will house 32,000 birds, together with a service area and office on the west gable end.

22.0 Economic Context of the Development

The farm business is run by D S Humphreys & Co.

The proposed diversification is to ensure that there is a viable farming business operating in order to support the next generation of the family.

Farm businesses need to change and grow in response to market forces and legislation if they are to survive.

Poultry is becoming an important element in the Powys Agricultural economy.

Planning Policy Wales is supportive of diversification of agricultural enterprises.

The current market dictates that agriculture must adapt to meet consumer demands, the applicant has chosen to diversify to respond to the demand for free range eggs.

23.0 Conclusion

- The proposal is an economic development that is supported by both local and national policy; it amounts to sustainable development that will improve the agricultural business located on site.
- The building is sited within a natural hollow of the landscape and does not affect long distance views from amenity areas therefore minimising the impact of the building on the landscape, in addition to this there is a proposed landscaping planting scheme.
- The building is intelligently and sympathetically designed and strikes a balance between practical and economic efficiency and minimal landscape impact.
- Adequate provision is made for the disposal of foul and surface water drainage and animal wastes without risk to watercourses through a sustainable drainage technique.
- Adequate provision is made for access and movement of machinery to avert the perpetuation, intensification or creation of traffic hazard.
- The proposal is of an appropriate location, scale and type so as not to be detrimental to the amenities of any nearby existing residential properties.
- Please be aware that this is a poultry rearing unit and not an intensive livestock unit (battery unit).
- This proposal has significant merit, fits within the policies of the development plan and national planning guidance, and it is respectfully requested that the submitted planning application be approved.