

HARVEY HUGHES

INDEPENDENT RURAL CONSULTANTS

T G Gaskin & Son

Pen-Y-Parc Farm

Black Park

Halton

Chrik

LL14 5AX

Justification Report

In support of

A Planning Application for proposed building for general purpose agricultural storage of machinery and produce and the extension of existing silage clamp at Pen-Y-Parc Farm, Chrik.

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1.0 Introduction

T G Gaskin & Son farm approximately 205 acres (82 hectares) of agricultural land at Pen-Y-Parc Farm and surrounding rented areas of Halton, Chrik. The farmland associated with Pen-Y-Parc Farm is predominantly grassland with 40 acres cropped to maize and 10 acres of wheat, all crops are used as forage which is utilised for the production of the dairy herd and followers. The main enterprise of the business is the 125 head of Holstein Frisian Dairy cattle, the business breeds and rears their own herd replacements and bull/beef calves totalling circa 260 head of stock on farm.

Since 2017 the business has had multiple outbreaks of TB (Bovine tuberculosis) which has put pressure of stocking rates on the farm due to keeping bull/beef calves for longer and being limited in the sale of the surplus milking herd.

Pen-Y-Parc farm has multiple buildings which are now being used for the housing of cattle therefore the existing buildings do not provide sufficient storage for produce and machinery kept on site, additionally the businesses increasing stock numbers is increasing the quantity of forage needed. As such a planning application is being submitted for the construction of a new agricultural building for the storage of machinery and produce and the proposed extension of existing silage clamp.

2.0 Purpose of proposed building

As previously mentioned, there is currently insufficient storage capacity at Pen-Y-Parc farm to store all produce and machinery and silage.

The farm produces hay/haylage and silage to feed the dairy enterprise operated on site. The farm also purchases straw for feed and bedding purposes, The hay and straw must be stored immediately after harvest/purchase to ensure that the quality does not deteriorate. Should the quality deteriorate this can result in the produce becoming unfit for livestock consumption and subsequently, the business will have to purchase in replacement feed at an inflated price.

The silage clamp also requires further capacity to feed the increased number of cattle on the farm.

Further to the need of sufficient produce storage there is also the need for machinery and equipment storage, including tractors and crop management/harvesting equipment.

3.0 Design of Building/extension

3.1 Proposed agricultural general purpose building

The proposed building will measure as follows:

Length:	29.26m
Width:	10.668m
Eaves height:	4.572m
Ridge height:	6.00m
Roof pitch:	15°

The total surface area of the building will be **312m²**

The walls will be constructed using pre cast concrete panels to 2m in height with slate blue box profile sheets on the south facing elevation, the west facing gable end and 1 bay on the north facing elevation with the remaining area being open voids. With cement fibre roof sheets.

3.2 Proposed extension of existing Silage Clamp

The proposed Silage clamp extension will measure as follows:

Length: 13.719m
Width: 7.6m
Height: 4m

Total extension surface area: 105m²
Total extension clamp capacity: 420m³
Total area of total surface area: 260m²
Total capacity of total clamp: 1040m³

The walls will be constructed with concrete to 4m and a 1.2 meter safety rail will be installed on top. To match the existing Clamp.

4.0 Visual impact and Access

There will be no alteration to the farm access due to this proposal, nor will there be any increased volume of vehicle movements to and from the farm.

The proposed building is to be located beyond an existing building on the farmyard, entering into a grassland parcel,

The materials used for the construction of the building will be similar to other agricultural buildings on the farm and in the surrounding area.

The silage clamp extension will be constructed using the same materials as the existing, with concrete panels. is offset from the buildings so the clamp walls run parallel to the cow track, the proposed extension will extend from the rear of the existing clamp and continue to run parallel to the cow track.

As seen in the proposed site plan, a line of hedgerow is to be removed for the construction of the proposed general purpose building but will be replaced and moved to combat against loss of habitat in the long term.

The extended silage clamp will not impact any environmental features and will have minimal implication on visual impact from any public access points, as the proposed building will be next to an existing building and the existing and proposed extending silage clamp, this will also have minimal visual impact.

5.0 Storage requirement

5.1 Proposed agricultural general purpose building

The proposed building will be used for the storage of produce and machinery utilised by the business.

The business produces and purchases a quantity of hay and straw each year which is used during the winter months for livestock feed and bedding. It is important that the produce is stored out of direct sunlight in order to reduce the risk of the produce heating and deteriorating. Further to the implications of sunlight it is also essential that the hay and straw are stored in a dry area in order to reduce the risk of the produce becoming damp and unsuitable for livestock consumption. Additionally to this, in an attempt to reduce the volume of plastic used on farm the business is looking to move away from haylage bales which are plastic wrapped, replacing with more hay like bales which will need to be stored inside to reduce, as mentioned, the risk of deterioration.

Further to the need of produce storage, it is also essential that the business has sufficient storage capacity for any machinery and equipment which is operated on the land.

If the agricultural machinery and equipment are not stored correctly the value can be significantly reduced due to weather damage and increased deterioration rates. Further to this, the machinery and equipment is put at a higher risk of theft and vandalism if stored outdoors.

The total storage area required for each of the items is detailed below:

5.1.1 Straw

As previously mentioned the business purchases straw for the use of bedding and feed for the cattle, as the land the business owns is unsuitable for cereal production. The proposed new building will allow the business to be able to bulk buy more straw in harvest season resulting in saving costs, by storing the bales outdoors, it can severely reduce the quality of the bales through becoming damp and heating due to sunlight and weather conditions. Once the bales become damp, they are inappropriate for bedding. Therefore, it is essential to store the bales indoor, to reduce waste and unnecessary excess use. The business purchases straw during harvest time to, save cost of buying during winter when costs increase, although has had to buy throughout the year due to lack of storage which has seen cost increases of £85-£115/tonne

The business buys in straw by the artic load (two at a time) which consists of 32 Heston bales per load.

As such the following storage area is required:

Stacked 3 high (120cm each):	= 3.6m
Stacked 4 wide (245cm each):	= 9.8m
Stacked 6 long (130 cm each):	= 7.8m

The total area needed for the storage of straw has been calculated **77m²**.

5.1.2 Hay

Bales of hay are used to feed the cattle, predominantly young stock and dry cows. The business makes round bales of hay from 20 acres of grassland. Hay needs to be stored out of direct sunlight in order to reduce the risk of the produce heating and deteriorating. Further

to the implication of sunlight, it is also essential that Hay is stored in a dry area to reduce the risk of the feed becoming damp and unsuitable for cattle consumption.

The round hay bales are approximately 1.5m in diameter and are stacked in a pyramid.

T G Gaskin & Son produce on average 2 tonnes to the acre of hay, 1 tonne of hay produces 4/5 bales, therefore 180 round bales will be produced. The building will need to accommodate for the produce, as such the following storage area is required:

Stacked 3 high (150cm each, displayed in figure 1)	= 4.5m
Stacked 10 deep (150cm each displayed in figure 2)	= 15 m
Stacked in a pyramid (also displayed in Figure 1)	= 10.5m

The total area needed for the storage of the Hay has been calculated at **157.5m²**.

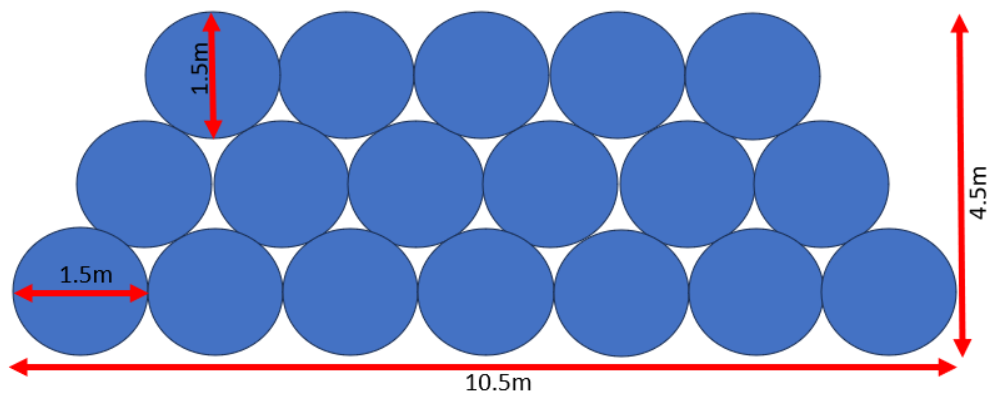


Figure 1: Round bale stack illustration 1

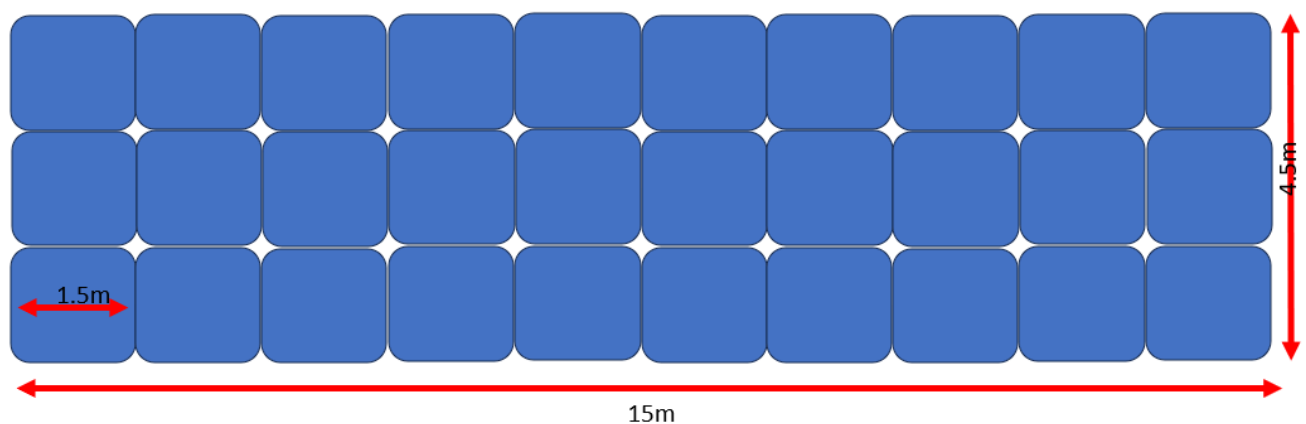


Figure 2: Round bale stack illustration 2

5.1.2 Machinery

The machinery and equipment's storage requirements are detailed below:

Machinery/Equipment	Storage Area required
Grass Sward Lifter	8m ²
Grass Mowers	8m ² x 3
Plough	8m ²
Hedge Cutter	8m ²
Power Harrow	8m ²
Fertiliser Spinner	8m ²
Total	64m²

To allow for practical access to the machinery the total surface area of the machinery will also need to be increased by 50%, as such the total surface area requirement of the machinery and equipment is **96m²**.

5.1.3 Storage Total

As can be seen from the above, 77m² is required for the storage of straw used for feed and bedding for the cattle of all ages, an additional 157.5m² is required for the storage of Hay produced by the business therefore circa 235m² is required for the storage of produce. As well as 96m² for machinery storage. Therefore the building requirement of 330m² exceeds the proposed 310m² for produce and machinery.

5.2 Proposed extension of existing Silage Clamp

The existing clamp has an area of 155m², the proposed extension will extend by 105m² to make a total surface area of 260m² (1040m³). The silage clamp was originally build in 2017 with the intention of storing maize silage, but over the years has had a variety of maize, whole crop, 2nd cut grass and peas and beans clamped within it.

The proposed extension is required for the following reasons:

- Aim to reduce the amount of plastic wrapped silage bales produced,
 - Reduce the plastic usage on farm
 - Increase feed quality fed
 - Reduce overall farm carbon footprint
- Aim to increase the milk from feed forage within the herd.
 - Produce more varieties of forage
 - Produce and store better yielding crops

When ensiling forage crops the storage is keen to maintaining the forage quality and the feed value. Without sufficient storage for Silage within a clamp can result in middens being made on yard or hardcore areas, this is not ideal for maintaining good quality forage as it can not be rolled and compacted to the same standard as that ensiled within a structural clamp.

The existing effluent tank has sufficient capacity for the extended area which is as per the SSAFO regulations for silage effluent. The existing and proposed structures are designed to comply with all relevant regulations.

6.0 Planning Policy

The proposed plans within this application are in line with the **Welsh Technical Advice Note 6 (TAN 6) – Planning for sustainable rural communities (2010)** specifically 3.3 Agricultural buildings. Meeting the policies related as follows:

- The proposed development will not cause any unacceptable adverse effects on the local landscape.
- The proposed structures are sited and designed to minimize impact on the landscape and is grouped as close as practically possible to existing buildings.
- The proposed building is designed and constructed of materials to take account of their surroundings. Reflective external surfaces have been avoided wherever possible.
- The proposals ensure the farm business is sustainable and will help to provide continued employment for the farmer, his family and employees.

7.0 Conclusion

In conclusion the proposed building and Silage clamp extension will improve T G Gaskin & Son's business, accounting for increased stock numbers due to TB restrictions, aiming to improve business efficiency and reduce their overall carbon footprint. The proposed general purpose building will ensure produce is stored correctly maximising profitability and minimising waste, with additional roof for the safe storage of machinery. Additionally the proposed extension to the existing silage pit allows for the increased volume of forage required for the increased stock and reduction of plastic used.