

# Agricultural Justification Statement

Franks Hall Farm,  
Eglantine Lane, Horton  
Kirby DA4 9JL

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Prepared By	Reviewed By
Jack Sadler MProf FAAV	Jonathan Morris BSc (Hons) MRICS



CLM Ltd  
Sackville House, Sackville Lane, Hartfield, East Sussex, TN7 4AW  
Tel. 01892 770339 Fax. 01892 770931  
Email. [info@c-l-m.co.uk](mailto:info@c-l-m.co.uk)  
[www.c-l-m.co.uk](http://www.c-l-m.co.uk)

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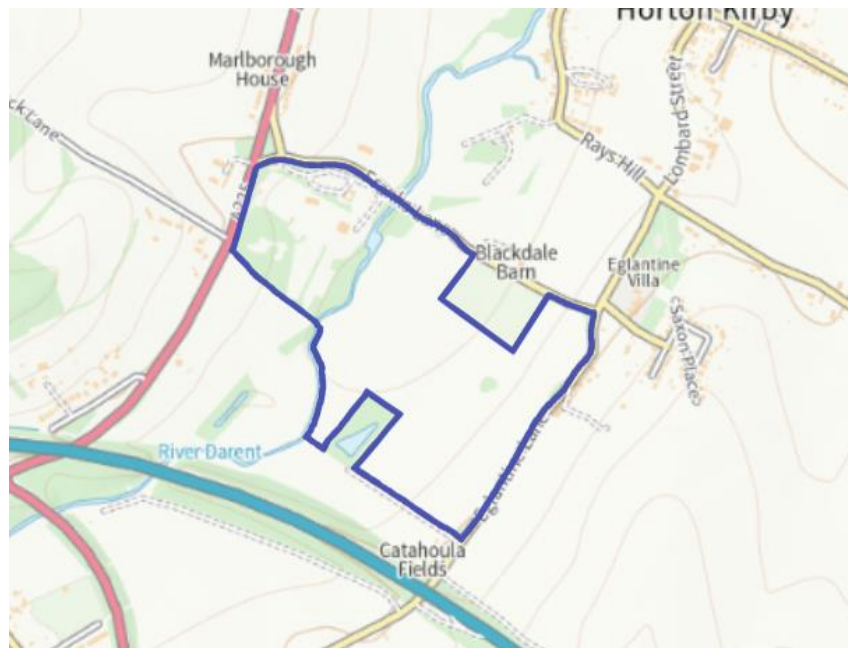
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## 1. INTRODUCTION

- 1.1. This report has been prepared in support of an application submitted on behalf of Mr G Sawyer for a new farm storage building at Franks Hall Barn, Eglantine Lane, Horton Kirby, Kent, DA4 9JL.
- 1.2. This report has been prepared by Jack Sadler MProf FAAV of CLM Ltd, Sackville House, Sackville Lane, Hartfield, East Sussex, TN7 4AW.
- 1.3. CLM Ltd are a firm of Chartered Surveyors operating across Kent, Sussex and Surrey specialising in rural matters including, inter alia, agri-business, planning and estate management services. CLM are regularly involved in working with a variety of agricultural and land based business providing independent consultancy advice.

## 2. THE SITE

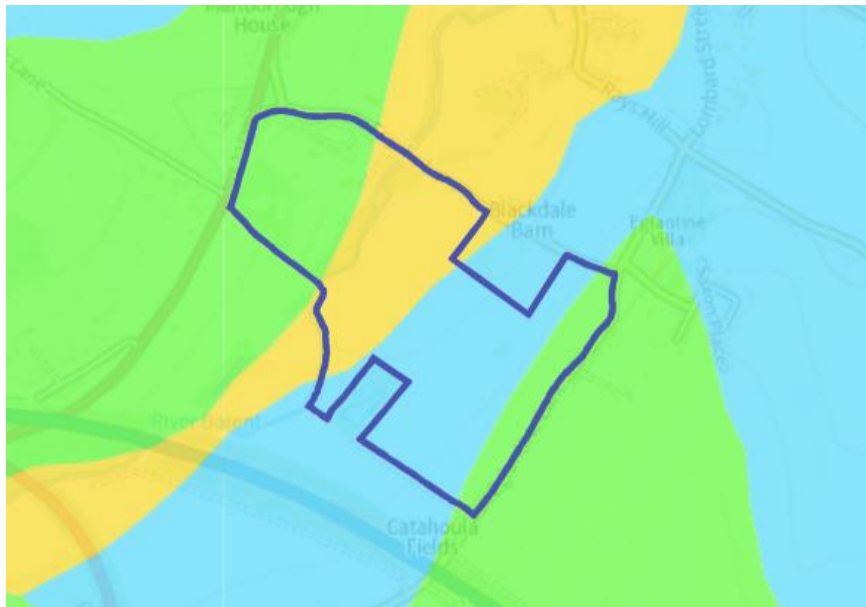
- 2.1. Franks Hall Farm extends to approximately 32.37 hectares (79.99 acres) and is located approximately 2.8 miles south-east of Swanley, 2.9 miles north of West Kingsdown and 4.7 miles south of Dartford. We are informed that the land, which can be seen below edged blue in Plan 1, comprises 21.65 hectares (53.5 acres) of pasture and the remainder consists of woodland, residential properties and amenity land.



**Plan 1** – The land at Franks Hall Farm, Eglantine Lane, DA4 9JL

- 2.2. The farm is bordered in part by residential grounds to the north (within the same ownership), Franks Lane to the east, Eglantine Lane to the south and the M20 motorway to the west. The surrounding area is a mixture of agriculture and residential use.

- 2.3. The Pasture at Franks Hall Farm is of varying quality, as can be visualised below in Plan 2. Part of the land in the middle of the holding is classified as Grade 2 – very good quality agricultural land, as outlined in the Agricultural Land Classification of England and Wales, which is bound to the north by an area of Grade 4 land (poor quality), and to the south by an area of Grade 3 land (good to moderate).
- 2.4. According to the Soil Survey of England and Wales, the holding contains a mixture of lime-rich loamy and loamy/clayey soils with moderate fertility. Whilst the majority of the pasture is identified as being ‘freely draining’, some of the pasture to the west of the holding remains naturally wet due to the proximity to the River Darent.



**Plan 2** – The land quality at Franks Hall Farm as outlined in the Agricultural Land Classification of England and Wales, showing areas of Grade 2 (Blue), Grade 3 (Green) and Grade 4 (Yellow).

### 3. THE SITUATION AND NEED

- 3.1. The land comprises underutilised bare agricultural pastureland having previously been used for the growing of combinable crops. The land is considered capable of sustaining grazing livestock together with the production of hay and silage or, reversion to arable production is possible.
- 3.2. Currently, the land is used for the production of forage in the form of small bale hay however, due to the lack of any proper storage facility, the applicant employs a contractor to undertake the maintenance and cutting of the grass, and then any forage is removed from site by the contractor.
- 3.3. We understand the applicant intends to continue to improve the land, utilise it for the purposes of grazing a lowland sheep flock and produce forage for supplementary feed. It is however also the intention of the applicant to move away from the use of third-party contractors and undertake more farming operations in hand with privately owned equipment.

- 3.4. At present, there are no buildings identified on the holding and the applicant does not have the ability to provide covered storage for their produce or their agricultural machinery which includes specific forage harvesting equipment. In light of the applicant's intentions to now take the farming operations back in hand, and the available pasture from which to produce forage, there is a clear need for a storage building on the holding.
- 3.5. The production of hay commonly involves various pieces of specialist equipment which includes, inter alia, tractors, mowers, tedders, rakes, balers and trailers. Hay has a dry matter content of over 85% and so once the grass has been cut, it is left in situ to dry. The drying produce, is then turned over to allow moisture to escape using a 'tedder' and then once dry, it is aligned into windrows using a 'rake'; these two processes can be combined using a 'haybob' which is often the case for smaller farms who cannot justify the expenditure on two separate pieces of machinery.
- 3.6. Once at the desired moisture content, the hay is then baled and removed from site on a trailer. How much machinery is owned, depends on a number of variables specific to each farming business however a fundamental consideration is the access to proper, secure storage due to the exponential increase in rural crime.
- 3.7. Research published in the International Journal for Crime, Justice and Social Democracy (2013) outlined that a key physical predictor of victimisation for farmers is the location of their farm in relation to both urban areas and main roads. The research stated that those farms who are located closer to built-up areas or main public roads, are more accessible and therefore more likely to experience various forms of theft, vandalism and trespassing.
- 3.8. Franks Hall farm lies adjacent to the M20 which is easily accessed at Swanley via the A225 and A20. From here, there are links to both the M26 to the south east and the M25 to west. Taking account of the proximity to three main motorways, the farm is statistically higher at risk of rural crime than those in more rural areas. At present and in the absence of an appropriate facility, it would be illogical for the business to invest in any required machinery without first ensuring a space for it's secure storage.
- 3.9. In terms of the forage, proper storage is essential to maintain the quality of the commodity, particularly for hay. Having a low moisture content and high dry matter content, hay is extremely susceptible to water ingress and so this must be addressed if the quality of the hay is to remain suitable for sale or consumption by animals. If water does enter the hay, soluble nutrients are leached from the product and the instances of rot, decay and mould increase. As this happens, the product becomes unpalatable for, and can cause respiratory diseases in, livestock and horses. In extreme cases the bales are burnt in order to destroy the soured crop.
- 3.10. The only alternative to a covered storage building is to store bales underneath waterproof sheeting. This will undoubtedly increase levels of spoilage within the

stored produce and so we do not consider this a sustainable long-term storage strategy and a purpose-built store is required.

- 3.11. It is a reasonable expectation for a viable agricultural business to benefit from some form of building ancillary to the land for storage of produce and/or machinery. There are no buildings or storage facilities at Franks Hall Farm therefore in light of the factors outlined above, it is considered that currently, the viability of the holding is undermined and the lack of storage space is the limiting factor for the growth of this agricultural enterprise.

## 4. RECOMMENDATIONS

- 4.1. In preparing these recommendations consideration has been given to: the size of the holding, the productive capacity of the pasture, storage requirements for produce, any currently owned machinery/equipment and machinery not currently owned which is to be purchased by the applicant. Where necessary, we have sought figures from readily available online information in addition to industry recognised sources which are updated annually.
- 4.2. Our recommendations for forage storage are as follows:

**Table 1. Storage recommendation for the forage produced at Franks Hall Farm**

<b><u>Holding</u></b>	<b><u>Hectares</u></b>	<b><u>Acres</u></b>
Franks Hall Farm	21.66	53.52
<b><u>Average Hay Production</u></b>	<b><u>Acres</u></b>	<b><u>Hay Yield</u></b>
80 bales/acre	53.52	4280 bales
<b><u>Potential Hay Yield <sup>(1)</sup></u></b>	<b><u>Bale Weight (Kg)</u></b>	<b><u>Total Tonnage (t)</u></b>
4,920 bales	25	123
<b><u>Total Tonnage (t)</u></b>	<b><u>Total Storage (m<sup>3</sup>/t)</u></b>	<b><u>Total Storage Requirement (m<sup>3</sup>)</u></b>
123	8	984
<b><u>Total Storage Requirement (m<sup>3</sup>)</u></b>	<b><u>Required Floor Space (m<sup>2</sup>) <sup>(2)</sup></u></b>	<b><u>Recommended Floor Space (m<sup>2</sup>) <sup>(3)</sup></u></b>
984	205	225

(1) +15% of the average yield to account for annual fluctuations, aligns with the Agricultural Budgeting and Costings Book 2023.

(2) Required floor space accounts for the building being 4.8 metres to the eaves

(3) +10% to allow for correct storage and manoeuvrability

- 4.3. Expected yields of Hay vary due to management activity, quality of land and climatic conditions of a particular year however, industry standard figures taken from the Agricultural Budgeting and Costings Book 2023 state that approximately 2.3-3 tonnes of Hay can be produced depending on management intensity. Given the level of investment required for a storage building of this nature, the potential yield should be considered to avoid a future undersupply of storage.
- 4.4. We have estimated that, with gradual management of the pasture of Franks Hall Farm, it would be reasonable to achieve the lower end of this range therefore the 'Potential Hay Yield' outlined in Table 1 above reflects this. For the avoidance of doubt, 2.3 tonnes amounts to circa 92, 25kg bales per acre.

4.5. In terms of machinery storage our recommendations are as follows:

**Table 2. Storage recommendations for machinery at Franks Hall Farm**

<b>Machinery</b>	<b>Quantity</b>	<b>Actual Size (m<sup>2</sup>)</b>	<b>Recommended Storage (m<sup>2</sup>)</b>
Tractor	2	24	30
Mower	1	6	10
Haybob	1	6	10
Fert Spreader	1	4	10
Roller	1	6	10
Chain Harrows	1	9	15
Bale Trailer	1	18	25
Miscellaneous Hand Tools	N/A	20	25
<b>Storage Requirement</b>		<b>93 m<sup>2</sup></b>	<b>135 m<sup>2</sup></b>

4.6. The machinery quoted above in Table 2 includes a combination of currently owned machinery and equipment, in addition to some machinery to be purchased to facilitate in-hand management of the holding.

4.7. The figures for 'Actual Size' given above, are taken from readily available online sources which states sizes of common machinery. Whilst the calculated actual size comes to 93m<sup>2</sup> this does not account for: any space between machinery, movement in/out of the building when mounted to a tractor, nor does it leave enough space to provide safe working conditions for those repairing or maintaining the equipment. Consequently, a modest floor space of 135m<sup>2</sup> has been recommended; this is considered reasonable to meet the requirements of the holding.

4.8. The total recommended floor space is calculated as 360m<sup>2</sup> however, modern farm buildings are commonly constructed using 6 metre bays, therefore a floor space of 375m<sup>2</sup> should be adopted. Whilst presenting a negligible increase in floor space above the recommended, this allows for the building to be constructed using 6 metre bays which is a practical and cost effective solution. The total building recommendations would therefore be as follows:

**Table 3. Space provided by the building accounting for 6 metre bays**

<b>Storage</b>	<b>Recommended Storage (m<sup>2</sup>)</b>	<b>6m x 12.5m Bays occupied</b>	<b>Space Provided in Building (m<sup>2</sup>)</b>
Hay	225	3	225
Machinery	135	2	150
<b>Total</b>			<b>375</b>

4.9. In terms of the building design, the building should comprise a steel portal frame enclosed with part concrete panel and part corrugated sheet, or timber if design parameters allow, under a corrugated sheet roof.

4.10. Access by way of an open front would be preferable although in light of security issues, the provision of roller shutter doors of a height suitable for access/egress with agricultural machinery would improve security without conflicting with the agricultural need. If using roller shutter doors, it is recommended to include separate personnel doors for ease of access.

## 5. CONCLUSION

- 5.1. We have considered the agricultural need set out above which is clear. After making an allowance for the proper handling and storage of both produce and machinery, in addition to the use of common construction parameters, our recommended building size is 375m<sup>2</sup>.
- 5.2. A building of this size would, in our opinion, provide adequate undercover storage space for a range of agricultural equipment, stores and ancillary operations associated with the holding without significantly exceeding justifiable space requirements. Common activities associated with the storage of forage such as the use of tractor mounted grabs or squeezes are accounted for in the above calculations and safe working conditions are available at all times.
- 5.3. There is an evident need for an agricultural building in order to facilitate the growth of the extant agricultural business by both preventing rural crime and the spoiling of the stored forage. Any proposed building should be commensurate with our recommendations in order to be considered to meet the credible need that exists on the holding at this time.

### REFERENCES:

*Donnermeyer, J ; Scott, J ; Barclay, E. (2013). How Rural Criminology Informs Critical Thinking In Criminology. International Journal for Crime, Justice and Social Democracy. 2(3), pp.69-91.*

*Agro Business Consultants, 2023, The Agricultural Budgeting Costing Book, No. 96*